APPENDIX A – TRAFFIC DATA

TURNING MOVEMENT COUNTS

McINTOSH PERRY

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #20-164 - McIntosh Perry

Intersection Count Report

Intersection:	Sherk St & Seacliff Dr W (CR 20)
Municipality:	Leamington
Count Date:	Oct 06, 2020
Site Code:	2016400001
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

Sherk St - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	63	0	70	0	133	5	0	0	0	0	0	7
08:00 - 09:00	84	0	40	0	124	2	0	0	0	0	0	1
BREAK												
16:00 - 17:00	104	0	79	0	183	0	0	0	0	0	0	9
17:00 - 18:00	121	0	103	0	224	0	0	0	0	0	0	2
GRAND TOTAL	**372**	**0**	**292**	**0**	**664**	**7**	**0**	**0**	**0**	**0**	**0**	**19**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

Seacliff Dr W - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	175	80	0	255	12	75	126	0	0	201	4
08:00 - 09:00	0	203	78	0	281	12	74	161	0	0	235	0
BREAK												
16:00 - 17:00	0	411	114	0	525	6	107	289	0	0	396	8
17:00 - 18:00	0	288	92	0	380	4	94	258	0	0	352	0
GRAND TOTAL	**0**	**1077**	**364**	**0**	**1441**	**34**	**350**	**834**	**0**	**0**	**1184**	**12**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	11	0	9	0	20	3	0	4	0	7	0	0	0	0	0	0
07:15	13	0	8	0	21	4	0	5	0	9	0	0	0	0	0	0
07:30	7	0	19	0	26	3	0	4	0	7	0	0	0	0	0	3
07:45	14	0	18	0	32	8	0	3	0	11	0	0	0	0	0	2
08:00	20	0	13	0	33	9	0	3	0	12	0	0	0	0	0	2
08:15	7	0	4	0	11	9	0	1	0	10	0	0	0	0	0	0
08:30	14	0	6	0	20	5	0	1	0	6	0	0	0	0	0	0
08:45	16	0	10	0	26	4	0	2	0	6	0	0	0	0	0	0
SUBTOTAL	102	0	87	0	189	45	0	23	0	68	0	0	0	0	0	7

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	17	0	22	0	39	7	0	2	0	9	2	0	0	0	2	0
16:15	20	0	20	0	40	5	0	3	0	8	0	0	0	0	0	0
16:30	23	0	13	0	36	6	0	4	0	10	1	0	0	0	1	0
16:45	21	0	11	0	32	2	0	4	0	6	0	0	0	0	0	0
17:00	17	0	17	0	34	10	0	11	0	21	0	0	0	0	0	0
17:15	23	0	29	0	52	7	0	5	0	12	0	0	0	0	0	0
17:30	19	0	19	0	38	9	0	5	0	14	5	0	0	0	5	0
17:45	21	0	14	0	35	10	0	3	0	13	0	0	0	0	0	0
SUBTOTAL	161	0	145	0	306	56	0	37	0	93	8	0	0	0	8	0
GRAND TOTAL	**263**	**0**	**232**	**0**	**495**	**101**	**0**	**60**	**0**	**161**	**8**	**0**	**0**	**0**	**8**	**7**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Seacliff Dr W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	34	9	0	43	0	8	2	0	10	0	1	0	0	1	0
07:15	0	18	6	0	24	0	18	8	0	26	0	0	0	0	0	5
07:30	0	33	12	0	45	0	17	8	0	25	0	0	2	0	2	1
07:45	0	31	28	0	59	0	15	5	0	20	0	0	0	0	0	6
08:00	0	38	10	0	48	0	13	10	0	23	0	0	1	0	1	5
08:15	0	31	11	0	42	0	17	7	0	24	0	0	0	0	0	2
08:30	0	32	9	0	41	0	22	6	0	28	0	0	0	0	0	2
08:45	0	30	18	0	48	0	20	6	0	26	0	0	0	0	0	3
SUBTOTAL	0	247	103	0	350	0	130	52	0	182	0	1	3	0	4	24

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Seacliff Dr W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	0	73	28	0	101	0	19	9	0	28	0	0	0	0	0	1
16:15	0	76	19	0	95	0	32	4	0	36	0	0	0	0	0	1
16:30	0	76	25	0	101	0	31	9	0	40	0	1	0	0	1	2
16:45	0	85	14	0	99	0	18	6	0	24	0	0	0	0	0	2
17:00	0	48	19	0	67	0	23	4	0	27	0	1	0	0	1	1
17:15	0	60	14	0	74	0	13	6	0	19	0	0	0	0	0	0
17:30	0	66	16	0	82	0	18	9	0	27	0	0	0	0	0	2
17:45	0	50	22	0	72	0	9	2	0	11	0	0	0	0	0	1
SUBTOTAL	0	534	157	0	691	0	163	49	0	212	0	2	0	0	2	10
GRAND TOTAL	0	781	260	0	1041	0	293	101	0	394	0	3	3	0	6	34

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Seacliff Dr W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	6	20	0	0	26	2	1	0	0	3	0	0	0	0	0	0
07:15	16	23	0	0	39	3	3	0	0	6	0	0	0	0	0	1
07:30	15	40	0	0	55	5	4	0	0	9	0	1	0	0	1	3
07:45	23	28	0	0	51	5	6	0	0	11	0	0	0	0	0	0
08:00	15	32	0	0	47	3	6	0	0	9	0	0	0	0	0	0
08:15	11	29	0	0	40	6	0	0	0	6	0	0	0	0	0	0
08:30	13	37	0	0	50	4	4	0	0	8	0	0	0	0	0	0
08:45	17	48	0	0	65	5	5	0	0	10	0	0	0	0	0	0
SUBTOTAL	116	257	0	0	373	33	29	0	0	62	0	1	0	0	1	4

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Seacliff Dr W (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Seacliff Dr W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	26	65	0	0	91	7	1	0	0	8	0	0	0	0	0	2
16:15	21	62	0	0	83	6	9	0	0	15	0	1	0	0	1	2
16:30	21	66	0	0	87	3	7	0	0	10	0	0	0	0	0	0
16:45	14	78	0	0	92	9	0	0	0	9	0	0	0	0	0	4
17:00	21	59	0	0	80	4	1	0	0	5	0	1	0	0	1	0
17:15	21	71	0	0	92	7	2	0	0	9	0	1	0	0	1	0
17:30	21	63	0	0	84	3	1	0	0	4	0	0	0	0	0	0
17:45	13	57	0	0	70	4	2	0	0	6	0	0	0	0	0	0
SUBTOTAL	158	521	0	0	679	43	23	0	0	66	0	3	0	0	3	8
GRAND TOTAL	**274**	**778**	**0**	**0**	**1052**	**76**	**52**	**0**	**0**	**128**	**0**	**4**	**0**	**0**	**4**	**12**

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	07:30:00
To:	09:00:00	To:	08:30:00

Intersection: Sherk St & Seacliff Dr W (CR 20)
Site ID: 2016400001
Count Date: Oct 06, 2020

Weather conditions:

**** Signalized Intersection ****

Major Road: Seacliff Dr W runs E/W

North Approach

	Out	In	Total
Cars	102	125	227
Trucks	40	49	89
Bicycles	0	3	3
	142	**177**	**319**

Sherk St

Bicycles	0	0	0
Trucks	11	29	0
Cars	54	48	0
Totals	**65**	**77**	**0**

East Approach

	Out	In	Total
Cars	194	177	371
Trucks	92	45	137
Bicycles	3	1	4
	289	**223**	**512**

Seacliff Dr W

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	19	64	**83**	
1	16	129	**146**	

Peds: 3

Peds: 7

Peds: 14

Peds: 6



Seacliff Dr W

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	94	61	30	3
	195	133	62	0

West Approach

	Out	In	Total
Cars	193	187	380
Trucks	35	73	108
Bicycles	1	0	1
	229	**260**	**489**

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Sherk St & Seacliff Dr W (CR 20)
Count Date: Oct 06, 2020
Period: 07:00 - 09:00

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

Start Time	North Approach Sherk St						South Approach						East Approach Seacliff Dr W						West Approach Seacliff Dr W						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
07:30	10		23	0	3	33				5				50	22	0	1	72	20	45		0	3	65	170
07:45	22		21	0	2	43				1				46	33	0	6	79	28	34		0	0	62	184
08:00	29		16	0	2	45				0				51	21	0	5	72	18	38		0	0	56	173
08:15	16		5	0	0	21				0				48	18	0	2	66	17	29		0	0	46	133
Grand Total	**77**		**65**	**0**	**7**	**142**				**6**	**0**			**195**	**94**	**0**	**14**	**289**	**83**	**146**		**0**	**3**	**229**	**660**
Approach %	54.2		45.8	0		-					-			67.5	32.5	0		-	36.2	63.8		0		-	
Totals %	11.7		9.8	0		21.5					0			29.5	14.2	0		43.8	12.6	22.1		0		34.7	
PHF	**0.66**		**0.71**	**0**		**0.79**					**0**			**0.96**	**0.71**	**0**		**0.91**	**0.74**	**0.81**		**0**		**0.88**	**0.9**
Cars	48		54	0		102					0			133	61	0		194	64	129		0		193	489
% Cars	62.3		83.1	0		71.8					0			68.2	64.9	0		67.1	77.1	88.4		0		84.3	74.1
Trucks	29		11	0		40					0			62	30	0		92	19	16		0		35	167
% Trucks	37.7		16.9	0		28.2					0			31.8	31.9	0		31.8	22.9	11		0		15.3	25.3
Bicycles	0		0	0		0					0			0	3	0		3	0	1		0		1	4
% Bicycles	0		0	0		0					0			0	3.2	0		1	0	0.7		0		0.4	0.6
Peds					7	-				6	-						14	-					3	-	30
% Peds					23.3	-				20	-						46.7	-					10	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:00:00
To:	18:00:00	To:	17:00:00

Intersection: Sherk St & Seacliff Dr W (CR 20)
Site ID: 2016400001
Count Date: Oct 06, 2020

Weather conditions:

**** Signalized Intersection ****

Major Road: Seacliff Dr W runs E/W

North Approach

	Out	In	Total
Cars	147	168	315
Trucks	33	53	86
Bicycles	3	0	3
	183	**221**	**404**

Sherk St

Bicycles	0	3	0
Trucks	13	20	0
Cars	66	81	0
Totals	**79**	**104**	**0**

East Approach

	Out	In	Total
Cars	396	352	748
Trucks	128	37	165
Bicycles	1	4	5
	525	**393**	**918**

Seacliff Dr W

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	25	82	**107**	
1	17	271	**289**	

Peds: 8

Peds: 0

Peds: 6

Peds: 9



Seacliff Dr W

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	114	86	28	0
	411	310	100	1

West Approach

	Out	In	Total
Cars	353	376	729
Trucks	42	113	155
Bicycles	1	1	2
	396	**490**	**886**

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Sherk St & Seacliff Dr W (CR 20)
Count Date: Oct 06, 2020
Period: 16:00 - 18:00

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

Start Time	North Approach Sherk St						South Approach						East Approach Seacliff Dr W						West Approach Seacliff Dr W						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	26		24	0	0	50					2			92	37	0	1	129	33	66		0	2	99	278
16:15	25		23	0	0	48					2			108	23	0	1	131	27	72		0	2	99	278
16:30	30		17	0	0	47					0			108	34	0	2	142	24	73		0	0	97	286
16:45	23		15	0	0	38					5			103	20	0	2	123	23	78		0	4	101	262
Grand Total	**104**		**79**	**0**	**0**	**183**					**9**	**0**		**411**	**114**	**0**	**6**	**525**	**107**	**289**		**0**	**8**	**396**	**1104**
Approach %	56.8		43.2	0		-						-		78.3	21.7	0		-	27	73		0		-	
Totals %	9.4		7.2	0		16.6						0		37.2	10.3	0		47.6	9.7	26.2		0		35.9	
PHF	**0.87**		**0.82**	**0**		**0.92**						**0**		**0.95**	**0.77**	**0**		**0.92**	**0.81**	**0.93**		**0**		**0.98**	**0.97**
Cars	81		66	0		147						0		310	86	0		396	82	271		0		353	896
% Cars	77.9		83.5	0		80.3						0		75.4	75.4	0		75.4	76.6	93.8		0		89.1	81.2
Trucks	20		13	0		33						0		100	28	0		128	25	17		0		42	203
% Trucks	19.2		16.5	0		18						0		24.3	24.6	0		24.4	23.4	5.9		0		10.6	18.4
Bicycles	3		0	0		3						0		1	0	0		1	0	1		0		1	5
% Bicycles	2.9		0	0		1.6						0		0.2	0	0		0.2	0	0.3		0		0.3	0.5
Peds					0	-					9	-					6	-					8	-	23
% Peds					0	-					39.1	-					26.1	-					34.8	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #20-164 - McIntosh Perry

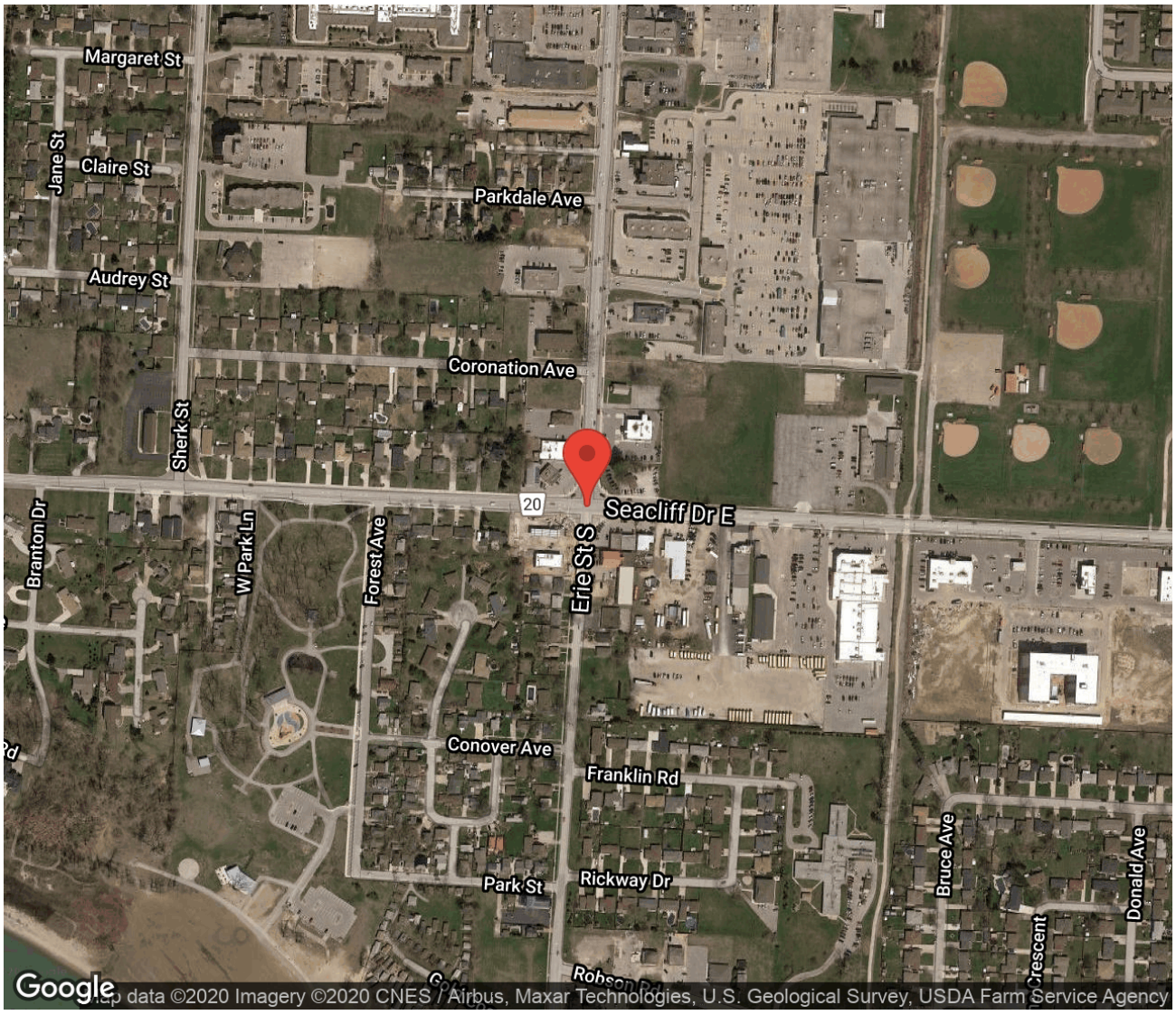
Intersection Count Report

Intersection:	Erie St S & Seacliff Dr (CR 20)
Municipality:	Leamington
Count Date:	Oct 06, 2020
Site Code:	2016400002
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

Erie St S - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	58	66	34	0	158	0	79	75	18	0	172	4
08:00 - 09:00	63	70	38	0	171	1	89	90	18	0	197	6
BREAK												
16:00 - 17:00	203	139	163	0	505	6	100	115	38	0	253	4
17:00 - 18:00	154	158	123	0	435	1	85	103	21	0	209	6
GRAND TOTAL	**478**	**433**	**358**	**0**	**1269**	**8**	**353**	**383**	**95**	**0**	**831**	**20**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

Seacliff Dr (CR 20) - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	9	123	88	1	221	2	39	139	44	0	222	6
08:00 - 09:00	16	155	117	2	290	1	59	163	59	0	281	2
BREAK												
16:00 - 17:00	27	247	197	0	471	9	104	247	80	0	431	10
17:00 - 18:00	34	188	169	0	391	4	113	259	90	0	462	4
GRAND TOTAL	**86**	**713**	**571**	**3**	**1373**	**16**	**315**	**808**	**273**	**0**	**1396**	**22**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	10	9	4	0	23	1	5	1	0	7	0	0	0	0	0	0
07:15	12	13	3	0	28	6	6	3	0	15	0	0	0	0	0	0
07:30	11	12	10	0	33	1	3	3	0	7	0	0	0	0	0	0
07:45	12	14	7	0	33	5	4	3	0	12	0	0	0	0	0	0
08:00	9	10	8	0	27	5	6	4	0	15	0	0	0	0	0	1
08:15	2	15	7	0	24	4	4	1	0	9	0	0	0	0	0	0
08:30	16	17	7	0	40	4	0	0	0	4	0	0	0	0	0	0
08:45	16	12	10	0	38	7	6	1	0	14	0	0	0	0	0	0
SUBTOTAL	88	102	56	0	246	33	34	16	0	83	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	39	31	38	0	108	16	7	7	0	30	0	0	0	0	0	2
16:15	38	25	28	0	91	6	3	9	0	18	0	0	0	0	0	0
16:30	44	35	30	0	109	13	6	11	0	30	0	1	0	0	1	1
16:45	36	28	35	0	99	11	3	5	0	19	0	0	0	0	0	3
17:00	39	33	29	0	101	4	10	3	0	17	0	0	0	0	0	1
17:15	35	35	19	0	89	6	8	6	0	20	0	0	0	0	0	0
17:30	28	33	30	0	91	7	5	7	0	19	0	0	0	0	0	0
17:45	28	28	25	0	81	7	6	4	0	17	0	0	0	0	0	0
SUBTOTAL	287	248	234	0	769	70	48	52	0	170	0	1	0	0	1	7
GRAND TOTAL	**375**	**350**	**290**	**0**	**1015**	**103**	**82**	**68**	**0**	**253**	**0**	**1**	**0**	**0**	**1**	**8**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	16	8	3	0	27	0	3	0	0	3	0	0	0	0	0	1
07:15	13	17	3	0	33	6	5	0	0	11	0	0	0	0	0	2
07:30	13	10	5	0	28	7	4	2	0	13	0	0	0	0	0	0
07:45	22	22	3	0	47	2	6	2	0	10	0	0	0	0	0	1
08:00	15	17	4	0	36	9	5	2	0	16	0	0	0	0	0	0
08:15	14	19	6	0	39	11	8	1	0	20	0	0	0	0	0	0
08:30	13	12	1	0	26	4	3	1	0	8	0	0	0	0	0	4
08:45	10	19	1	0	30	13	7	2	0	22	0	0	0	0	0	2
SUBTOTAL	116	124	26	0	266	52	41	10	0	103	0	0	0	0	0	10

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	28	27	5	0	60	2	4	2	0	8	0	0	0	0	0	1
16:15	18	19	4	0	41	5	3	2	0	10	0	0	0	0	0	3
16:30	18	17	11	0	46	8	4	2	0	14	0	1	0	0	1	0
16:45	12	33	8	0	53	9	7	4	0	20	0	0	0	0	0	0
17:00	19	26	4	0	49	7	5	2	0	14	0	0	0	0	0	4
17:15	10	20	3	0	33	5	5	2	0	12	0	0	0	0	0	0
17:30	16	24	2	0	42	3	2	2	0	7	0	0	0	0	0	0
17:45	20	19	4	0	43	5	2	2	0	9	0	0	0	0	0	2
SUBTOTAL	141	185	41	0	367	44	32	18	0	94	0	1	0	0	1	10
GRAND TOTAL	**257**	**309**	**67**	**0**	**633**	**96**	**73**	**28**	**0**	**197**	**0**	**1**	**0**	**0**	**1**	**20**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Seacliff Dr (CR 20)

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	1	22	13	0	36	1	7	4	0	12	0	0	0	0	0	0
07:15	1	12	20	1	34	2	14	8	0	24	0	0	0	0	0	1
07:30	1	20	18	0	39	0	15	7	0	22	0	0	0	0	0	0
07:45	1	26	15	0	42	2	7	3	0	12	0	0	0	0	0	1
08:00	6	30	16	2	54	1	14	7	0	22	0	0	0	0	0	0
08:15	0	17	10	0	27	1	12	13	0	26	0	0	0	0	0	1
08:30	2	23	23	0	48	2	19	6	0	27	0	0	0	0	0	0
08:45	1	28	29	0	58	3	12	13	0	28	0	0	0	0	0	0
SUBTOTAL	13	178	144	3	338	12	100	61	0	173	0	0	0	0	0	3

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Seacliff Dr (CR 20)

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	3	42	33	0	78	2	19	6	0	27	0	0	0	0	0	2
16:15	7	43	48	0	98	3	16	5	0	24	0	0	0	0	0	2
16:30	6	48	42	0	96	3	13	6	0	22	0	1	0	0	1	3
16:45	2	49	46	0	97	1	16	11	0	28	0	0	0	0	0	2
17:00	7	42	38	0	87	0	10	5	0	15	0	0	0	0	0	1
17:15	10	40	48	0	98	2	11	8	0	21	0	0	0	0	0	2
17:30	7	29	33	0	69	1	14	6	0	21	0	0	0	0	0	0
17:45	7	32	24	0	63	0	10	7	0	17	0	0	0	0	0	1
SUBTOTAL	49	325	312	0	686	12	109	54	0	175	0	1	0	0	1	13
GRAND TOTAL	**62**	**503**	**456**	**3**	**1024**	**24**	**209**	**115**	**0**	**348**	**0**	**1**	**0**	**0**	**1**	**16**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Seacliff Dr (CR 20)

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	3	13	7	0	23	3	10	2	0	15	0	0	0	0	0	0
07:15	3	18	6	0	27	3	12	5	0	20	0	0	0	0	0	2
07:30	9	33	10	0	52	4	20	4	0	28	0	0	0	0	0	3
07:45	14	20	4	0	38	0	11	6	0	17	0	2	0	0	2	1
08:00	5	31	14	0	50	5	17	5	0	27	0	0	0	0	0	0
08:15	8	18	7	0	33	4	15	8	0	27	0	0	0	0	0	0
08:30	12	24	4	0	40	4	14	7	0	25	0	0	0	0	0	1
08:45	18	34	7	0	59	3	10	7	0	20	0	0	0	0	0	1
SUBTOTAL	72	191	59	0	322	26	109	44	0	179	0	2	0	0	2	8

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Seacliff Dr (CR 20)
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Seacliff Dr (CR 20)

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	29	46	13	0	88	2	18	4	0	24	0	0	0	0	0	4
16:15	21	43	11	0	75	3	20	3	0	26	0	0	0	0	0	1
16:30	17	31	21	0	69	4	20	7	0	31	0	0	0	0	0	2
16:45	22	54	15	0	91	6	15	6	0	27	0	0	0	0	0	3
17:00	25	53	19	0	97	8	19	5	0	32	0	0	0	0	0	4
17:15	22	39	13	0	74	4	26	4	0	34	0	0	0	0	0	0
17:30	25	37	15	0	77	4	24	8	0	36	0	2	0	0	2	0
17:45	23	33	22	0	78	2	25	4	0	31	0	1	0	0	1	0
SUBTOTAL	184	336	129	0	649	33	167	41	0	241	0	3	0	0	3	14
GRAND TOTAL	**256**	**527**	**188**	**0**	**971**	**59**	**276**	**85**	**0**	**420**	**0**	**5**	**0**	**0**	**5**	**22**

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: Erie St S & Seacliff Dr (CR 20)
Site ID: 2016400002
Count Date: Oct 06, 2020

Weather conditions:

**** Signalized Intersection ****

Major Road: Seacliff Dr (CR 20) runs E/W

North Approach

	Out	In	Total
Cars	129	188	317
Trucks	42	78	120
Bicycles	0	0	0
	171	**266**	**437**

Erie St S

Bicycles	0	0	0	0
Trucks	6	16	20	0
Cars	32	54	43	0
Totals	**38**	**70**	**63**	**0**

Peds: 1

East Approach

	Out	In	Total
Cars	187	164	351
Trucks	103	82	185
Bicycles	0	0	0
	290	**246**	**536**

Seacliff Dr (CR 20)

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	16	43	**59**	
0	56	107	**163**	
0	27	32	**59**	

Peds: 2



Peds: 1

Seacliff Dr (CR 20)

Totals	Cars	Trucks	Bicycles
2	2	0	0
117	78	39	0
155	98	57	0
16	9	7	0

Peds: 6

West Approach

	Out	In	Total
Cars	182	182	364
Trucks	99	100	199
Bicycles	0	0	0
	281	**282**	**563**

Totals	**89**	**90**	**18**	**0**
Cars	52	67	12	0
Trucks	37	23	6	0
Bicycles	0	0	0	0

Erie St S

South Approach

	Out	In	Total
Cars	131	95	226
Trucks	66	50	116
Bicycles	0	0	0
	197	**145**	**342**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Seacliff Dr (CR 20)
Count Date: Oct 06, 2020
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Seacliff Dr (CR 20)						West Approach Seacliff Dr (CR 20)						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	14	16	12	0	1	42	24	22	6	0	0	52	7	44	23	2	0	76	10	48	19	0	0	77	247
08:15	6	19	8	0	0	33	25	27	7	0	0	59	1	29	23	0	1	53	12	33	15	0	0	60	205
08:30	20	17	7	0	0	44	17	15	2	0	4	34	4	42	29	0	0	75	16	38	11	0	1	65	218
08:45	23	18	11	0	0	52	23	26	3	0	2	52	4	40	42	0	0	86	21	44	14	0	1	79	269
Grand Total	**63**	**70**	**38**	**0**	**1**	**171**	**89**	**90**	**18**	**0**	**6**	**197**	**16**	**155**	**117**	**2**	**1**	**290**	**59**	**163**	**59**	**0**	**2**	**281**	**939**
Approach %	36.8	40.9	22.2	0		-	45.2	45.7	9.1	0		-	5.5	53.4	40.3	0.7		-	21	58	21	0		-	
Totals %	6.7	7.5	4	0		18.2	9.5	9.6	1.9	0		21	1.7	16.5	12.5	0.2		30.9	6.3	17.4	6.3	0		29.9	
PHF	**0.68**	**0.92**	**0.79**	**0**		**0.82**	**0.89**	**0.83**	**0.64**	**0**		**0.83**	**0.57**	**0.88**	**0.7**	**0.25**		**0.84**	**0.7**	**0.85**	**0.78**	**0**		**0.89**	**0.87**
Cars	43	54	32	0		129	52	67	12	0		131	9	98	78	2		187	43	107	32	0		182	629
% Cars	68.3	77.1	84.2	0		75.4	58.4	74.4	66.7	0		66.5	56.3	63.2	66.7	100		64.5	72.9	65.6	54.2	0		64.8	67
Trucks	20	16	6	0		42	37	23	6	0		66	7	57	39	0		103	16	56	27	0		99	310
% Trucks	31.7	22.9	15.8	0		24.6	41.6	25.6	33.3	0		33.5	43.8	36.8	33.3	0		35.5	27.1	34.4	45.8	0		35.2	33
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					6	-					1	-					2	-	10
% Peds					10	-					60	-					10	-					20	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:00:00
To:	18:00:00	To:	17:00:00

Intersection: Erie St S & Seacliff Dr (CR 20)
Site ID: 2016400002
Count Date: Oct 06, 2020

Weather conditions:

**** Signalized Intersection ****

Major Road: Seacliff Dr (CR 20) runs E/W

North Approach

	Out	In	Total
Cars	407	354	761
Trucks	97	61	158
Bicycles	1	1	2
	505	**416**	**921**

Erie St S

Bicycles	0	1	0	0
Trucks	32	19	46	0
Cars	131	119	157	0
Totals	**163**	**139**	**203**	**0**

Peds: 6

East Approach

	Out	In	Total
Cars	369	359	728
Trucks	101	129	230
Bicycles	1	0	1
	471	**488**	**959**

Seacliff Dr (CR 20)

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	15	89	**104**	
0	73	174	**247**	
0	20	60	**80**	

Peds: 10



Peds: 9

Seacliff Dr (CR 20)

Totals	Cars	Trucks	Bicycles
0	0	0	0
197	169	28	0
247	182	64	1
27	18	9	0

Peds: 4

West Approach

	Out	In	Total
Cars	323	389	712
Trucks	108	120	228
Bicycles	0	1	1
	431	**510**	**941**

Totals	**100**	**115**	**38**	**0**
Cars	76	96	28	0
Trucks	24	18	10	0
Bicycles	0	1	0	0

Erie St S

South Approach

	Out	In	Total
Cars	200	197	397
Trucks	52	48	100
Bicycles	1	1	2
	253	**246**	**499**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Seacliff Dr (CR 20)
Count Date: Oct 06, 2020
Period: 16:00 - 18:00

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

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Seacliff Dr (CR 20)						West Approach Seacliff Dr (CR 20)						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	55	38	45	0	2	138	30	31	7	0	1	68	5	61	39	0	2	105	31	64	17	0	4	112	423
16:15	44	28	37	0	0	109	23	22	6	0	3	51	10	59	53	0	2	122	24	63	14	0	1	101	383
16:30	57	42	41	0	1	140	26	22	13	0	0	61	9	62	48	0	3	119	21	51	28	0	2	100	420
16:45	47	31	40	0	3	118	21	40	12	0	0	73	3	65	57	0	2	125	28	69	21	0	3	118	434
Grand Total	**203**	**139**	**163**	**0**	**6**	**505**	**100**	**115**	**38**	**0**	**4**	**253**	**27**	**247**	**197**	**0**	**9**	**471**	**104**	**247**	**80**	**0**	**10**	**431**	**1660**
Approach %	40.2	27.5	32.3	0		-	39.5	45.5	15	0		-	5.7	52.4	41.8	0		-	24.1	57.3	18.6	0		-	
Totals %	12.2	8.4	9.8	0		30.4	6	6.9	2.3	0		15.2	1.6	14.9	11.9	0		28.4	6.3	14.9	4.8	0		26	
PHF	**0.89**	**0.83**	**0.91**	**0**		**0.9**	**0.83**	**0.72**	**0.73**	**0**		**0.87**	**0.68**	**0.95**	**0.86**	**0**		**0.94**	**0.84**	**0.89**	**0.71**	**0**		**0.91**	**0.96**
Cars	157	119	131	0		407	76	96	28	0		200	18	182	169	0		369	89	174	60	0		323	1299
% Cars	77.3	85.6	80.4	0		80.6	76	83.5	73.7	0		79.1	66.7	73.7	85.8	0		78.3	85.6	70.4	75	0		74.9	78.3
Trucks	46	19	32	0		97	24	18	10	0		52	9	64	28	0		101	15	73	20	0		108	358
% Trucks	22.7	13.7	19.6	0		19.2	24	15.7	26.3	0		20.6	33.3	25.9	14.2	0		21.4	14.4	29.6	25	0		25.1	21.6
Bicycles	0	1	0	0		1	0	1	0	0		1	0	1	0	0		1	0	0	0	0		0	3
% Bicycles	0	0.7	0	0		0.2	0	0.9	0	0		0.4	0	0.4	0	0		0.2	0	0	0	0		0	0.2
Peds					6	-					4	-					9	-					10	-	29
% Peds					20.7	-					13.8	-					31	-					34.5	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #20-164 - McIntosh Perry

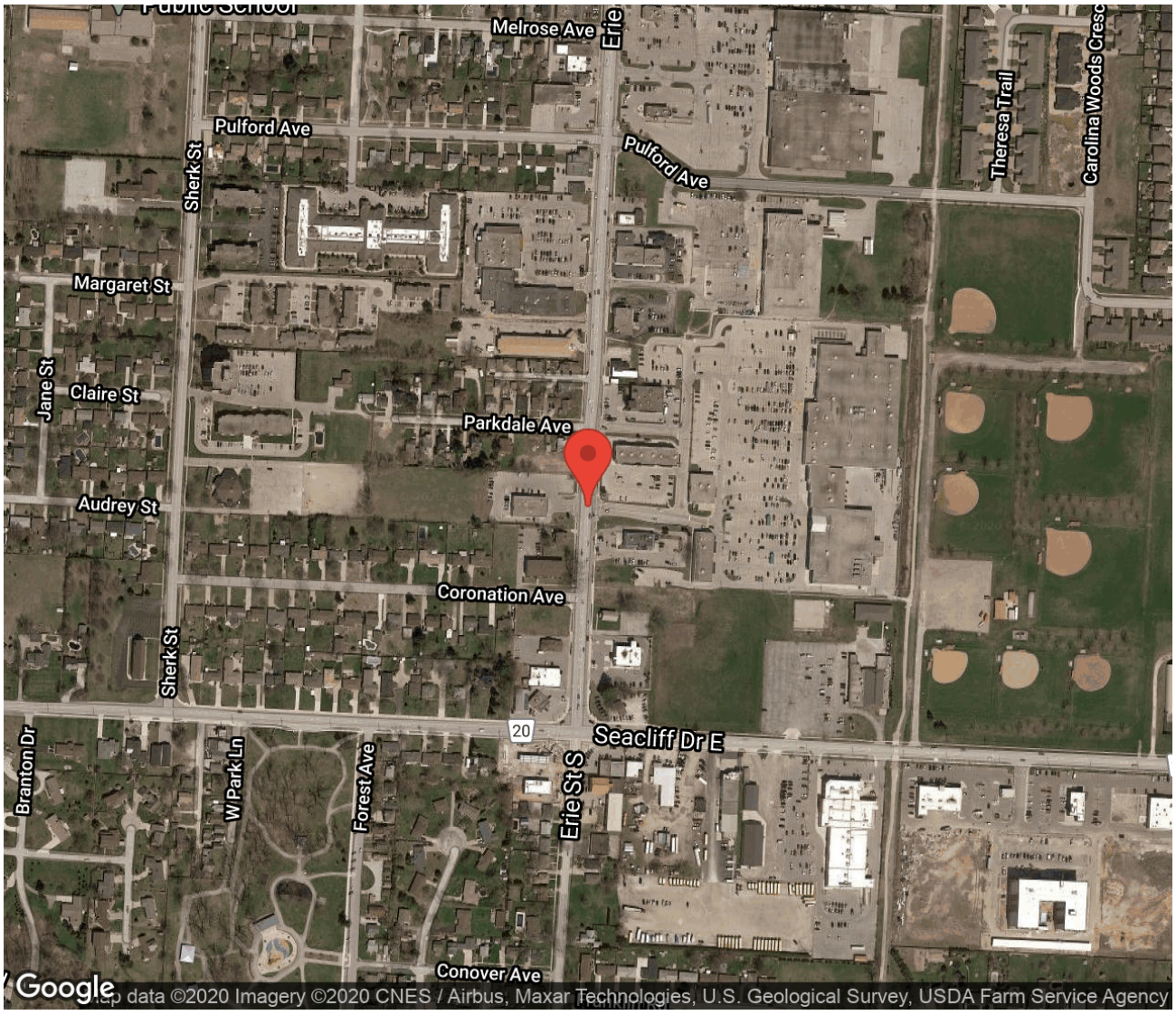
Intersection Count Report

Intersection:	Erie St S & Walmart-BMO Bank
Municipality:	Leamington
Count Date:	Oct 06, 2020
Site Code:	2016400003
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

Erie St S - Traffic Summary

Hour	North Approach Totals (Includes Cars, Trucks, Bicycles)						South Approach Totals (Includes Cars, Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	12	162	1	0	175	0	0	178	22	0	200	0
08:00 - 09:00	29	159	6	0	194	0	8	193	48	0	249	0
BREAK												
16:00 - 17:00	39	352	10	0	401	6	7	306	86	0	399	3
17:00 - 18:00	46	351	9	0	406	3	3	273	92	0	368	2
GRAND TOTAL	**126**	**1024**	**26**	**0**	**1176**	**9**	**18**	**950**	**248**	**0**	**1216**	**5**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

Walmart - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	8	0	5	0	13	6	0	0	2	0	2	6
08:00 - 09:00	24	0	31	0	55	3	4	0	2	0	6	3
BREAK												
16:00 - 17:00	115	2	89	0	206	12	17	2	14	0	33	15
17:00 - 18:00	82	1	98	0	181	3	7	1	5	0	13	14
GRAND TOTAL	**229**	**3**	**223**	**0**	**455**	**24**	**28**	**3**	**23**	**0**	**54**	**38**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	4	23	0	0	27	1	6	0	0	7	0	0	0	0	0	0
07:15	1	35	0	0	36	0	10	0	0	10	0	0	0	0	0	0
07:30	0	33	1	0	34	1	5	0	0	6	0	0	0	0	0	0
07:45	3	37	0	0	40	2	12	0	0	14	0	1	0	0	1	0
08:00	6	27	2	0	35	2	16	0	0	18	0	0	0	0	0	0
08:15	5	22	0	0	27	1	8	0	0	9	0	0	0	0	0	0
08:30	5	38	2	0	45	2	5	0	0	7	0	0	0	0	0	0
08:45	5	31	2	0	38	3	12	0	0	15	0	0	0	0	0	0
SUBTOTAL	29	246	7	0	282	12	74	0	0	86	0	1	0	0	1	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	13	54	4	0	71	5	19	0	0	24	1	0	0	0	1	0
16:15	7	69	2	0	78	0	15	0	0	15	0	1	0	0	1	1
16:30	7	89	0	0	96	1	24	1	0	26	0	0	0	0	0	4
16:45	5	67	3	0	75	0	14	0	0	14	0	0	0	0	0	1
17:00	14	82	1	0	97	3	20	0	0	23	0	1	0	0	1	0
17:15	4	62	1	0	67	2	20	1	0	23	0	0	0	0	0	1
17:30	7	74	2	0	83	1	16	1	0	18	0	0	0	0	0	2
17:45	12	62	3	0	77	3	13	0	0	16	0	1	0	0	1	0
SUBTOTAL	69	559	16	0	644	15	141	3	0	159	1	3	0	0	4	9
GRAND TOTAL	**98**	**805**	**23**	**0**	**926**	**27**	**215**	**3**	**0**	**245**	**1**	**4**	**0**	**0**	**5**	**9**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	22	3	0	25	0	10	2	0	12	0	0	0	0	0	0
07:15	0	36	5	0	41	0	10	2	0	12	0	0	0	0	0	0
07:30	0	40	1	0	41	0	8	1	0	9	0	0	0	0	0	0
07:45	0	43	6	0	49	0	8	2	0	10	0	1	0	0	1	0
08:00	2	35	5	0	42	0	11	2	0	13	0	0	0	0	0	0
08:15	1	37	9	0	47	0	14	4	0	18	0	0	0	0	0	0
08:30	2	39	5	0	46	0	11	2	0	13	0	0	0	0	0	0
08:45	2	30	20	0	52	1	16	1	0	18	0	0	0	0	0	0
SUBTOTAL	7	282	54	0	343	1	88	16	0	105	0	1	0	0	1	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	1	56	18	0	75	1	9	2	0	12	0	0	0	0	0	0
16:15	2	66	20	0	88	0	8	6	0	14	0	0	1	0	1	1
16:30	2	56	16	0	74	0	13	2	0	15	0	1	0	0	1	1
16:45	1	81	17	0	99	0	16	4	0	20	0	0	0	0	0	1
17:00	0	55	25	0	80	0	15	4	0	19	0	1	0	0	1	0
17:15	1	63	19	0	83	0	13	3	0	16	0	0	0	0	0	2
17:30	1	48	23	0	72	0	12	1	0	13	0	2	0	0	2	0
17:45	1	53	16	0	70	0	11	1	0	12	0	0	0	0	0	0
SUBTOTAL	9	478	154	0	641	1	97	23	0	121	0	4	1	0	5	5
GRAND TOTAL	16	760	208	0	984	2	185	39	0	226	0	5	1	0	6	5

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Walmart

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
07:15	3	0	1	0	4	0	0	1	0	1	0	0	0	0	0	2
07:30	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	3
07:45	0	0	0	0	0	3	0	1	0	4	0	0	0	0	0	0
08:00	3	0	10	0	13	0	0	1	0	1	0	0	0	0	0	1
08:15	8	0	3	0	11	0	0	1	0	1	0	0	0	0	0	2
08:30	4	0	1	0	5	0	0	3	0	3	0	0	0	0	0	0
08:45	7	0	9	0	16	2	0	3	0	5	0	0	0	0	0	0
SUBTOTAL	26	0	25	0	51	6	0	11	0	17	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Walmart

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	22	0	13	0	35	1	1	2	0	4	0	0	0	0	0	1
16:15	23	0	19	0	42	5	0	3	0	8	0	0	0	0	0	3
16:30	26	0	24	0	50	5	1	4	0	10	0	0	0	0	0	6
16:45	29	0	22	0	51	4	0	2	0	6	0	0	0	0	0	2
17:00	15	0	25	0	40	4	0	4	0	8	0	0	0	0	0	1
17:15	17	1	19	0	37	1	0	1	0	2	0	0	0	0	0	2
17:30	18	0	22	0	40	3	0	3	0	6	0	0	0	0	0	0
17:45	20	0	18	0	38	4	0	6	0	10	0	0	0	0	0	0
SUBTOTAL	170	1	162	0	333	27	2	25	0	54	0	0	0	0	0	15
GRAND TOTAL	**196**	**1**	**187**	**0**	**384**	**33**	**2**	**36**	**0**	**71**	**0**	**0**	**0**	**0**	**0**	**24**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - BMO Bank

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	4	0	4	0	8	0	0	0	0	0	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Walmart-BMO Bank
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - BMO Bank

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	9	0	0	0	9	2	0	0	0	2	0	0	0	0	0	11
16:15	3	0	2	0	5	0	0	1	0	1	0	0	0	0	0	1
16:30	2	1	5	0	8	0	0	0	0	0	0	0	0	0	0	3
16:45	1	1	6	0	8	0	0	0	0	0	0	0	0	0	0	0
17:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6
17:15	0	0	2	0	2	1	1	0	0	2	0	0	0	0	0	1
17:30	3	0	1	0	4	1	0	0	0	1	0	0	0	0	0	1
17:45	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	6
SUBTOTAL	20	2	18	0	40	4	1	1	0	6	0	0	0	0	0	29
GRAND TOTAL	**24**	**2**	**22**	**0**	**48**	**4**	**1**	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**38**

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: Erie St S & Walmart-BMO Bank
Site ID: 2016400003
Count Date: Oct 06, 2020

Weather conditions:

**** Signalized Intersection ****

Major Road: Erie St S runs N/S

North Approach

	Out	In	Total
Cars	145	168	313
Trucks	49	60	109
Bicycles	0	0	0
	194	**228**	**422**

Erie St S

Bicycles	0	0	0	0
Trucks	0	41	8	0
Cars	6	118	21	0
Totals	**6**	**159**	**29**	**0**

Peds: 0

East Approach

	Out	In	Total
Cars	45	60	105
Trucks	10	17	27
Bicycles	0	0	0
	55	**77**	**132**

BMO Bank

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	0	4	**4**
0	0	0	**0**
0	0	2	**2**

Peds: 3



Peds: 3

Walmart

Totals	Cars	Trucks	Bicycles
0	0	0	0
31	23	8	0
0	0	0	0
24	22	2	0

Peds: 0

West Approach

	Out	In	Total
Cars	6	13	19
Trucks	0	1	1
Bicycles	0	0	0
	6	**14**	**20**

Totals	**8**	**193**	**48**	**0**
Cars	7	141	39	0
Trucks	1	52	9	0
Bicycles	0	0	0	0

Erie St S

South Approach

	Out	In	Total
Cars	187	142	329
Trucks	62	43	105
Bicycles	0	0	0
	249	**185**	**434**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Walmart-BMO Bank
Count Date: Oct 06, 2020
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Walmart						West Approach BMO Bank						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
08:00	8	43	2	0	0	53	2	46	7	0	0	55	3	0	11	0	1	14	0	0	0	0	1	0	122
08:15	6	30	0	0	0	36	1	51	13	0	0	65	8	0	4	0	2	12	2	0	0	0	0	2	115
08:30	7	43	2	0	0	52	2	50	7	0	0	59	4	0	4	0	0	8	0	0	1	0	0	1	120
08:45	8	43	2	0	0	53	3	46	21	0	0	70	9	0	12	0	0	21	2	0	1	0	2	3	147
Grand Total	**29**	**159**	**6**	**0**	**0**	**194**	**8**	**193**	**48**	**0**	**0**	**249**	**24**	**0**	**31**	**0**	**3**	**55**	**4**	**0**	**2**	**0**	**3**	**6**	**504**
Approach %	14.9	82	3.1	0		-	3.2	77.5	19.3	0		-	43.6	0	56.4	0		-	66.7	0	33.3	0		-	
Totals %	5.8	31.5	1.2	0		38.5	1.6	38.3	9.5	0		49.4	4.8	0	6.2	0		10.9	0.8	0	0.4	0		1.2	
PHF	**0.91**	**0.92**	**0.75**	**0**		**0.92**	**0.67**	**0.95**	**0.57**	**0**		**0.89**	**0.67**	**0**	**0.65**	**0**		**0.65**	**0.5**	**0**	**0.5**	**0**		**0.5**	**0.86**
Cars	21	118	6	0		145	7	141	39	0		187	22	0	23	0		45	4	0	2	0		6	383
% Cars	72.4	74.2	100	0		74.7	87.5	73.1	81.3	0		75.1	91.7	0	74.2	0		81.8	100	0	100	0		100	76
Trucks	8	41	0	0		49	1	52	9	0		62	2	0	8	0		10	0	0	0	0		0	121
% Trucks	27.6	25.8	0	0		25.3	12.5	26.9	18.8	0		24.9	8.3	0	25.8	0		18.2	0	0	0	0		0	24
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					0	-					3	-					3	-	6
% Peds					0	-					0	-					50	-					50	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:15:00
To:	18:00:00	To:	17:15:00

Intersection: Erie St S & Walmart-BMO Bank
Site ID: 2016400003
Count Date: Oct 06, 2020

Weather conditions:

**** Signalized Intersection ****

Major Road: Erie St S runs N/S

North Approach

	Out	In	Total
Cars	346	355	701
Trucks	78	65	143
Bicycles	2	2	4
	426	**422**	**848**

Erie St S

Bicycles	0	2	0	0
Trucks	1	73	4	0
Cars	6	307	33	0
Totals	**7**	**382**	**37**	**0**

East Approach

	Out	In	Total
Cars	183	113	296
Trucks	32	20	52
Bicycles	0	1	1
	215	**134**	**349**

Peds: 6

BMO Bank

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	0	7	**7**
0	0	2	**2**
0	1	13	**14**

Peds: 10



Peds: 12

Walmart

Totals	Cars	Trucks	Bicycles
0	0	0	0
103	90	13	0
1	0	1	0
111	93	18	0

Peds: 3

West Approach

	Out	In	Total
Cars	22	11	33
Trucks	1	2	3
Bicycles	0	0	0
	23	**13**	**36**

Totals	**5**	**312**	**95**	**0**
Cars	5	258	78	0
Trucks	0	52	16	0
Bicycles	0	2	1	0

Erie St S

South Approach

	Out	In	Total
Cars	341	413	754
Trucks	68	92	160
Bicycles	3	2	5
	412	**507**	**919**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Walmart-BMO Bank
Count Date: Oct 06, 2020
Period: 16:00 - 18:00

Peak Hour Data (16:15 - 17:15)

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Walmart						West Approach BMO Bank						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
16:15	7	85	2	0	1	94	2	74	27	0	1	103	28	0	22	0	3	50	3	0	3	0	1	6	253
16:30	8	113	1	0	4	122	2	70	18	0	1	90	31	1	28	0	6	60	2	1	5	0	3	8	280
16:45	5	81	3	0	1	89	1	97	21	0	1	119	33	0	24	0	2	57	1	1	6	0	0	8	273
17:00	17	103	1	0	0	121	0	71	29	0	0	100	19	0	29	0	1	48	1	0	0	0	6	1	270
Grand Total	**37**	**382**	**7**	**0**	**6**	**426**	**5**	**312**	**95**	**0**	**3**	**412**	**111**	**1**	**103**	**0**	**12**	**215**	**7**	**2**	**14**	**0**	**10**	**23**	**1076**
Approach %	8.7	89.7	1.6	0		-	1.2	75.7	23.1	0		-	51.6	0.5	47.9	0		-	30.4	8.7	60.9	0		-	
Totals %	3.4	35.5	0.7	0		39.6	0.5	29	8.8	0		38.3	10.3	0.1	9.6	0		20	0.7	0.2	1.3	0		2.1	
PHF	**0.54**	**0.85**	**0.58**	**0**		**0.87**	**0.63**	**0.8**	**0.82**	**0**		**0.87**	**0.84**	**0.25**	**0.89**	**0**		**0.9**	**0.58**	**0.5**	**0.58**	**0**		**0.72**	**0.96**
Cars	33	307	6	0		346	5	258	78	0		341	93	0	90	0		183	7	2	13	0		22	892
% Cars	89.2	80.4	85.7	0		81.2	100	82.7	82.1	0		82.8	83.8	0	87.4	0		85.1	100	100	92.9	0		95.7	82.9
Trucks	4	73	1	0		78	0	52	16	0		68	18	1	13	0		32	0	0	1	0		1	179
% Trucks	10.8	19.1	14.3	0		18.3	0	16.7	16.8	0		16.5	16.2	100	12.6	0		14.9	0	0	7.1	0		4.3	16.6
Bicycles	0	2	0	0		2	0	2	1	0		3	0	0	0	0		0	0	0	0	0		0	5
% Bicycles	0	0.5	0	0		0.5	0	0.6	1.1	0		0.7	0	0	0	0		0	0	0	0	0		0	0.5
Peds					6	-					3	-					12	-					10	-	31
% Peds					19.4	-					9.7	-					38.7	-					32.3	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #20-164 - McIntosh Perry

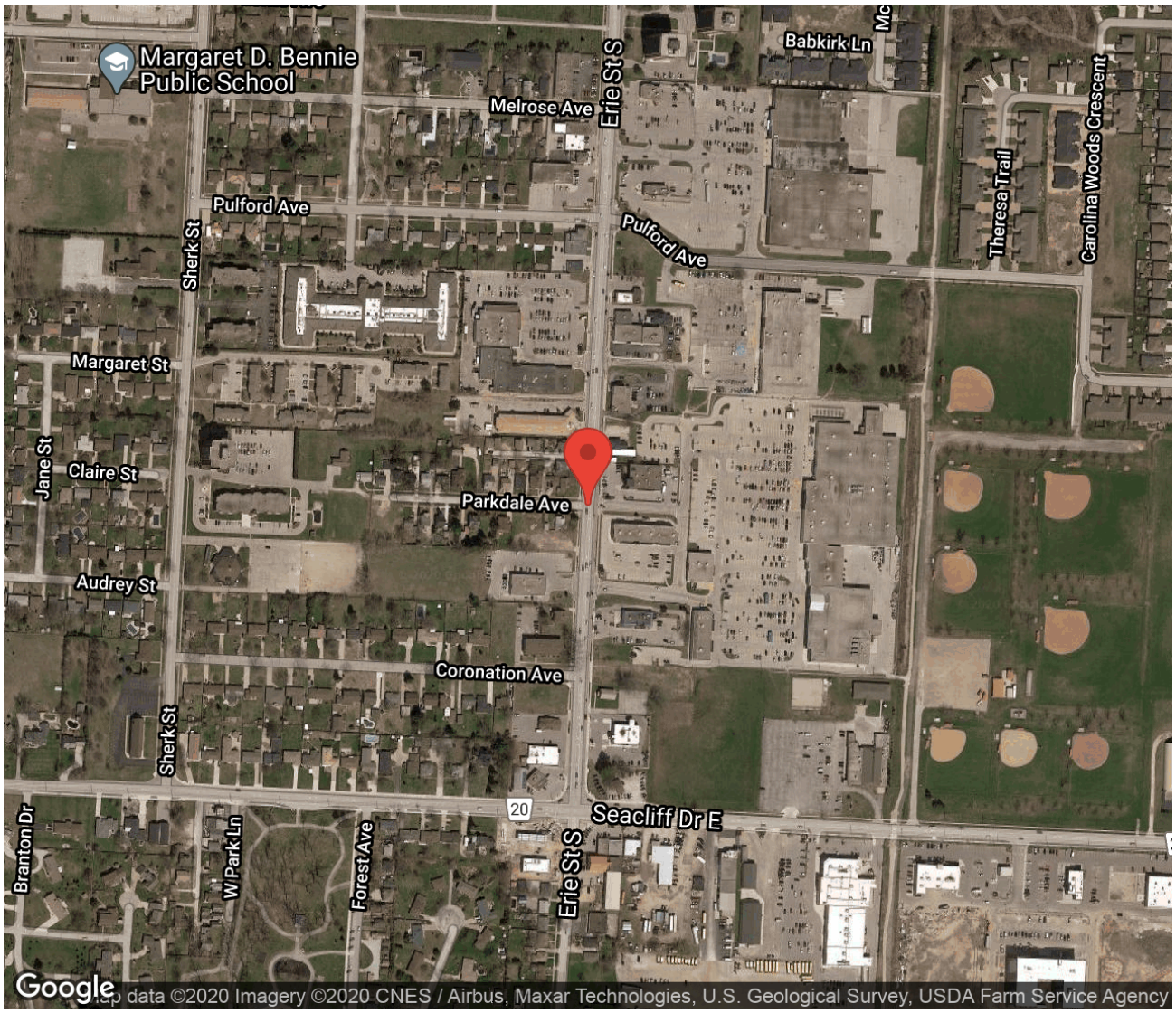
Intersection Count Report

Intersection:	Erie St S & Parkdale Ave-Commercial Access
Municipality:	Leamington
Count Date:	Oct 06, 2020
Site Code:	2016400004
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

Erie St S - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	22	165	17	0	204	0	24	158	1	0	183	0
08:00 - 09:00	58	189	15	0	262	0	17	204	5	0	226	1
BREAK												
16:00 - 17:00	122	388	15	0	525	1	22	375	11	0	408	0
17:00 - 18:00	120	393	17	0	530	2	13	357	12	0	382	0
GRAND TOTAL	**322**	**1135**	**64**	**0**	**1521**	**3**	**76**	**1094**	**29**	**0**	**1199**	**1**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

Commercial Access - Traffic Summary

Hour	East Approach Totals (Includes Cars, Trucks, Bicycles)						West Approach Totals (Includes Cars, Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	3	0	19	0	22	5	16	0	7	0	23	5
08:00 - 09:00	2	0	27	0	29	4	12	0	2	0	14	3
BREAK												
16:00 - 17:00	6	1	100	0	107	12	12	0	6	0	18	12
17:00 - 18:00	9	2	94	0	105	4	8	0	4	0	12	13
GRAND TOTAL	**20**	**3**	**240**	**0**	**263**	**25**	**48**	**0**	**19**	**0**	**67**	**33**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	5	26	1	0	32	0	6	1	0	7	0	0	0	0	0	0
07:15	0	33	2	0	35	1	9	0	0	10	0	0	0	0	0	0
07:30	4	32	6	0	42	1	5	0	0	6	0	0	0	0	0	0
07:45	11	39	7	0	57	0	14	0	0	14	0	1	0	0	1	0
08:00	10	35	2	0	47	0	19	0	0	19	0	0	0	0	0	0
08:15	12	26	6	0	44	0	8	0	0	8	0	0	0	0	0	0
08:30	9	43	1	0	53	2	7	0	0	9	0	0	0	0	0	0
08:45	22	37	5	0	64	3	14	1	0	18	0	0	0	0	0	0
SUBTOTAL	73	271	30	0	374	7	82	2	0	91	0	1	0	0	1	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	23	67	7	0	97	3	24	0	0	27	0	1	0	0	1	0
16:15	33	76	2	0	111	4	15	0	0	19	0	0	0	0	0	1
16:30	29	92	3	0	124	5	25	0	0	30	0	1	0	0	1	0
16:45	22	73	3	0	98	3	14	0	0	17	0	0	0	0	0	0
17:00	29	95	2	0	126	3	22	0	0	25	0	1	0	0	1	2
17:15	32	64	5	0	101	5	23	0	0	28	1	0	0	0	1	0
17:30	19	81	3	0	103	7	17	0	0	24	0	1	0	0	1	0
17:45	21	74	5	0	100	3	15	2	0	20	0	0	0	0	0	0
SUBTOTAL	208	622	30	0	860	33	155	2	0	190	1	4	0	0	5	3
GRAND TOTAL	**281**	**893**	**60**	**0**	**1234**	**40**	**237**	**4**	**0**	**281**	**1**	**5**	**0**	**0**	**6**	**3**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	3	19	0	0	22	0	11	0	0	11	0	0	0	0	0	0
07:15	9	28	0	0	37	1	10	0	0	11	0	0	0	0	0	0
07:30	8	33	0	0	41	0	7	0	0	7	0	0	0	0	0	0
07:45	3	39	1	0	43	0	10	0	0	10	0	1	0	0	1	0
08:00	4	40	0	0	44	2	10	0	0	12	0	0	0	0	0	0
08:15	3	39	0	0	42	0	15	0	0	15	0	0	0	0	0	0
08:30	2	37	2	0	41	1	13	0	0	14	0	0	0	0	0	1
08:45	4	33	2	0	39	1	17	1	0	19	0	0	0	0	0	0
SUBTOTAL	36	268	5	0	309	5	93	1	0	99	0	1	0	0	1	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	6	67	3	0	76	1	12	0	0	13	0	0	0	0	0	0
16:15	5	80	2	0	87	1	9	1	0	11	0	0	0	0	0	0
16:30	7	74	2	0	83	0	16	1	0	17	0	1	0	0	1	0
16:45	2	99	2	0	103	0	17	0	0	17	0	0	0	0	0	0
17:00	2	78	3	0	83	1	18	0	0	19	0	1	0	0	1	0
17:15	5	75	3	0	83	0	15	1	0	16	0	0	0	0	0	0
17:30	2	70	1	0	73	0	15	1	0	16	0	2	0	0	2	0
17:45	3	66	3	0	72	0	17	0	0	17	0	0	0	0	0	0
SUBTOTAL	32	609	19	0	660	3	119	4	0	126	0	4	0	0	4	0
GRAND TOTAL	68	877	24	0	969	8	212	5	0	225	0	5	0	0	5	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Commercial Access

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	1
07:15	1	0	4	0	5	0	0	1	0	1	0	0	0	0	0	3
07:30	1	0	2	0	3	1	0	1	0	2	0	0	0	0	0	1
07:45	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0	2
08:15	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1
08:30	1	0	10	0	11	0	0	1	0	1	0	0	0	0	0	1
08:45	0	0	6	0	6	1	0	1	0	2	0	0	0	0	0	0
SUBTOTAL	3	0	41	0	44	2	0	5	0	7	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Commercial Access

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	3	0	21	0	24	0	0	4	0	4	0	0	0	0	0	1
16:15	1	1	18	0	20	0	0	5	0	5	0	0	0	0	0	9
16:30	0	0	22	0	22	0	0	3	0	3	0	0	1	0	1	2
16:45	1	0	23	0	24	1	0	3	0	4	0	0	0	0	0	0
17:00	1	0	22	0	23	0	0	3	0	3	0	0	0	0	0	1
17:15	2	0	15	0	17	0	1	2	0	3	0	0	0	0	0	3
17:30	2	1	20	0	23	1	0	2	0	3	0	0	0	0	0	0
17:45	2	0	28	0	30	1	0	2	0	3	0	0	0	0	0	0
SUBTOTAL	12	2	169	0	183	3	1	24	0	28	0	0	1	0	1	16
GRAND TOTAL	**15**	**2**	**210**	**0**	**227**	**5**	**1**	**29**	**0**	**35**	**0**	**0**	**1**	**0**	**1**	**25**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Parkdale Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	2	0	1	0	3	0	0	1	0	1	0	0	0	0	0	0
07:15	1	0	2	0	3	1	0	1	0	2	0	0	0	0	0	3
07:30	7	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0
07:45	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	2
08:00	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
08:15	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
08:30	4	0	1	0	5	1	0	0	0	1	0	0	0	0	0	0
08:45	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	2
SUBTOTAL	24	0	7	0	31	4	0	2	0	6	0	0	0	0	0	8

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Parkdale Ave-Commercial Access
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Parkdale Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	5	0	1	0	6	1	0	0	0	1	0	0	0	0	0	9
16:15	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
16:30	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	3
16:45	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	5
17:15	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	1
17:30	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	4
17:45	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3
SUBTOTAL	19	0	9	0	28	1	0	1	0	2	0	0	0	0	0	25
GRAND TOTAL	**43**	**0**	**16**	**0**	**59**	**5**	**0**	**3**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**33**

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: Erie St S & Parkdale Ave-Commercial Access
Site ID: 2016400004
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Erie St S runs N/S

North Approach

	Out	In	Total
Cars	208	182	390
Trucks	54	61	115
Bicycles	0	0	0
	262	**243**	**505**

Erie St S

Bicycles	0	0	0	0
Trucks	1	48	5	0
Cars	14	141	53	0
Totals	**15**	**189**	**58**	**0**

Peds: 0

East Approach

	Out	In	Total
Cars	25	57	82
Trucks	4	6	10
Bicycles	0	0	0
	29	**63**	**92**

Parkdale Ave

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	3	9	**12**
0	0	0	**0**
0	0	2	**2**

Peds: 3



Peds: 4

Commercial Access

Totals	Cars	Trucks	Bicycles
0	0	0	0
27	24	3	0
0	0	0	0
2	1	1	0

Peds: 1

West Approach

	Out	In	Total
Cars	11	27	38
Trucks	3	5	8
Bicycles	0	0	0
	14	**32**	**46**

Erie St S

Totals	**17**	**204**	**5**	**0**
Cars	13	149	4	0
Trucks	4	55	1	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	166	144	310
Trucks	60	49	109
Bicycles	0	0	0
	226	**193**	**419**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Parkdale Ave-Commercial Access
Count Date: Oct 06, 2020
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Commercial Access						West Approach Parkdale Ave						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	10	54	2	0	0	66	6	50	0	0	0	56	0	0	4	0	2	4	2	0	0	0	1	2	128
08:15	12	34	6	0	0	52	3	54	0	0	0	57	0	0	5	0	1	5	3	0	0	0	0	3	117
08:30	11	50	1	0	0	62	3	50	2	0	1	55	1	0	11	0	1	12	5	0	1	0	0	6	135
08:45	25	51	6	0	0	82	5	50	3	0	0	58	1	0	7	0	0	8	2	0	1	0	2	3	151
Grand Total	**58**	**189**	**15**	**0**	**0**	**262**	**17**	**204**	**5**	**0**	**1**	**226**	**2**	**0**	**27**	**0**	**4**	**29**	**12**	**0**	**2**	**0**	**3**	**14**	**531**
Approach %	22.1	72.1	5.7	0		-	7.5	90.3	2.2	0		-	6.9	0	93.1	0		-	85.7	0	14.3	0		-	
Totals %	10.9	35.6	2.8	0		49.3	3.2	38.4	0.9	0		42.6	0.4	0	5.1	0		5.5	2.3	0	0.4	0		2.6	
PHF	**0.58**	**0.88**	**0.63**	**0**		**0.8**	**0.71**	**0.94**	**0.42**	**0**		**0.97**	**0.5**	**0**	**0.61**	**0**		**0.6**	**0.6**	**0**	**0.5**	**0**		**0.58**	**0.88**
Cars	53	141	14	0		208	13	149	4	0		166	1	0	24	0		25	9	0	2	0		11	410
% Cars	91.4	74.6	93.3	0		79.4	76.5	73	80	0		73.5	50	0	88.9	0		86.2	75	0	100	0		78.6	77.2
Trucks	5	48	1	0		54	4	55	1	0		60	1	0	3	0		4	3	0	0	0		3	121
% Trucks	8.6	25.4	6.7	0		20.6	23.5	27	20	0		26.5	50	0	11.1	0		13.8	25	0	0	0		21.4	22.8
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					1	-					4	-					3	-	8
% Peds					0	-					12.5	-					50	-					37.5	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:15:00
To:	18:00:00	To:	17:15:00

Intersection: Erie St S & Parkdale Ave-Commercial Access
Site ID: 2016400004
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Erie St S runs N/S

North Approach

	Out	In	Total
Cars	459	422	881
Trucks	91	74	165
Bicycles	2	3	5
	552	**499**	**1051**

Erie St S

Bicycles	0	2	0	0
Trucks	0	76	15	0
Cars	10	336	113	0
Totals	**10**	**414**	**128**	**0**

Peds: 3

East Approach

	Out	In	Total
Cars	89	122	211
Trucks	15	17	32
Bicycles	1	0	1
	105	**139**	**244**

Parkdale Ave

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	0	6	**6**
0	0	0	**0**
0	1	6	**7**

Peds: 8



Peds: 12

Commercial Access

Totals	Cars	Trucks	Bicycles
0	0	0	0
100	85	14	1
1	1	0	0
4	3	1	0

Peds: 0

West Approach

	Out	In	Total
Cars	12	27	39
Trucks	1	2	3
Bicycles	0	0	0
	13	**29**	**42**

Totals	**18**	**393**	**11**	**0**
Cars	16	331	9	0
Trucks	2	60	2	0
Bicycles	0	2	0	0

Erie St S

South Approach

	Out	In	Total
Cars	356	345	701
Trucks	64	78	142
Bicycles	2	2	4
	422	**425**	**847**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Parkdale Ave-Commercial Access
Count Date: Oct 06, 2020
Period: 16:00 - 18:00

Peak Hour Data (16:15 - 17:15)

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Commercial Access						West Approach Parkdale Ave						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:15	37	91	2	0	1	130	6	89	3	0	0	98	1	1	23	0	9	25	3	0	1	0	0	4	257
16:30	34	118	3	0	0	155	7	91	3	0	0	101	0	0	26	0	2	26	1	0	3	0	3	4	286
16:45	25	87	3	0	0	115	2	116	2	0	0	120	2	0	26	0	0	28	2	0	1	0	0	3	266
17:00	32	118	2	0	2	152	3	97	3	0	0	103	1	0	25	0	1	26	0	0	2	0	5	2	283
Grand Total	**128**	**414**	**10**	**0**	**3**	**552**	**18**	**393**	**11**	**0**	**0**	**422**	**4**	**1**	**100**	**0**	**12**	**105**	**6**	**0**	**7**	**0**	**8**	**13**	**1092**
Approach %	23.2	75	1.8	0		-	4.3	93.1	2.6	0		-	3.8	1	95.2	0		-	46.2	0	53.8	0		-	
Totals %	11.7	37.9	0.9	0		50.5	1.6	36	1	0		38.6	0.4	0.1	9.2	0		9.6	0.5	0	0.6	0		1.2	
PHF	**0.86**	**0.88**	**0.83**	**0**		**0.89**	**0.64**	**0.85**	**0.92**	**0**		**0.88**	**0.5**	**0.25**	**0.96**	**0**		**0.94**	**0.5**	**0**	**0.58**	**0**		**0.81**	**0.95**
Cars	113	336	10	0		459	16	331	9	0		356	3	1	85	0		89	6	0	6	0		12	916
% Cars	88.3	81.2	100	0		83.2	88.9	84.2	81.8	0		84.4	75	100	85	0		84.8	100	0	85.7	0		92.3	83.9
Trucks	15	76	0	0		91	2	60	2	0		64	1	0	14	0		15	0	0	1	0		1	171
% Trucks	11.7	18.4	0	0		16.5	11.1	15.3	18.2	0		15.2	25	0	14	0		14.3	0	0	14.3	0		7.7	15.7
Bicycles	0	2	0	0		2	0	2	0	0		2	0	0	1	0		1	0	0	0	0		0	5
% Bicycles	0	0.5	0	0		0.4	0	0.5	0	0		0.5	0	0	1	0		1	0	0	0	0		0	0.5
Peds					3	-					0	-					12	-					8	-	23
% Peds					13	-					0	-					52.2	-					34.8	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #20-164 - McIntosh Perry

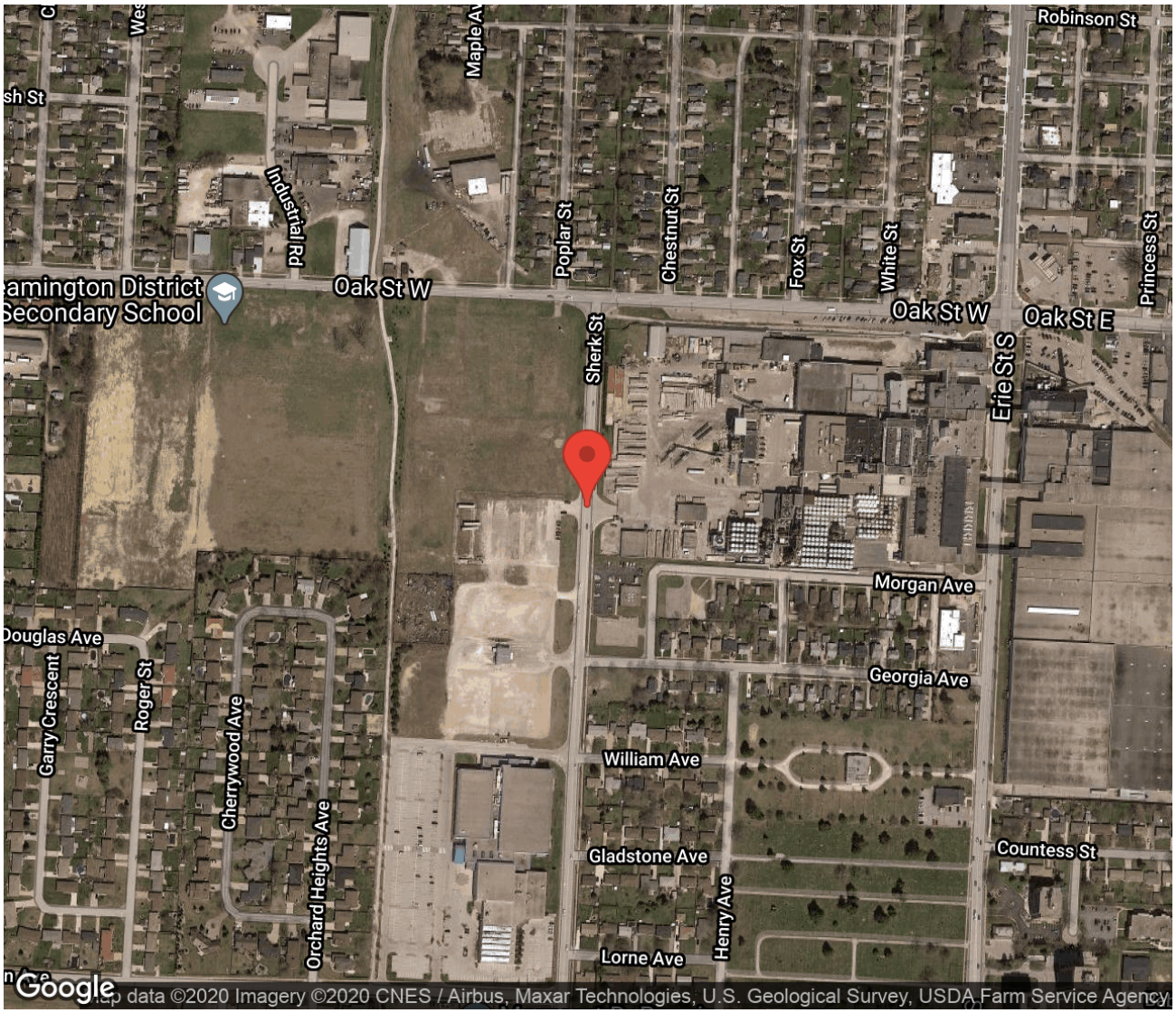
Intersection Count Report

Intersection:	Sherk St & Highbury Canco Driveway
Municipality:	Leamington
Count Date:	Oct 06, 2020
Site Code:	2016400005
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

Sherk St - Traffic Summary

Hour	North Approach Totals (Includes Cars, Trucks, Bicycles)						South Approach Totals (Includes Cars, Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	7	168	0	0	175	0	1	189	1	0	191	2
08:00 - 09:00	5	210	2	0	217	0	0	236	2	0	238	8
BREAK												
16:00 - 17:00	0	279	2	0	281	0	2	277	0	0	279	6
17:00 - 18:00	2	309	6	2	319	0	4	232	1	0	237	20
GRAND TOTAL	**14**	**966**	**10**	**2**	**992**	**0**	**7**	**934**	**4**	**0**	**945**	**36**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

Highbury Canco Driveway - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	3	4	0	7	3	3	4	0	0	7	0
08:00 - 09:00	1	3	5	0	9	3	2	8	1	0	11	0
BREAK												
16:00 - 17:00	1	4	10	0	15	0	1	4	0	0	5	2
17:00 - 18:00	3	0	5	0	8	4	1	7	1	0	9	0
GRAND TOTAL	**5**	**10**	**24**	**0**	**39**	**10**	**7**	**23**	**2**	**0**	**32**	**2**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	20	0	0	20	3	7	0	0	10	0	0	0	0	0	0
07:15	0	25	0	0	25	2	10	0	0	12	0	0	0	0	0	0
07:30	0	34	0	0	34	2	9	0	0	11	0	0	0	0	0	0
07:45	0	52	0	0	52	0	11	0	0	11	0	0	0	0	0	0
08:00	0	55	1	0	56	0	19	0	0	19	0	2	0	0	2	0
08:15	1	39	0	0	40	1	5	0	0	6	0	0	0	0	0	0
08:30	0	29	1	0	30	2	10	0	0	12	0	0	0	0	0	0
08:45	0	36	0	0	36	1	14	0	0	15	0	1	0	0	1	0
SUBTOTAL	1	290	2	0	293	11	85	0	0	96	0	3	0	0	3	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	60	0	0	60	0	13	0	0	13	0	0	0	0	0	0
16:15	0	52	0	0	52	0	13	0	0	13	0	1	0	0	1	0
16:30	0	59	0	0	59	0	17	1	0	18	0	1	0	0	1	0
16:45	0	56	0	0	56	0	7	1	0	8	0	0	0	0	0	0
17:00	0	70	1	0	71	0	20	0	0	20	0	0	0	0	0	0
17:15	0	64	1	1	66	0	15	1	0	16	1	0	0	0	1	0
17:30	0	57	1	0	58	1	19	0	0	20	0	0	0	0	0	0
17:45	0	48	2	1	51	0	15	0	0	15	0	1	0	0	1	0
SUBTOTAL	0	466	5	2	473	1	119	3	0	123	1	3	0	0	4	0
GRAND TOTAL	1	756	7	2	766	12	204	3	0	219	1	6	0	0	7	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	21	0	0	21	0	8	0	0	8	0	0	0	0	0	0
07:15	0	23	0	0	23	0	12	0	0	12	0	0	0	0	0	0
07:30	0	38	0	0	38	0	11	1	0	12	0	1	0	0	1	0
07:45	0	53	0	0	53	1	21	0	0	22	0	1	0	0	1	2
08:00	0	47	0	0	47	0	7	0	0	7	0	0	0	0	0	4
08:15	0	47	0	0	47	0	17	0	0	17	0	0	0	0	0	0
08:30	0	37	1	0	38	0	12	0	0	12	0	0	0	0	0	2
08:45	0	58	0	0	58	0	11	1	0	12	0	0	0	0	0	2
SUBTOTAL	0	324	1	0	325	1	99	2	0	102	0	2	0	0	2	10

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	55	0	0	55	1	20	0	0	21	0	0	0	0	0	3
16:15	0	56	0	0	56	0	5	0	0	5	0	2	0	0	2	0
16:30	0	57	0	0	57	0	18	0	0	18	0	0	0	0	0	2
16:45	1	49	0	0	50	0	13	0	0	13	0	2	0	0	2	1
17:00	0	52	0	0	52	1	10	0	0	11	0	1	0	0	1	6
17:15	1	47	0	0	48	2	8	0	0	10	0	0	0	0	0	5
17:30	0	44	0	0	44	0	12	0	0	12	0	2	0	0	2	7
17:45	0	42	1	0	43	0	14	0	0	14	0	0	0	0	0	2
SUBTOTAL	2	402	1	0	405	4	100	0	0	104	0	7	0	0	7	26
GRAND TOTAL	**2**	**726**	**2**	**0**	**730**	**5**	**199**	**2**	**0**	**206**	**0**	**9**	**0**	**0**	**9**	**36**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Highbury Canco Driveway

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	1
07:45	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
08:30	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0
08:45	0	0	1	0	1	1	1	1	0	3	0	0	0	0	0	0
SUBTOTAL	0	0	1	0	1	1	6	8	0	15	0	0	0	0	0	6

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Highbury Canco Driveway

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	1	2	2	0	5	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
16:45	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0
17:00	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	1
17:15	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	1
17:30	0	0	0	0	0	1	0	2	0	3	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
SUBTOTAL	0	0	1	0	1	4	4	13	0	21	0	0	1	0	1	4
GRAND TOTAL	0	0	2	0	2	5	10	21	0	36	0	0	1	0	1	10

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Highbury Canco Driveway

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0
07:30	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0
07:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
08:00	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0
08:15	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0
SUBTOTAL	2	0	0	0	2	3	12	1	0	16	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Highbury Canco Driveway
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Highbury Canco Driveway

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
16:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
16:30	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1
16:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
17:00	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	0
17:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	0	0	1	0	1	2	11	0	0	13	0	0	0	0	0	2
GRAND TOTAL	2	0	1	0	3	5	23	1	0	29	0	0	0	0	0	2

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	07:30:00
To:	09:00:00	To:	08:30:00

Intersection: Sherk St & Highbury Canco Driveway
Site ID: 2016400005
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Sherk St runs N/S

North Approach

	Out	In	Total
Cars	182	187	369
Trucks	47	62	109
Bicycles	2	2	4
	231	**251**	**482**

Sherk St

Bicycles	0	2	0	0
Trucks	0	44	3	0
Cars	1	180	1	0
Totals	**1**	**226**	**4**	**0**

East Approach

	Out	In	Total
Cars	0	1	1
Trucks	8	13	21
Bicycles	0	0	0
	8	**14**	**22**

Highbury Canco Driveway

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	1	2	**3**
0	9	0	**9**
0	0	0	**0**

Peds: 0

Peds: 0

N
W E
S

Peds: 4

Peds: 6

Highbury Canco Driveway

Totals	Cars	Trucks	Bicycles
0	0	0	0
5	0	5	0
3	0	3	0
0	0	0	0

West Approach

	Out	In	Total
Cars	2	1	3
Trucks	10	4	14
Bicycles	0	0	0
	12	**5**	**17**

Totals	**1**	**243**	**1**	**0**
Cars	0	185	0	0
Trucks	1	56	1	0
Bicycles	0	2	0	0

Sherk St

South Approach

	Out	In	Total
Cars	185	180	365
Trucks	58	44	102
Bicycles	2	2	4
	245	**226**	**471**

Cars - Cars Trucks - Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Sherk St & Highbury Canco Driveway
Count Date: Oct 06, 2020
Period: 07:00 - 09:00

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

Start Time	North Approach Sherk St						South Approach Sherk St						East Approach Highbury Canco Driveway						West Approach Highbury Canco Driveway						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
07:30	2	43	0	0	0	45	0	50	1	0	0	51	0	1	2	0	1	3	1	3	0	0	0	4	103
07:45	0	63	0	0	0	63	1	75	0	0	2	76	0	2	2	0	0	4	0	1	0	0	0	1	144
08:00	0	76	1	0	0	77	0	54	0	0	4	54	0	0	0	0	2	0	2	2	0	0	0	4	135
08:15	2	44	0	0	0	46	0	64	0	0	0	64	0	0	1	0	1	1	0	3	0	0	0	3	114
Grand Total	**4**	**226**	**1**	**0**	**0**	**231**	**1**	**243**	**1**	**0**	**6**	**245**	**0**	**3**	**5**	**0**	**4**	**8**	**3**	**9**	**0**	**0**	**0**	**12**	**496**
Approach %	1.7	97.8	0.4	0		-	0.4	99.2	0.4	0		-	0	37.5	62.5	0		-	25	75	0	0		-	
Totals %	0.8	45.6	0.2	0		46.6	0.2	49	0.2	0		49.4	0	0.6	1	0		1.6	0.6	1.8	0	0		2.4	
PHF	**0.5**	**0.74**	**0.25**	**0**		**0.75**	**0.25**	**0.81**	**0.25**	**0**		**0.81**	**0**	**0.38**	**0.63**	**0**		**0.5**	**0.38**	**0.75**	**0**	**0**		**0.75**	**0.86**
Cars	1	180	1	0		182	0	185	0	0		185	0	0	0	0		0	2	0	0	0		2	369
% Cars	25	79.6	100	0		78.8	0	76.1	0	0		75.5	0	0	0	0		0	66.7	0	0	0		16.7	74.4
Trucks	3	44	0	0		47	1	56	1	0		58	0	3	5	0		8	1	9	0	0		10	123
% Trucks	75	19.5	0	0		20.3	100	23	100	0		23.7	0	100	100	0		100	33.3	100	0	0		83.3	24.8
Bicycles	0	2	0	0		2	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	4
% Bicycles	0	0.9	0	0		0.9	0	0.8	0	0		0.8	0	0	0	0		0	0	0	0	0		0	0.8
Peds					0	-					6	-					4	-					0	-	10
% Peds					0	-					60	-					40	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:30:00
To:	18:00:00	To:	17:30:00

Intersection: Sherk St & Highbury Canco Driveway
Site ID: 2016400005
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Sherk St runs N/S

North Approach

	Out	In	Total
Cars	252	206	458
Trucks	62	58	120
Bicycles	2	4	6
	316	**268**	**584**

Sherk St

Bicycles	0	1	1	0
Trucks	3	59	0	0
Cars	2	249	0	1
Totals	**5**	**309**	**1**	**1**

East Approach

	Out	In	Total
Cars	0	0	0
Trucks	12	8	20
Bicycles	1	1	2
	13	**9**	**22**

Highbury Canco Driveway

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	1	0	**1**
0	8	0	**8**
0	0	1	**1**

Peds: 0

Peds: 1

N
W E
S

Peds: 2

Peds: 14

Highbury Canco Driveway

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	9	0	8	1
	2	0	2	0
	2	0	2	0

West Approach

	Out	In	Total
Cars	1	4	5
Trucks	9	8	17
Bicycles	0	0	0
	10	**12**	**22**

Totals	**5**	**257**	**0**	**0**
Cars	2	205	0	0
Trucks	3	49	0	0
Bicycles	0	3	0	0

Sherk St

South Approach

	Out	In	Total
Cars	207	250	457
Trucks	52	61	113
Bicycles	3	1	4
	262	**312**	**574**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Sherk St & Highbury Canco Driveway
Count Date: Oct 06, 2020
Period: 16:00 - 18:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach Sherk St						South Approach Sherk St						East Approach Highbury Canco Driveway						West Approach Highbury Canco Driveway						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:30	0	77	1	0	0	78	0	75	0	0	2	75	0	0	5	0	0	5	0	2	0	0	1	2	160
16:45	0	63	1	0	0	64	1	64	0	0	1	65	0	2	2	0	0	4	0	1	0	0	0	1	134
17:00	0	90	1	0	0	91	1	63	0	0	6	64	1	0	1	0	1	2	1	3	1	0	0	5	162
17:15	1	79	2	1	0	83	3	55	0	0	5	58	1	0	1	0	1	2	0	2	0	0	0	2	145
Grand Total	**1**	**309**	**5**	**1**	**0**	**316**	**5**	**257**	**0**	**0**	**14**	**262**	**2**	**2**	**9**	**0**	**2**	**13**	**1**	**8**	**1**	**0**	**1**	**10**	**601**
Approach %	0.3	97.8	1.6	0.3		-	1.9	98.1	0	0		-	15.4	15.4	69.2	0		-	10	80	10	0		-	
Totals %	0.2	51.4	0.8	0.2		52.6	0.8	42.8	0	0		43.6	0.3	0.3	1.5	0		2.2	0.2	1.3	0.2	0		1.7	
PHF	**0.25**	**0.86**	**0.63**	**0.25**		**0.87**	**0.42**	**0.86**	**0**	**0**		**0.87**	**0.5**	**0.25**	**0.45**	**0**		**0.65**	**0.25**	**0.67**	**0.25**	**0**		**0.5**	**0.93**
Cars	0	249	2	1		252	2	205	0	0		207	0	0	0	0		0	0	0	1	0		1	460
% Cars	0	80.6	40	100		79.7	40	79.8	0	0		79	0	0	0	0		0	0	0	100	0		10	76.5
Trucks	0	59	3	0		62	3	49	0	0		52	2	2	8	0		12	1	8	0	0		9	135
% Trucks	0	19.1	60	0		19.6	60	19.1	0	0		19.8	100	100	88.9	0		92.3	100	100	0	0		90	22.5
Bicycles	1	1	0	0		2	0	3	0	0		3	0	0	1	0		1	0	0	0	0		0	6
% Bicycles	100	0.3	0	0		0.6	0	1.2	0	0		1.1	0	0	11.1	0		7.7	0	0	0	0		0	1
Peds					0	-					14	-					2	-					1	-	17
% Peds					0	-					82.4	-					11.8	-					5.9	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #20-164 - McIntosh Perry

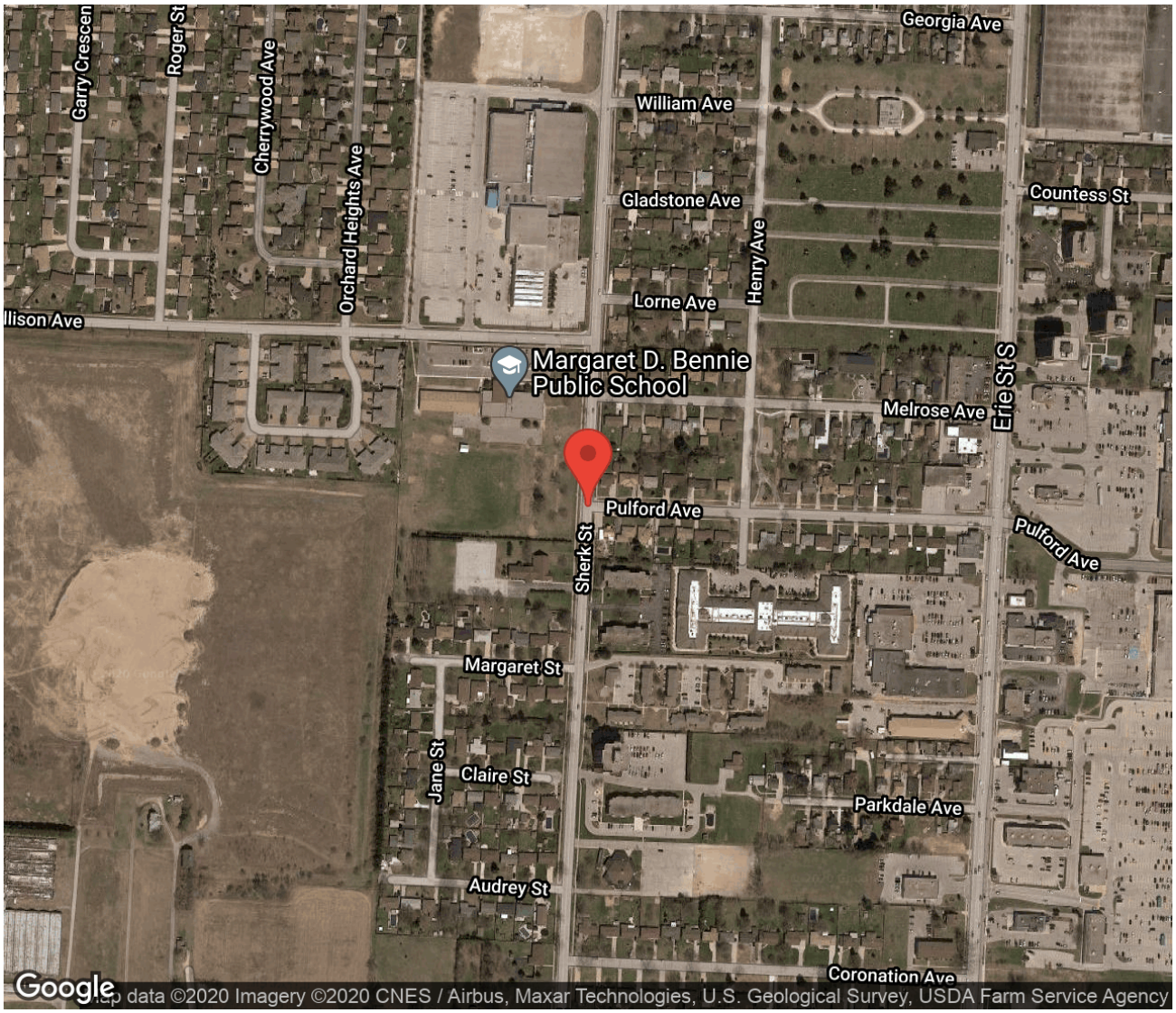
Intersection Count Report

Intersection:	Sherk St & Pulford St
Municipality:	Leamington
Count Date:	Oct 06, 2020
Site Code:	2016400006
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection:	Sherk St & Pulford St
Municipality:	Leamington
Count Date:	Oct 06, 2020



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

Sherk St - Traffic Summary

Hour	North Approach Totals (Includes Cars, Trucks, Bicycles)						South Approach Totals (Includes Cars, Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	34	113	0	0	147	0	0	167	18	0	185	0
08:00 - 09:00	92	129	0	0	221	0	0	188	25	0	213	1
BREAK												
16:00 - 17:00	119	181	0	0	300	0	0	223	24	0	247	1
17:00 - 18:00	106	234	0	0	340	0	0	199	23	0	222	0
GRAND TOTAL	**351**	**657**	**0**	**0**	**1008**	**0**	**0**	**777**	**90**	**0**	**867**	**2**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

Pulford St - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	10	0	30	0	40	9	0	0	0	0	0	0
08:00 - 09:00	16	0	60	0	76	8	0	0	0	0	0	0
BREAK												
16:00 - 17:00	28	0	92	0	120	5	0	0	0	0	0	0
17:00 - 18:00	42	0	91	0	133	1	0	0	0	0	0	0
GRAND TOTAL	**96**	**0**	**273**	**0**	**369**	**23**	**0**	**0**	**0**	**0**	**0**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	8	23	0	0	31	1	8	0	0	9	0	0	0	0	0	0
07:15	3	18	0	0	21	2	5	0	0	7	0	0	0	0	0	0
07:30	6	19	0	0	25	2	9	0	0	11	0	0	0	0	0	0
07:45	11	22	0	0	33	1	8	0	0	9	0	1	0	0	1	0
08:00	14	34	0	0	48	6	13	0	0	19	0	0	0	0	0	0
08:15	21	13	0	0	34	3	8	0	0	11	0	0	0	0	0	0
08:30	19	19	0	0	38	4	8	0	0	12	0	0	0	0	0	0
08:45	18	25	0	0	43	7	9	0	0	16	0	0	0	0	0	0
SUBTOTAL	100	173	0	0	273	26	68	0	0	94	0	1	0	0	1	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	28	44	0	0	72	6	7	0	0	13	0	3	0	0	3	0
16:15	31	29	0	0	60	3	11	0	0	14	0	0	0	0	0	0
16:30	20	41	0	0	61	5	6	0	0	11	0	1	0	0	1	0
16:45	21	30	0	0	51	5	8	0	0	13	0	1	0	0	1	0
17:00	28	36	0	0	64	6	16	0	0	22	0	0	0	0	0	0
17:15	18	51	0	0	69	6	16	0	0	22	0	0	0	0	0	0
17:30	20	49	0	0	69	2	14	0	0	16	0	1	0	0	1	0
17:45	18	38	0	0	56	8	9	0	0	17	0	4	0	0	4	0
SUBTOTAL	184	318	0	0	502	41	87	0	0	128	0	10	0	0	10	0
GRAND TOTAL	**284**	**491**	**0**	**0**	**775**	**67**	**155**	**0**	**0**	**222**	**0**	**11**	**0**	**0**	**11**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	24	3	0	27	0	8	0	0	8	0	0	0	0	0	0
07:15	0	21	2	0	23	0	9	1	0	10	0	0	0	0	0	0
07:30	0	27	5	0	32	0	10	0	0	10	0	1	0	0	1	0
07:45	0	49	6	0	55	0	17	1	0	18	0	1	0	0	1	0
08:00	0	46	1	0	47	0	11	0	0	11	0	1	0	0	1	0
08:15	0	29	5	0	34	0	17	3	0	20	0	1	0	0	1	1
08:30	0	25	3	0	28	0	5	2	0	7	0	0	0	0	0	0
08:45	0	40	7	0	47	0	13	4	0	17	0	0	0	0	0	0
SUBTOTAL	0	261	32	0	293	0	90	11	0	101	0	4	0	0	4	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Sherk St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	0	47	7	0	54	0	11	1	0	12	0	0	0	0	0	0
16:15	0	41	5	0	46	0	8	0	0	8	0	2	0	0	2	0
16:30	0	46	3	0	49	0	8	1	0	9	0	0	0	0	0	0
16:45	0	42	6	0	48	0	16	1	0	17	0	2	0	0	2	1
17:00	0	41	4	0	45	0	10	0	0	10	0	1	0	0	1	0
17:15	0	44	4	0	48	0	12	3	0	15	0	0	0	0	0	0
17:30	0	31	2	0	33	0	9	0	0	9	0	0	0	0	0	0
17:45	0	44	8	0	52	0	7	2	0	9	0	0	0	0	0	0
SUBTOTAL	0	336	39	0	375	0	81	8	0	89	0	5	0	0	5	1
GRAND TOTAL	**0**	**597**	**71**	**0**	**668**	**0**	**171**	**19**	**0**	**190**	**0**	**9**	**0**	**0**	**9**	**2**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Pulford St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	2	0	7	0	9	2	0	1	0	3	0	0	0	0	0	1
07:15	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1
07:30	3	0	4	0	7	1	0	4	0	5	0	0	0	0	0	1
07:45	1	0	5	0	6	1	0	4	0	5	0	0	0	0	0	6
08:00	3	0	19	0	22	0	0	3	0	3	0	0	0	0	0	0
08:15	6	0	9	0	15	1	0	4	0	5	0	0	2	0	2	2
08:30	3	0	4	0	7	0	0	3	0	3	0	0	0	0	0	1
08:45	1	0	12	0	13	2	0	4	0	6	0	0	0	0	0	5
SUBTOTAL	19	0	65	0	84	7	0	23	0	30	0	0	2	0	2	17

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Sherk St & Pulford St
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Pulford St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	5	0	14	0	19	2	0	6	0	8	0	0	0	0	0	0
16:15	9	0	22	0	31	1	0	4	0	5	0	0	0	0	0	1
16:30	4	0	18	0	22	0	0	5	0	5	0	0	0	0	0	3
16:45	7	0	21	0	28	0	0	2	0	2	0	0	0	0	0	1
17:00	10	0	21	0	31	2	0	5	0	7	0	0	0	0	0	1
17:15	9	0	18	0	27	1	0	3	0	4	0	0	0	0	0	0
17:30	12	0	14	0	26	2	0	3	0	5	0	0	1	0	1	0
17:45	4	0	20	0	24	2	0	6	0	8	0	0	0	0	0	0
SUBTOTAL	60	0	148	0	208	10	0	34	0	44	0	0	1	0	1	6
GRAND TOTAL	79	0	213	0	292	17	0	57	0	74	0	0	3	0	3	23

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: Sherk St & Pulford St
Site ID: 2016400006
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Sherk St runs N/S

North Approach

	Out	In	Total
Cars	163	184	347
Trucks	58	60	118
Bicycles	0	4	4
	221	**248**	**469**

Sherk St

Bicycles	0	0	0
Trucks	38	20	0
Cars	91	72	0
Totals	**129**	**92**	**0**

Peds: 0

Peds: 0

Peds: 8

Peds: 1

Totals	**188**	**25**	**0**
Cars	140	16	0
Trucks	46	9	0
Bicycles	2	0	0

Sherk St

East Approach

	Out	In	Total
Cars	57	88	145
Trucks	17	29	46
Bicycles	2	0	2
	76	**117**	**193**

Pulford St

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	60	44	14	2
	16	13	3	0

South Approach

	Out	In	Total
Cars	156	104	260
Trucks	55	41	96
Bicycles	2	0	2
	213	**145**	**358**

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Sherk St & Pulford St
Count Date: Oct 06, 2020
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Sherk St						South Approach Sherk St						East Approach Pulford St						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	20	47		0	0	67		58	1	0	0	59	3		22	0	0	25					0		151
08:15	24	21		0	0	45		47	8	0	1	55	7		15	0	2	22					0		122
08:30	23	27		0	0	50		30	5	0	0	35	3		7	0	1	10					0		95
08:45	25	34		0	0	59		53	11	0	0	64	3		16	0	5	19					0		142
Grand Total	**92**	**129**		**0**	**0**	**221**		**188**	**25**	**0**	**1**	**213**	**16**		**60**	**0**	**8**	**76**					**0**	**0**	**510**
Approach %	41.6	58.4		0		-		88.3	11.7	0		-	21.1		78.9	0		-						-	
Totals %	18	25.3		0		43.3		36.9	4.9	0		41.8	3.1		11.8	0		14.9						0	
PHF	**0.92**	**0.69**		**0**		**0.82**		**0.81**	**0.57**	**0**		**0.83**	**0.57**		**0.68**	**0**		**0.76**						**0**	**0.84**
Cars	72	91		0		163		140	16	0		156	13		44	0		57						0	376
% Cars	78.3	70.5		0		73.8		74.5	64	0		73.2	81.3		73.3	0		75						0	73.7
Trucks	20	38		0		58		46	9	0		55	3		14	0		17						0	130
% Trucks	21.7	29.5		0		26.2		24.5	36	0		25.8	18.8		23.3	0		22.4						0	25.5
Bicycles	0	0		0		0		2	0	0		2	0		2	0		2						0	4
% Bicycles	0	0		0		0		1.1	0	0		0.9	0		3.3	0		2.6						0	0.8
Peds					0	-					1	-					8	-					0	-	9
% Peds					0	-					11.1	-					88.9	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	17:00:00
To:	18:00:00	To:	18:00:00

Intersection: Sherk St & Pulford St
Site ID: 2016400006
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Sherk St runs N/S

North Approach

	Out	In	Total
Cars	258	233	491
Trucks	77	55	132
Bicycles	5	2	7
	340	**290**	**630**

Sherk St

Bicycles	5	0	0
Trucks	55	22	0
Cars	174	84	0
Totals	**234**	**106**	**0**

Peds: 0

Peds: 0

Peds: 1

Peds: 0

Totals	**199**	**23**	**0**
Cars	160	18	0
Trucks	38	5	0
Bicycles	1	0	0

Sherk St

East Approach

	Out	In	Total
Cars	108	102	210
Trucks	24	27	51
Bicycles	1	0	1
	133	**129**	**262**

Pulford St

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	91	73	17	1
	42	35	7	0

South Approach

	Out	In	Total
Cars	178	209	387
Trucks	43	62	105
Bicycles	1	5	6
	222	**276**	**498**

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Sherk St & Pulford St
Count Date: Oct 06, 2020
Period: 16:00 - 18:00

Peak Hour Data (17:00 - 18:00)

Start Time	North Approach Sherk St						South Approach Sherk St						East Approach Pulford St						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
17:00	34	52		0	0	86		52	4	0	0	56	12		26	0	1	38					0		180
17:15	24	67		0	0	91		56	7	0	0	63	10		21	0	0	31					0		185
17:30	22	64		0	0	86		40	2	0	0	42	14		18	0	0	32					0		160
17:45	26	51		0	0	77		51	10	0	0	61	6		26	0	0	32					0		170
Grand Total	**106**	**234**		**0**	**0**	**340**		**199**	**23**	**0**	**0**	**222**	**42**		**91**	**0**	**1**	**133**					**0**	**0**	**695**
Approach %	31.2	68.8		0		-		89.6	10.4	0		-	31.6		68.4	0		-						-	
Totals %	15.3	33.7		0		48.9		28.6	3.3	0		31.9	6		13.1	0		19.1						0	
PHF	**0.78**	**0.87**		**0**		**0.93**		**0.89**	**0.58**	**0**		**0.88**	**0.75**		**0.88**	**0**		**0.88**						**0**	**0.94**
Cars	84	174		0		258		160	18	0		178	35		73	0		108						0	544
% Cars	79.2	74.4		0		75.9		80.4	78.3	0		80.2	83.3		80.2	0		81.2						0	78.3
Trucks	22	55		0		77		38	5	0		43	7		17	0		24						0	144
% Trucks	20.8	23.5		0		22.6		19.1	21.7	0		19.4	16.7		18.7	0		18						0	20.7
Bicycles	0	5		0		5		1	0	0		1	0		1	0		1						0	7
% Bicycles	0	2.1		0		1.5		0.5	0	0		0.5	0		1.1	0		0.8						0	1
Peds					0	-					0	-					1	-					0	-	1
% Peds					0	-					0	-					100	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #20-164 - McIntosh Perry

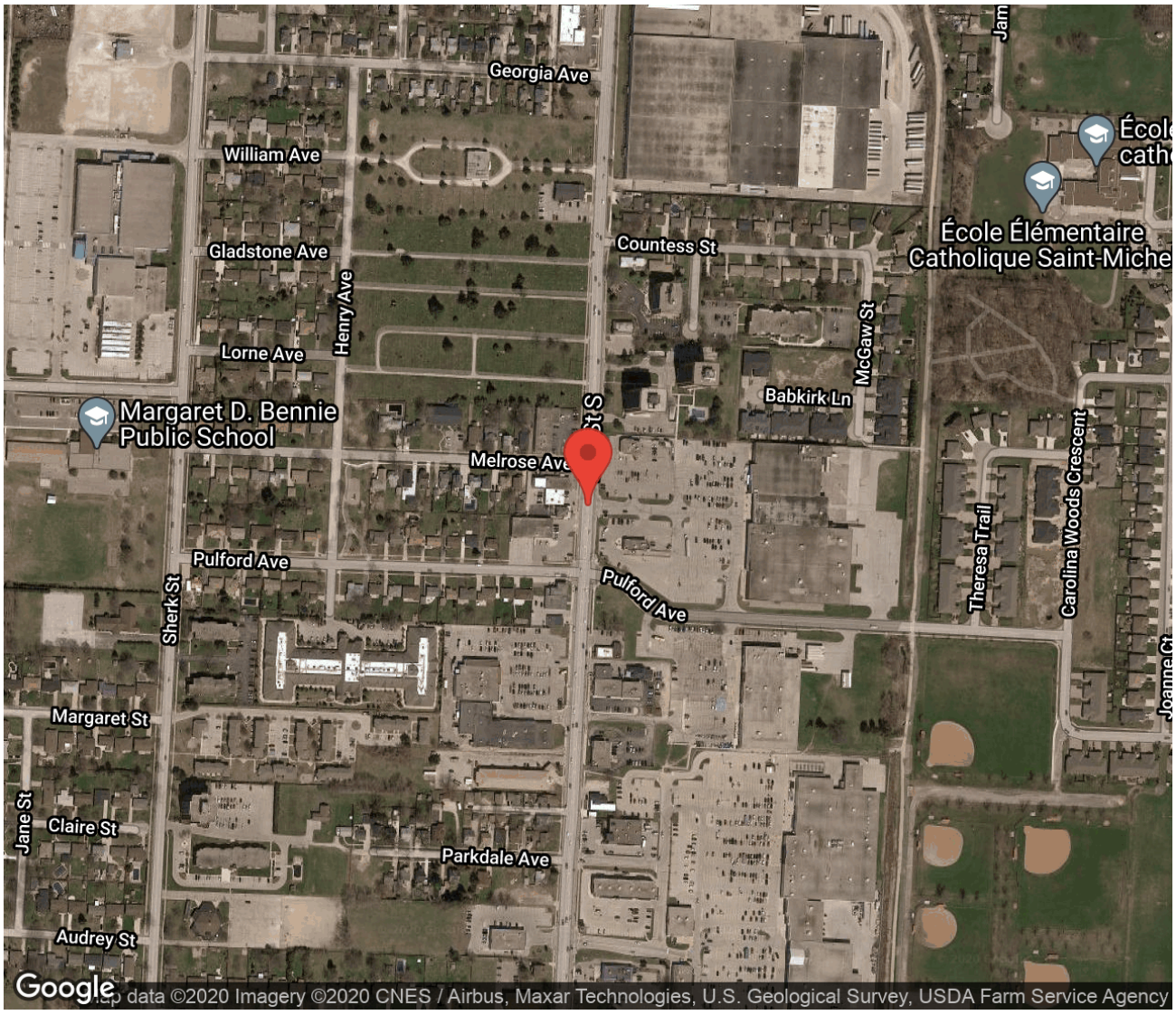
Intersection Count Report

Intersection:	Erie St S & Plaza Access
Municipality:	Leamington
Count Date:	Oct 06, 2020
Site Code:	2016400007
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

Erie St S - Traffic Summary

Hour	North Approach Totals (Includes Cars, Trucks, Bicycles)						South Approach Totals (Includes Cars, Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	77	147	0	0	224	2	0	178	65	0	243	0
08:00 - 09:00	88	197	0	0	285	2	0	215	83	0	298	0
BREAK												
16:00 - 17:00	96	455	18	1	570	3	2	450	71	0	523	0
17:00 - 18:00	107	432	26	0	565	1	0	420	58	0	478	1
GRAND TOTAL	**368**	**1231**	**44**	**1**	**1644**	**8**	**2**	**1263**	**277**	**0**	**1542**	**1**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

Plaza Access - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	51	0	93	0	144	10	0	0	0	0	0	5
08:00 - 09:00	55	0	102	0	157	6	0	0	0	0	0	4
BREAK												
16:00 - 17:00	34	0	140	0	174	16	0	0	2	0	2	5
17:00 - 18:00	43	0	101	0	144	9	1	0	1	0	2	9
GRAND TOTAL	**183**	**0**	**436**	**0**	**619**	**41**	**1**	**0**	**3**	**0**	**4**	**23**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	11	19	0	0	30	2	5	0	0	7	0	0	0	0	0	0
07:15	19	29	0	0	48	3	10	0	0	13	0	0	0	0	0	2
07:30	16	33	0	0	49	7	4	0	0	11	0	0	0	0	0	0
07:45	14	36	0	0	50	5	11	0	0	16	0	0	0	0	0	0
08:00	19	30	0	0	49	1	10	0	0	11	0	0	0	0	0	0
08:15	23	38	0	0	61	5	10	0	0	15	0	0	0	0	0	0
08:30	18	35	0	0	53	2	9	0	0	11	0	0	0	0	0	2
08:45	15	53	0	0	68	5	10	0	0	15	0	2	0	0	2	0
SUBTOTAL	135	273	0	0	408	30	69	0	0	99	0	2	0	0	2	4

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

North Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	15	104	1	0	120	2	16	1	0	19	0	1	0	0	1	0
16:15	21	103	4	1	129	2	9	2	0	13	0	0	0	0	0	2
16:30	28	98	2	0	128	3	14	0	0	17	0	1	0	0	1	1
16:45	23	99	6	0	128	2	9	2	0	13	0	1	0	0	1	0
17:00	25	91	4	0	120	3	17	2	0	22	0	0	0	0	0	0
17:15	19	113	2	0	134	5	15	1	0	21	0	0	0	0	0	1
17:30	21	93	6	0	120	3	9	1	0	13	0	1	0	0	1	0
17:45	27	78	6	0	111	4	15	4	0	23	0	0	0	0	0	0
SUBTOTAL	179	779	31	1	990	24	104	13	0	141	0	4	0	0	4	4
GRAND TOTAL	**314**	**1052**	**31**	**1**	**1398**	**54**	**173**	**13**	**0**	**240**	**0**	**6**	**0**	**0**	**6**	**8**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	25	10	0	35	0	9	3	0	12	0	0	0	0	0	0
07:15	0	33	6	0	39	0	11	6	0	17	0	0	0	0	0	0
07:30	0	36	19	0	55	0	9	4	0	13	0	0	0	0	0	0
07:45	0	41	17	0	58	0	13	0	0	13	0	1	0	0	1	0
08:00	0	35	16	0	51	0	11	5	0	16	0	0	0	0	0	0
08:15	0	43	14	0	57	0	18	4	0	22	0	0	0	0	0	0
08:30	0	51	12	0	63	0	6	7	0	13	0	0	0	0	0	0
08:45	0	36	15	0	51	0	15	10	0	25	0	0	0	0	0	0
SUBTOTAL	0	300	109	0	409	0	92	39	0	131	0	1	0	0	1	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

South Approach - Erie St S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	1	100	19	0	120	0	19	3	0	22	0	0	0	0	0	0
16:15	0	95	10	0	105	0	16	2	0	18	0	0	0	0	0	0
16:30	0	91	15	0	106	0	14	1	0	15	0	0	0	0	0	0
16:45	1	93	18	0	112	0	22	3	0	25	0	0	0	0	0	0
17:00	0	86	15	0	101	0	19	4	0	23	0	0	0	0	0	0
17:15	0	91	11	0	102	0	12	1	0	13	0	0	0	0	0	1
17:30	0	97	13	0	110	0	19	4	0	23	0	0	0	0	0	0
17:45	0	77	7	0	84	0	19	3	0	22	0	0	0	0	0	0
SUBTOTAL	2	730	108	0	840	0	140	21	0	161	0	0	0	0	0	1
GRAND TOTAL	2	1030	217	0	1249	0	232	60	0	292	0	1	0	0	1	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Plaza Access

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	6	0	20	0	26	2	0	5	0	7	0	0	0	0	0	3
07:15	6	0	19	0	25	4	0	6	0	10	0	0	0	0	0	4
07:30	11	0	16	0	27	2	0	6	0	8	0	0	0	0	0	3
07:45	12	0	19	0	31	8	0	2	0	10	0	0	0	0	0	0
08:00	12	0	18	0	30	3	0	7	0	10	0	0	0	0	0	0
08:15	7	0	17	0	24	2	0	8	0	10	0	0	0	0	0	3
08:30	11	0	20	0	31	3	0	6	0	9	0	0	0	0	0	2
08:45	10	0	20	0	30	7	0	6	0	13	0	0	0	0	0	1
SUBTOTAL	75	0	149	0	224	31	0	46	0	77	0	0	0	0	0	16

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

East Approach - Plaza Access

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	4	0	23	0	27	1	0	8	0	9	0	0	1	0	1	4
16:15	8	0	29	0	37	1	0	3	0	4	0	0	0	0	0	4
16:30	7	0	26	0	33	1	0	9	0	10	0	0	0	0	0	3
16:45	11	0	37	0	48	1	0	4	0	5	0	0	0	0	0	5
17:00	12	0	22	0	34	1	0	4	0	5	0	0	0	0	0	1
17:15	5	0	16	0	21	3	0	4	0	7	0	0	0	0	0	0
17:30	10	0	29	0	39	1	0	5	0	6	0	0	0	0	0	8
17:45	9	0	16	0	25	2	0	4	0	6	0	0	1	0	1	0
SUBTOTAL	66	0	198	0	264	11	0	41	0	52	0	0	2	0	2	25
GRAND TOTAL	**141**	**0**	**347**	**0**	**488**	**42**	**0**	**87**	**0**	**129**	**0**	**0**	**2**	**0**	**2**	**41**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Commercial Access

Start Time	Cars					Trucks					Bicycles					Total Peds
					Total					Total					Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Erie St S & Plaza Access
Municipality: Leamington
Count Date: Oct 06, 2020

West Approach - Commercial Access

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
16:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	8
SUBTOTAL	0	0	2	0	2	0	0	0	0	0	1	0	1	0	2	14
GRAND TOTAL	0	0	2	0	2	0	0	0	0	0	1	0	1	0	2	23

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: Erie St S & Plaza Access
Site ID: 2016400007
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Erie St S runs N/S

North Approach

	Out	In	Total
Cars	231	240	471
Trucks	52	77	129
Bicycles	2	0	2
	285	**317**	**602**

Erie St S

Bicycles	0	2	0	0
Trucks	0	39	13	0
Cars	0	156	75	0
Totals	**0**	**197**	**88**	**0**

East Approach

	Out	In	Total
Cars	115	132	247
Trucks	42	39	81
Bicycles	0	0	0
	157	**171**	**328**

Peds: 2

Commercial Access

			Totals
0	0	0	**0**
0	0	0	**0**
0	0	0	**0**
0	0	0	**0**

Peds: 4



Peds: 6

Plaza Access

	Totals			
	0	0	0	0
	102	75	27	0
	0	0	0	0
	55	40	15	0

Peds: 0

West Approach

	Out	In	Total
Cars	0	0	0
Trucks	0	0	0
Bicycles	0	0	0
	0	**0**	**0**

Erie St S

Totals	**0**	**215**	**83**	**0**
Cars	0	165	57	0
Trucks	0	50	26	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	222	196	418
Trucks	76	54	130
Bicycles	0	2	2
	298	**252**	**550**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Plaza Access
Count Date: Oct 06, 2020
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Plaza Access						West Approach Commercial Access						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	20	40	0	0	0	60	0	46	21	0	0	67	15	0	25	0	0	40	0	0	0	0	2	0	167
08:15	28	48	0	0	0	76	0	61	18	0	0	79	9	0	25	0	3	34	0	0	0	0	0	0	189
08:30	20	44	0	0	2	64	0	57	19	0	0	76	14	0	26	0	2	40	0	0	0	0	1	0	180
08:45	20	65	0	0	0	85	0	51	25	0	0	76	17	0	26	0	1	43	0	0	0	0	1	0	204
Grand Total	**88**	**197**	**0**	**0**	**2**	**285**	**0**	**215**	**83**	**0**	**0**	**298**	**55**	**0**	**102**	**0**	**6**	**157**	**0**	**0**	**0**	**0**	**4**	**0**	**740**
Approach %	30.9	69.1	0	0		-	0	72.1	27.9	0		-	35	0	65	0		-	0	0	0	0		-	
Totals %	11.9	26.6	0	0		38.5	0	29.1	11.2	0		40.3	7.4	0	13.8	0		21.2	0	0	0	0		0	
PHF	**0.79**	**0.76**	**0**	**0**		**0.84**	**0**	**0.88**	**0.83**	**0**		**0.94**	**0.81**	**0**	**0.98**	**0**		**0.91**	**0**	**0**	**0**	**0**		**0**	**0.91**
Cars	75	156	0	0		231	0	165	57	0		222	40	0	75	0		115	0	0	0	0		0	568
% Cars	85.2	79.2	0	0		81.1	0	76.7	68.7	0		74.5	72.7	0	73.5	0		73.2	0	0	0	0		0	76.8
Trucks	13	39	0	0		52	0	50	26	0		76	15	0	27	0		42	0	0	0	0		0	170
% Trucks	14.8	19.8	0	0		18.2	0	23.3	31.3	0		25.5	27.3	0	26.5	0		26.8	0	0	0	0		0	23
Bicycles	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	2
% Bicycles	0	1	0	0		0.7	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0.3
Peds					2	-					0	-					6	-					4	-	12
% Peds					16.7	-					0	-					50	-					33.3	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:00:00
To:	18:00:00	To:	17:00:00

Intersection: Erie St S & Plaza Access
Site ID: 2016400007
Count Date: Oct 06, 2020

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Erie St S runs N/S

North Approach

	Out	In	Total
Cars	505	495	1000
Trucks	62	95	157
Bicycles	3	1	4
	570	**591**	**1161**

Erie St S

Bicycles	0	3	0	0
Trucks	5	48	9	0
Cars	13	404	87	1
Totals	**18**	**455**	**96**	**1**

Peds: 3

East Approach

	Out	In	Total
Cars	145	149	294
Trucks	28	18	46
Bicycles	1	0	1
	174	**167**	**341**

Commercial Access

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	U-turn
0	0	0	**0**	Through
0	0	0	**0**	Right
0	0	2	**2**	Left

Peds: 5



Peds: 16

Plaza Access

Totals	Cars	Trucks	Bicycles	
0	0	0	0	U-turn
140	115	24	1	Through
0	0	0	0	Right
34	30	4	0	Left

Peds: 0

West Approach

	Out	In	Total
Cars	2	15	17
Trucks	0	5	5
Bicycles	0	0	0
	2	**20**	**22**

	Left	Through	Right	U-turn
Totals	**2**	**450**	**71**	**0**
Cars	2	379	62	0
Trucks	0	71	9	0
Bicycles	0	0	0	0

Erie St S

South Approach

	Out	In	Total
Cars	443	436	879
Trucks	80	52	132
Bicycles	0	3	3
	523	**491**	**1014**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Erie St S & Plaza Access
Count Date: Oct 06, 2020
Period: 16:00 - 18:00

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

Start Time	North Approach Erie St S						South Approach Erie St S						East Approach Plaza Access						West Approach Commercial Access						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	17	121	2	0	0	140	1	119	22	0	0	142	5	0	32	0	4	37	0	0	0	0	1	0	319
16:15	23	112	6	1	2	142	0	111	12	0	0	123	9	0	32	0	4	41	0	0	0	0	0	0	306
16:30	31	113	2	0	1	146	0	105	16	0	0	121	8	0	35	0	3	43	0	0	0	0	4	0	310
16:45	25	109	8	0	0	142	1	115	21	0	0	137	12	0	41	0	5	53	0	0	2	0	0	2	334
Grand Total	**96**	**455**	**18**	**1**	**3**	**570**	**2**	**450**	**71**	**0**	**0**	**523**	**34**	**0**	**140**	**0**	**16**	**174**	**0**	**0**	**2**	**0**	**5**	**2**	**1269**
Approach %	16.8	79.8	3.2	0.2		-	0.4	86	13.6	0		-	19.5	0	80.5	0		-	0	0	100	0		-	
Totals %	7.6	35.9	1.4	0.1		44.9	0.2	35.5	5.6	0		41.2	2.7	0	11	0		13.7	0	0	0.2	0		0.2	
PHF	**0.77**	**0.94**	**0.56**	**0.25**		**0.98**	**0.5**	**0.95**	**0.81**	**0**		**0.92**	**0.71**	**0**	**0.85**	**0**		**0.82**	**0**	**0**	**0.25**	**0**		**0.25**	**0.95**
Cars	87	404	13	1		505	2	379	62	0		443	30	0	115	0		145	0	0	2	0		2	1095
% Cars	90.6	88.8	72.2	100		88.6	100	84.2	87.3	0		84.7	88.2	0	82.1	0		83.3	0	0	100	0		100	86.3
Trucks	9	48	5	0		62	0	71	9	0		80	4	0	24	0		28	0	0	0	0		0	170
% Trucks	9.4	10.5	27.8	0		10.9	0	15.8	12.7	0		15.3	11.8	0	17.1	0		16.1	0	0	0	0		0	13.4
Bicycles	0	3	0	0		3	0	0	0	0		0	0	0	1	0		1	0	0	0	0		0	4
% Bicycles	0	0.7	0	0		0.5	0	0	0	0		0	0	0	0.7	0		0.6	0	0	0	0		0	0.3
Peds					3	-					0	-					16	-					5	-	24
% Peds					12.5	-					0	-					66.7	-					20.8	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #21-070 - McIntosh Perry

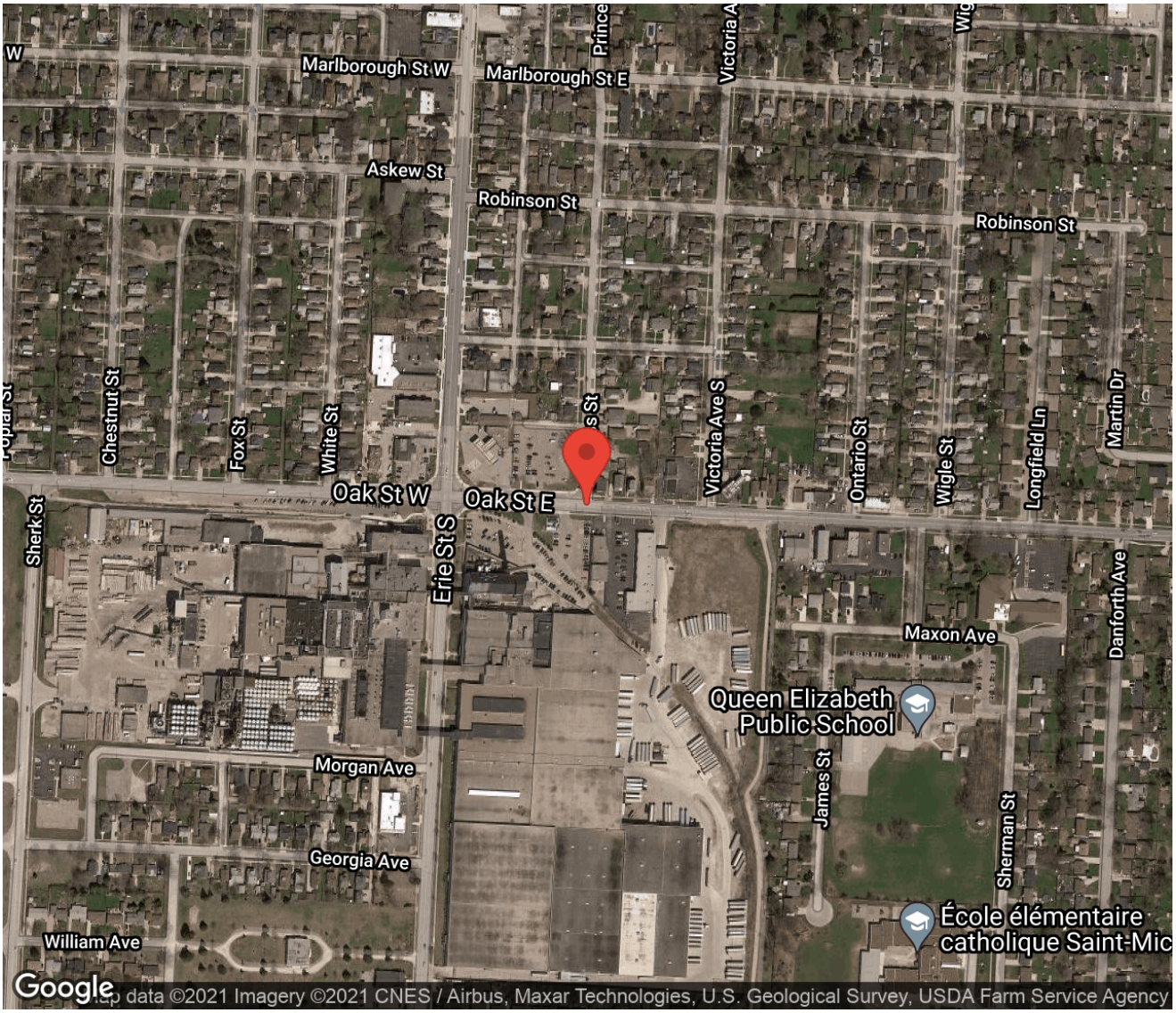
Intersection Count Report

Intersection:	Oak St E & Princess St
Municipality:	Leamington
Count Date:	May 04, 2021
Site Code:	2107000001
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Oak St E & Princess St
Site Code:	2107000001
Municipality:	Leamington
Count Date:	May 04, 2021



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Oak St E & Princess St
Site Code:	2107000001
Municipality:	Leamington
Count Date:	May 04, 2021

Princess St - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	6	0	14	0	20	7	0	0	0	0	0	0	20
08:00 - 09:00	2	0	14	0	16	1	0	0	0	0	0	0	16
BREAK													
16:00 - 17:00	8	0	34	0	42	7	0	0	0	0	0	0	42
17:00 - 18:00	5	0	30	0	35	7	0	0	0	0	0	0	35
GRAND TOTAL	**21**	**0**	**92**	**0**	**113**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**113**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Oak St E & Princess St
Site Code:	2107000001
Municipality:	Leamington
Count Date:	May 04, 2021

Oak St E - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	0	286	3	0	289	0	25	174	0	0	199	1	488
08:00 - 09:00	0	290	1	0	291	0	13	212	0	0	225	0	516
BREAK													
16:00 - 17:00	0	348	11	0	359	0	22	441	0	0	463	2	822
17:00 - 18:00	0	290	8	0	298	1	18	510	0	0	528	1	826
GRAND TOTAL	**0**	**1214**	**23**	**0**	**1237**	**1**	**78**	**1337**	**0**	**0**	**1415**	**4**	**2652**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Princess St
Site Code: 2107000001
Municipality: Leamington
Count Date: May 04, 2021

North Approach - Princess St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	4	0	4	0	8	1	0	0	0	1	0	0	0	0	0	2
07:30	1	0	7	0	8	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	4
08:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1
08:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:30	2	0	7	0	9	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	7	0	28	0	35	1	0	0	0	1	0	0	0	0	0	8

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Princess St
Site Code: 2107000001
Municipality: Leamington
Count Date: May 04, 2021

North Approach - Princess St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	2	0	7	0	9	0	0	0	0	0	0	0	0	0	0	0
16:15	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
16:30	2	0	13	0	15	0	0	0	0	0	0	0	0	0	0	0
16:45	3	0	11	0	14	0	0	0	0	0	0	0	0	0	0	7
17:00	3	0	10	0	13	0	0	0	0	0	0	0	0	0	0	3
17:15	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	1
17:45	2	0	5	0	7	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	13	0	64	0	77	0	0	0	0	0	0	0	0	0	0	14
GRAND TOTAL	20	0	92	0	112	1	0	0	0	1	0	0	0	0	0	22

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Princess St
Site Code: 2107000001
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	0	50	0	0	50	0	3	0	0	3	0	1	0	0	1	0
07:15	0	68	2	0	70	0	2	0	0	2	0	0	0	0	0	0
07:30	0	76	0	0	76	0	1	0	0	1	0	0	0	0	0	0
07:45	0	83	1	0	84	0	2	0	0	2	0	0	0	0	0	0
08:00	0	72	0	0	72	0	1	0	0	1	0	1	0	0	1	0
08:15	0	67	1	0	68	0	3	0	0	3	0	0	0	0	0	0
08:30	0	62	0	0	62	0	2	0	0	2	0	0	0	0	0	0
08:45	0	77	0	0	77	0	5	0	0	5	0	0	0	0	0	0
SUBTOTAL	0	555	4	0	559	0	19	0	0	19	0	2	0	0	2	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Princess St
Site Code: 2107000001
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	0	78	3	0	81	0	0	0	0	0	0	0	0	0	0	0
16:15	0	90	3	0	93	0	1	0	0	1	0	1	0	0	1	0
16:30	0	85	4	0	89	0	0	0	0	0	0	0	0	0	0	0
16:45	0	89	1	0	90	0	3	0	0	3	0	1	0	0	1	0
17:00	0	70	1	0	71	0	2	0	0	2	0	0	0	0	0	0
17:15	0	60	1	0	61	0	2	0	0	2	0	1	0	0	1	0
17:30	0	85	2	0	87	0	1	0	0	1	0	0	0	0	0	0
17:45	0	67	3	0	70	0	2	0	0	2	0	0	1	0	1	1
SUBTOTAL	0	624	18	0	642	0	11	0	0	11	0	3	1	0	4	1
GRAND TOTAL	0	1179	22	0	1201	0	30	0	0	30	0	5	1	0	6	1

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Princess St
Site Code: 2107000001
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	5	32	0	0	37	0	0	0	0	0	0	0	0	0	0	0
07:15	7	35	0	0	42	0	2	0	0	2	0	0	0	0	0	0
07:30	9	44	0	0	53	0	1	0	0	1	0	0	0	0	0	0
07:45	4	58	0	0	62	0	2	0	0	2	0	0	0	0	0	1
08:00	1	52	0	0	53	0	0	0	0	0	0	0	0	0	0	0
08:15	6	48	0	0	54	0	1	0	0	1	0	0	0	0	0	0
08:30	4	54	0	0	58	0	3	0	0	3	0	0	0	0	0	0
08:45	2	53	0	0	55	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	38	376	0	0	414	0	10	0	0	10	0	0	0	0	0	1

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Princess St
Site Code: 2107000001
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	10	100	0	0	110	0	1	0	0	1	0	0	0	0	0	0
16:15	5	104	0	0	109	0	2	0	0	2	0	0	0	0	0	1
16:30	3	107	0	0	110	0	1	0	0	1	0	0	0	0	0	1
16:45	4	123	0	0	127	0	2	0	0	2	0	1	0	0	1	0
17:00	8	131	0	0	139	0	3	0	0	3	0	1	0	0	1	0
17:15	4	135	0	0	139	0	4	0	0	4	0	1	0	0	1	0
17:30	4	118	0	0	122	0	1	0	0	1	0	2	0	0	2	0
17:45	2	113	0	0	115	0	1	0	0	1	0	0	0	0	0	1
SUBTOTAL	40	931	0	0	971	0	15	0	0	15	0	5	0	0	5	3
GRAND TOTAL	**78**	**1307**	**0**	**0**	**1385**	**0**	**25**	**0**	**0**	**25**	**0**	**5**	**0**	**0**	**5**	**4**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	07:00:00	From:	07:30:00
To:	09:00:00	To:	08:30:00

Intersection: Oak St E & Princess St
Site Code: 2107000001
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Oak St E runs E/W

North Approach

	Out	In	Total
Cars	14	22	36
Trucks	0	0	0
Bicycles	0	0	0
	14	**22**	**36**

Princess St

Bicycles	0	0	0
Trucks	0	0	0
Cars	13	1	0
Totals	**13**	**1**	**0**

East Approach

	Out	In	Total
Cars	300	203	503
Trucks	7	4	11
Bicycles	1	0	1
	308	**207**	**515**

Oak St E

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	0	20	**20**	
0	4	202	**206**	

Peds: 1

Peds: 6

Peds: 0

Peds: 0

Oak St E

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	2	2	0	0
	306	298	7	1

West Approach

	Out	In	Total
Cars	222	311	533
Trucks	4	7	11
Bicycles	0	1	1
	226	**319**	**545**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Oak St E & Princess St
Site Code: 2107000001
Count Date: May 04, 2021
Period: 07:00 - 09:00

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

Start Time	North Approach Princess St						South Approach						East Approach Oak St E						West Approach Oak St E						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
07:30	1		7	0	1	8					0			77	0	0	0	77	9	45		0	0	54	139
07:45	0		3	0	4	3					0			85	1	0	0	86	4	60		0	1	64	153
08:00	0		2	0	1	2					0			74	0	0	0	74	1	52		0	0	53	129
08:15	0		1	0	0	1					0			70	1	0	0	71	6	49		0	0	55	127
Grand Total	**1**		**13**	**0**	**6**	**14**					**0**	**0**		**306**	**2**	**0**	**0**	**308**	**20**	**206**		**0**	**1**	**226**	**548**
Approach %	7.1		92.9	0		-						-		99.4	0.6	0		-	8.8	91.2		0		-	
Totals %	0.2		2.4	0		2.6						0		55.8	0.4	0		56.2	3.6	37.6		0		41.2	
PHF	**0.25**		**0.46**	**0**		**0.44**						**0**		**0.9**	**0.5**	**0**		**0.9**	**0.56**	**0.86**		**0**		**0.88**	**0.9**
Cars	1		13	0		14						0		298	2	0		300	20	202		0		222	536
% Cars	100		100	0		100						0		97.4	100	0		97.4	100	98.1		0		98.2	97.8
Trucks	0		0	0		0						0		7	0	0		7	0	4		0		4	11
% Trucks	0		0	0		0						0		2.3	0	0		2.3	0	1.9		0		1.8	2
Bicycles	0		0	0		0						0		1	0	0		1	0	0		0		0	1
% Bicycles	0		0	0		0						0		0.3	0	0		0.3	0	0		0		0	0.2
Peds					6	-					0	-					0	-					1	-	7
% Peds					85.7	-					0	-					0	-					14.3	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:45:00
To:	18:00:00	To:	17:45:00

Intersection: Oak St E & Princess St
Site Code: 2107000001
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Oak St E runs E/W

North Approach

	Out	In	Total
Cars	42	25	67
Trucks	0	0	0
Bicycles	0	0	0
	42	**25**	**67**

Princess St

Bicycles	0	0	0
Trucks	0	0	0
Cars	36	6	0
Totals	**36**	**6**	**0**

East Approach

	Out	In	Total
Cars	309	513	822
Trucks	8	10	18
Bicycles	2	5	7
	319	**528**	**847**

Oak St E

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	0	20	**20**	
5	10	507	**522**	

Peds: 0

Peds: 12



Peds: 0

Peds: 0

Oak St E

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	5	5	0	0
	314	304	8	2

West Approach

	Out	In	Total
Cars	527	340	867
Trucks	10	8	18
Bicycles	5	2	7
	542	**350**	**892**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Oak St E & Princess St
Site Code: 2107000001
Count Date: May 04, 2021
Period: 16:00 - 18:00

Peak Hour Data (16:45 - 17:45)

Start Time	North Approach Princess St						South Approach						East Approach Oak St E						West Approach Oak St E						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:45	3		11	0	7	14					0			93	1	0	0	94	4	126		0	0	130	238
17:00	3		10	0	3	13					0			72	1	0	0	73	8	135		0	0	143	229
17:15	0		9	0	1	9					0			63	1	0	0	64	4	140		0	0	144	217
17:30	0		6	0	1	6					0			86	2	0	0	88	4	121		0	0	125	219
Grand Total	**6**		**36**	**0**	**12**	**42**					**0**	**0**		**314**	**5**	**0**	**0**	**319**	**20**	**522**		**0**	**0**	**542**	**903**
Approach %	14.3		85.7	0		-						-		98.4	1.6	0		-	3.7	96.3		0		-	
Totals %	0.7		4	0		4.7						0		34.8	0.6	0		35.3	2.2	57.8		0		60	
PHF	**0.5**		**0.82**	**0**		**0.75**						**0**		**0.84**	**0.63**	**0**		**0.85**	**0.63**	**0.93**		**0**		**0.94**	**0.95**
Cars	6		36	0		42						0		304	5	0		309	20	507		0		527	878
% Cars	100		100	0		100						0		96.8	100	0		96.9	100	97.1		0		97.2	97.2
Trucks	0		0	0		0						0		8	0	0		8	0	10		0		10	18
% Trucks	0		0	0		0						0		2.5	0	0		2.5	0	1.9		0		1.8	2
Bicycles	0		0	0		0						0		2	0	0		2	0	5		0		5	7
% Bicycles	0		0	0		0						0		0.6	0	0		0.6	0	1		0		0.9	0.8
Peds					12	-					0	-					0	-					0	-	12
% Peds					100	-					0	-					0	-					0	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #21-070 - McIntosh Perry

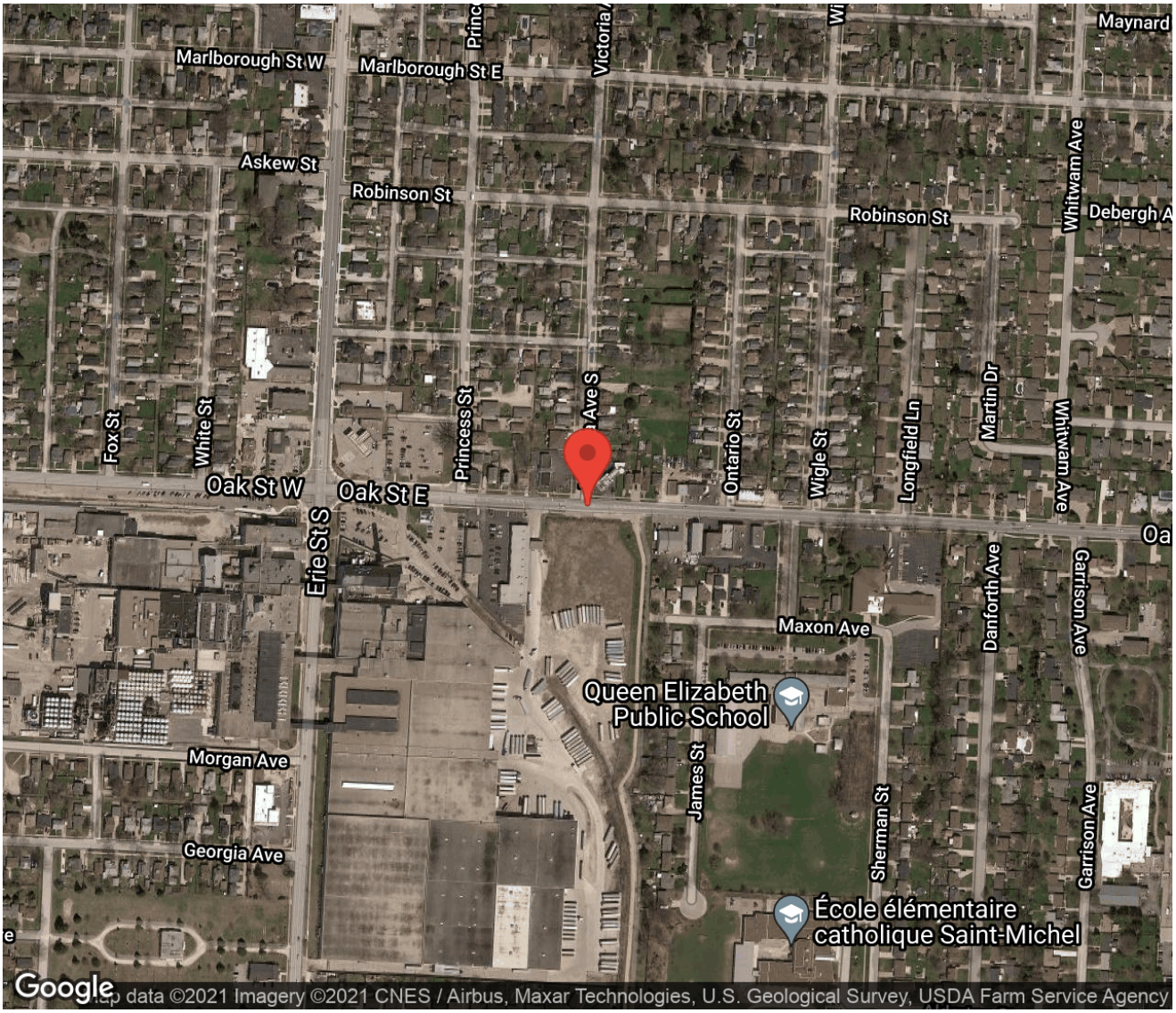
Intersection Count Report

Intersection:	Oak St E & Victoria Ave S
Municipality:	Leamington
Count Date:	May 04, 2021
Site Code:	2107000002
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Oak St E & Victoria Ave S
Site Code:	2107000002
Municipality:	Leamington
Count Date:	May 04, 2021



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Oak St E & Victoria Ave S
Site Code:	2107000002
Municipality:	Leamington
Count Date:	May 04, 2021

Victoria Ave S - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	0	0	0	0	0	4	0	0	0	0	0	0	0
08:00 - 09:00	0	0	0	0	0	9	0	0	0	0	0	0	0
BREAK													
16:00 - 17:00	0	0	2	0	2	7	0	0	0	0	0	0	2
17:00 - 18:00	0	0	0	0	0	3	0	0	0	0	0	0	0
GRAND TOTAL	**0**	**0**	**2**	**0**	**2**	**23**	**0**	**0**	**0**	**0**	**0**	**0**	**2**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Oak St E & Victoria Ave S
Site Code:	2107000002
Municipality:	Leamington
Count Date:	May 04, 2021

Oak St E - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	0	285	28	0	313	0	29	148	0	0	177	1	490
08:00 - 09:00	0	295	26	0	321	0	32	182	0	0	214	0	535
BREAK													
16:00 - 17:00	0	355	44	0	399	0	81	369	0	0	450	0	849
17:00 - 18:00	0	293	37	0	330	0	70	439	0	0	509	0	839
GRAND TOTAL	**0**	**1228**	**135**	**0**	**1363**	**0**	**212**	**1138**	**0**	**0**	**1350**	**1**	**2713**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Municipality: Leamington
Count Date: May 04, 2021

North Approach - Victoria Ave S

Start Time	Cars					Trucks					Bicycles					Total Peds
					Total					Total					Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Municipality: Leamington
Count Date: May 04, 2021

North Approach - Victoria Ave S

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	4
16:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	10
GRAND TOTAL	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	23

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	0	50	4	0	54	0	2	0	0	2	0	0	2	0	2	0
07:15	0	70	4	0	74	0	1	0	0	1	0	0	0	0	0	0
07:30	0	67	12	0	79	0	3	0	0	3	0	0	0	0	0	0
07:45	0	92	6	0	98	0	0	0	0	0	0	0	0	0	0	0
08:00	0	73	5	0	78	0	2	0	0	2	0	0	0	0	0	0
08:15	0	58	9	0	67	0	3	0	0	3	0	0	0	0	0	0
08:30	0	71	2	0	73	0	4	0	0	4	0	0	0	0	0	0
08:45	0	78	10	0	88	0	6	0	0	6	0	0	0	0	0	0
SUBTOTAL	0	559	52	0	611	0	21	0	0	21	0	0	2	0	2	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	0	80	10	0	90	0	1	0	0	1	0	0	1	0	1	0
16:15	0	93	14	0	107	0	0	0	0	0	0	0	0	0	0	0
16:30	0	86	9	0	95	0	1	0	0	1	0	0	0	0	0	0
16:45	0	90	10	0	100	0	2	0	0	2	0	2	0	0	2	0
17:00	0	71	10	0	81	0	1	0	0	1	0	0	0	0	0	0
17:15	0	61	3	0	64	0	1	0	0	1	0	0	0	0	0	0
17:30	0	85	10	0	95	0	1	0	0	1	0	0	2	0	2	0
17:45	0	71	11	0	82	0	2	1	0	3	0	0	0	0	0	0
SUBTOTAL	0	637	77	0	714	0	9	1	0	10	0	2	3	0	5	0
GRAND TOTAL	0	1196	129	0	1325	0	30	1	0	31	0	2	5	0	7	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	3	26	0	0	29	0	3	0	0	3	0	0	0	0	0	0
07:15	8	33	0	0	41	0	1	0	0	1	0	0	0	0	0	0
07:30	9	34	0	0	43	0	0	0	0	0	0	0	0	0	0	0
07:45	9	51	0	0	60	0	0	0	0	0	0	0	0	0	0	1
08:00	6	56	0	0	62	0	0	0	0	0	0	0	0	0	0	0
08:15	11	26	0	0	37	0	0	0	0	0	0	0	0	0	0	0
08:30	3	52	0	0	55	0	3	0	0	3	0	0	0	0	0	0
08:45	12	43	0	0	55	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	61	321	0	0	382	0	9	0	0	9	0	0	0	0	0	1

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	17	85	0	0	102	0	1	0	0	1	1	0	0	0	1	0
16:15	23	83	0	0	106	0	1	0	0	1	0	1	0	0	1	0
16:30	11	95	0	0	106	0	2	0	0	2	0	0	0	0	0	0
16:45	29	99	0	0	128	0	2	0	0	2	0	0	0	0	0	0
17:00	19	114	0	0	133	0	2	0	0	2	0	0	0	0	0	0
17:15	20	116	0	0	136	0	2	0	0	2	0	0	0	0	0	0
17:30	14	104	0	0	118	1	0	0	0	1	0	0	0	0	0	0
17:45	16	100	0	0	116	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	149	796	0	0	945	1	11	0	0	12	1	1	0	0	2	0
GRAND TOTAL	210	1117	0	0	1327	1	20	0	0	21	1	1	0	0	2	1

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	07:00:00	From:	07:15:00
To:	09:00:00	To:	08:15:00

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Oak St E runs E/W

North Approach

	Out	In	Total
Cars	0	59	59
Trucks	0	0	0
Bicycles	0	0	0
	0	**59**	**59**

Victoria Ave S

Bicycles	0	0	0
Trucks	0	0	0
Cars	0	0	0
Totals	**0**	**0**	**0**

East Approach

	Out	In	Total
Cars	329	174	503
Trucks	6	1	7
Bicycles	0	0	0
	335	**175**	**510**

Oak St E

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	0	32	**32**	
0	1	174	**175**	

Peds: 1

Peds: 5



Peds: 0

Peds: 0

Oak St E

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	27	27	0	0
	308	302	6	0

West Approach

	Out	In	Total
Cars	206	302	508
Trucks	1	6	7
Bicycles	0	0	0
	207	**308**	**515**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Count Date: May 04, 2021
Period: 07:00 - 09:00

Peak Hour Data (07:15 - 08:15)

Start Time	North Approach Victoria Ave S						South Approach						East Approach Oak St E						West Approach Oak St E						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
07:15	0		0	0	2	0					0			71	4	0	0	75	8	34		0	0	42	117
07:30	0		0	0	0	0					0			70	12	0	0	82	9	34		0	0	43	125
07:45	0		0	0	1	0					0			92	6	0	0	98	9	51		0	1	60	158
08:00	0		0	0	2	0					0			75	5	0	0	80	6	56		0	0	62	142
Grand Total	**0**		**0**	**0**	**5**	**0**					**0**	**0**		**308**	**27**	**0**	**0**	**335**	**32**	**175**		**0**	**1**	**207**	**542**
Approach %	0		0	0		-						-		91.9	8.1	0		-	15.5	84.5		0		-	
Totals %	0		0	0		0						0		56.8	5	0		61.8	5.9	32.3		0		38.2	
PHF	**0**		**0**	**0**		**0**						**0**		**0.84**	**0.56**	**0**		**0.85**	**0.89**	**0.78**		**0**		**0.83**	**0.86**
Cars	0		0	0		0						0		302	27	0		329	32	174		0		206	535
% Cars	0		0	0		0						0		98.1	100	0		98.2	100	99.4		0		99.5	98.7
Trucks	0		0	0		0						0		6	0	0		6	0	1		0		1	7
% Trucks	0		0	0		0						0		1.9	0	0		1.8	0	0.6		0		0.5	1.3
Bicycles	0		0	0		0						0		0	0	0		0	0	0		0		0	0
% Bicycles	0		0	0		0						0		0	0	0		0	0	0		0		0	0
Peds					5	-					0	-					0	-					1	-	6
% Peds					83.3	-					0	-					0	-					16.7	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:15:00
To:	18:00:00	To:	17:15:00

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Oak St E runs E/W

North Approach

	Out	In	Total
Cars	2	125	127
Trucks	0	0	0
Bicycles	0	0	0
	2	**125**	**127**

Victoria Ave S

Bicycles	0	0	0
Trucks	0	0	0
Cars	2	0	0
Totals	**2**	**0**	**0**

East Approach

	Out	In	Total
Cars	383	391	774
Trucks	4	7	11
Bicycles	2	1	3
	389	**399**	**788**

Oak St E

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	0	82	**82**
1	7	391	**399**

Peds: 8

Peds: 0

Peds: 0

Oak St E

Totals	Cars	Trucks	Bicycles
0	0	0	0
43	43	0	0
346	340	4	2

West Approach

	Out	In	Total
Cars	473	342	815
Trucks	7	4	11
Bicycles	1	2	3
	481	**348**	**829**

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Oak St E & Victoria Ave S
Site Code: 2107000002
Count Date: May 04, 2021
Period: 16:00 - 18:00

Peak Hour Data (16:15 - 17:15)

Start Time	North Approach Victoria Ave S						South Approach						East Approach Oak St E						West Approach Oak St E						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:15	0		1	0	4	1					0			93	14	0	0	107	23	85		0	0	108	216
16:30	0		1	0	1	1					0			87	9	0	0	96	11	97		0	0	108	205
16:45	0		0	0	2	0					0			94	10	0	0	104	29	101		0	0	130	234
17:00	0		0	0	1	0					0			72	10	0	0	82	19	116		0	0	135	217
Grand Total	**0**		**2**	**0**	**8**	**2**					**0**	**0**		**346**	**43**	**0**	**0**	**389**	**82**	**399**		**0**	**0**	**481**	**872**
Approach %	0		100	0		-						-		88.9	11.1	0		-	17	83		0		-	
Totals %	0		0.2	0		0.2						0		39.7	4.9	0		44.6	9.4	45.8		0		55.2	
PHF	**0**		**0.5**	**0**		**0.5**						**0**		**0.92**	**0.77**	**0**		**0.91**	**0.71**	**0.86**		**0**		**0.89**	**0.93**
Cars	0		2	0		2						0		340	43	0		383	82	391		0		473	858
% Cars	0		100	0		100						0		98.3	100	0		98.5	100	98		0		98.3	98.4
Trucks	0		0	0		0						0		4	0	0		4	0	7		0		7	11
% Trucks	0		0	0		0						0		1.2	0	0		1	0	1.8		0		1.5	1.3
Bicycles	0		0	0		0						0		2	0	0		2	0	1		0		1	3
% Bicycles	0		0	0		0						0		0.6	0	0		0.5	0	0.3		0		0.2	0.3
Peds					8	-					0	-					0	-					0	-	8
% Peds					100	-					0	-					0	-					0	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #21-070 - McIntosh Perry

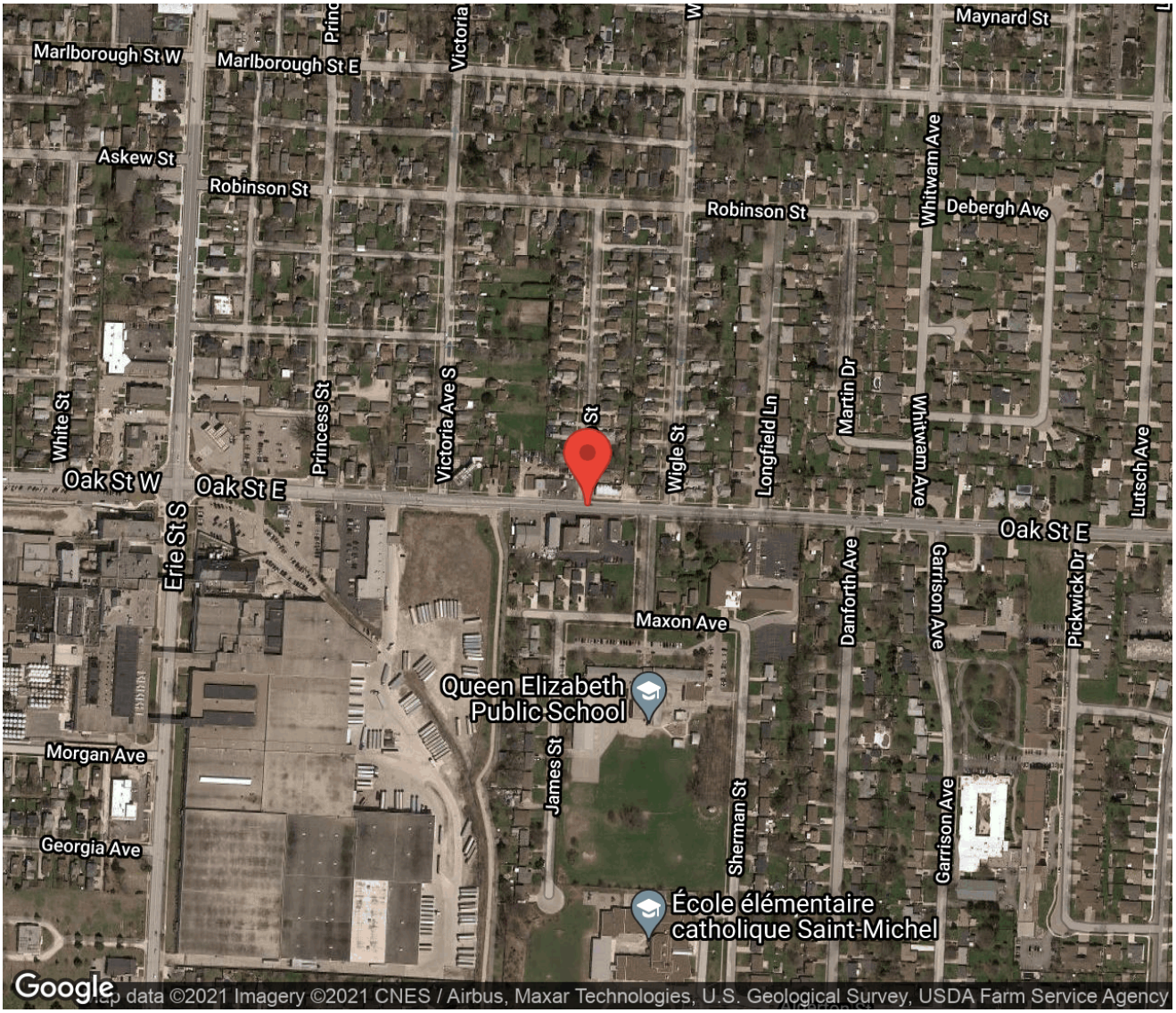
Intersection Count Report

Intersection:	Oak St E & Ontario St
Municipality:	Leamington
Count Date:	May 04, 2021
Site Code:	2107000003
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Oak St E & Ontario St
Site Code:	2107000003
Municipality:	Leamington
Count Date:	May 04, 2021



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Oak St E & Ontario St
Site Code:	2107000003
Municipality:	Leamington
Count Date:	May 04, 2021

Ontario St - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	2	0	11	0	13	4	0	0	0	0	0	0	13
08:00 - 09:00	1	0	6	0	7	9	0	0	0	0	0	0	7
BREAK													
16:00 - 17:00	4	0	9	0	13	6	0	0	0	0	0	0	13
17:00 - 18:00	5	0	8	0	13	3	0	0	0	0	0	0	13
GRAND TOTAL	**12**	**0**	**34**	**0**	**46**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**46**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Oak St E & Ontario St
Site Code:	2107000003
Municipality:	Leamington
Count Date:	May 04, 2021

Oak St E - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	0	302	5	0	307	0	5	144	0	0	149	0	456
08:00 - 09:00	0	316	3	0	319	2	7	172	0	0	179	0	498
BREAK													
16:00 - 17:00	0	390	9	0	399	2	5	364	0	0	369	0	768
17:00 - 18:00	0	324	6	0	330	1	8	432	0	0	440	0	770
GRAND TOTAL	**0**	**1332**	**23**	**0**	**1355**	**5**	**25**	**1112**	**0**	**0**	**1137**	**0**	**2492**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Municipality: Leamington
Count Date: May 04, 2021

North Approach - Ontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
07:30	1	0	7	0	8	0	0	0	0	0	0	0	0	0	0	0
07:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
08:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1
08:15	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	4
08:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
08:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
SUBTOTAL	3	0	16	0	19	0	0	1	0	1	0	0	0	0	0	13

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Municipality: Leamington
Count Date: May 04, 2021

North Approach - Ontario St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
16:00	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	2
16:15	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	1
16:30	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	3
16:45	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
17:00	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	1
17:15	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	1
17:45	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	9	0	15	0	24	0	0	0	0	0	0	0	2	0	2	9
GRAND TOTAL	12	0	31	0	43	0	0	1	0	1	0	0	2	0	2	22

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	0	52	1	0	53	0	1	0	0	1	0	0	0	0	0	0
07:15	0	72	1	0	73	0	1	0	0	1	0	0	0	0	0	0
07:30	0	74	1	0	75	0	3	0	0	3	0	0	0	0	0	0
07:45	0	99	2	0	101	0	0	0	0	0	0	0	0	0	0	0
08:00	0	75	0	0	75	0	2	0	0	2	0	0	0	0	0	1
08:15	0	73	2	0	75	0	5	0	0	5	0	0	0	0	0	1
08:30	0	64	1	0	65	0	4	0	0	4	0	0	0	0	0	0
08:45	0	90	0	0	90	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	0	599	8	0	607	0	19	0	0	19	0	0	0	0	0	2

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	0	97	1	0	98	0	1	0	0	1	0	1	0	0	1	0
16:15	0	98	1	0	99	0	0	0	0	0	0	0	0	0	0	0
16:30	0	92	4	0	96	0	1	0	0	1	0	0	0	0	0	0
16:45	0	96	3	0	99	0	2	0	0	2	0	2	0	0	2	2
17:00	0	80	1	0	81	0	1	0	0	1	0	0	0	0	0	0
17:15	0	64	3	0	67	0	1	1	0	2	0	0	0	0	0	0
17:30	0	92	0	0	92	0	2	0	0	2	0	1	0	0	1	1
17:45	0	80	1	0	81	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	0	699	14	0	713	0	11	1	0	12	0	4	0	0	4	3
GRAND TOTAL	0	1298	22	0	1320	0	30	1	0	31	0	4	0	0	4	5

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	0	25	0	0	25	0	3	0	0	3	0	0	0	0	0	0
07:15	1	34	0	0	35	0	1	0	0	1	0	0	0	0	0	0
07:30	2	35	0	0	37	0	0	0	0	0	0	0	0	0	0	0
07:45	2	45	0	0	47	0	0	0	0	0	0	1	0	0	1	0
08:00	1	43	0	0	44	0	0	0	0	0	0	0	0	0	0	0
08:15	1	37	0	0	38	0	1	0	0	1	0	0	0	0	0	0
08:30	4	48	0	0	52	1	2	0	0	3	0	0	0	0	0	0
08:45	0	41	0	0	41	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	11	308	0	0	319	1	7	0	0	8	0	1	0	0	1	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Oak St E

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	1	84	0	0	85	0	2	0	0	2	0	0	0	0	0	0
16:15	2	81	0	0	83	0	1	0	0	1	0	1	0	0	1	0
16:30	1	92	0	0	93	0	2	0	0	2	0	0	0	0	0	0
16:45	1	100	0	0	101	0	1	0	0	1	0	0	0	0	0	0
17:00	4	111	0	0	115	0	2	0	0	2	0	0	0	0	0	0
17:15	3	112	0	0	115	0	2	0	0	2	0	0	0	0	0	0
17:30	0	104	0	0	104	0	0	0	0	0	0	0	0	0	0	0
17:45	1	99	0	0	100	0	1	0	0	1	0	1	0	0	1	0
SUBTOTAL	13	783	0	0	796	0	11	0	0	11	0	2	0	0	2	0
GRAND TOTAL	24	1091	0	0	1115	1	18	0	0	19	0	3	0	0	3	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	07:00:00	From:	07:45:00
To:	09:00:00	To:	08:45:00

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Oak St E runs E/W

North Approach

	Out	In	Total
Cars	6	13	19
Trucks	1	1	2
Bicycles	0	0	0
	7	**14**	**21**

Ontario St

Bicycles	0	0	0
Trucks	1	0	0
Cars	5	1	0
Totals	**6**	**1**	**0**

East Approach

	Out	In	Total
Cars	316	174	490
Trucks	11	3	14
Bicycles	0	1	1
	327	**178**	**505**

Oak St E

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	1	8	**9**	
1	3	173	**177**	

Peds: 8

Peds: 0

Peds: 2

Peds: 0

Oak St E

Totals	Cars	Trucks	Bicycles
0	0	0	0
5	5	0	0
322	311	11	0

West Approach

	Out	In	Total
Cars	181	316	497
Trucks	4	12	16
Bicycles	1	0	1
	186	**328**	**514**

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Count Date: May 04, 2021
Period: 07:00 - 09:00

Peak Hour Data (07:45 - 08:45)

Start Time	North Approach Ontario St						South Approach						East Approach Oak St E						West Approach Oak St E						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
07:45	1		0	0	2	1					0			99	2	0	0	101	2	46		0	0	48	150
08:00	0		2	0	1	2					0			77	0	0	1	77	1	43		0	0	44	123
08:15	0		3	0	4	3					0			78	2	0	1	80	1	38		0	0	39	122
08:30	0		1	0	1	1					0			68	1	0	0	69	5	50		0	0	55	125
Grand Total	**1**		**6**	**0**	**8**	**7**					**0**	**0**		**322**	**5**	**0**	**2**	**327**	**9**	**177**		**0**	**0**	**186**	**520**
Approach %	14.3		85.7	0		-						-		98.5	1.5	0		-	4.8	95.2		0		-	
Totals %	0.2		1.2	0		1.3						0		61.9	1	0		62.9	1.7	34		0		35.8	
PHF	**0.25**		**0.5**	**0**		**0.58**						**0**		**0.81**	**0.63**	**0**		**0.81**	**0.45**	**0.89**		**0**		**0.85**	**0.87**
Cars	1		5	0		6						0		311	5	0		316	8	173		0		181	503
% Cars	100		83.3	0		85.7						0		96.6	100	0		96.6	88.9	97.7		0		97.3	96.7
Trucks	0		1	0		1						0		11	0	0		11	1	3		0		4	16
% Trucks	0		16.7	0		14.3						0		3.4	0	0		3.4	11.1	1.7		0		2.2	3.1
Bicycles	0		0	0		0						0		0	0	0		0	0	1		0		1	1
% Bicycles	0		0	0		0						0		0	0	0		0	0	0.6		0		0.5	0.2
Peds					8	-					0	-					2	-					0	-	10
% Peds					80	-					0	-					20	-					0	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:45:00
To:	18:00:00	To:	17:45:00

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Oak St E runs E/W

North Approach

	Out	In	Total
Cars	11	15	26
Trucks	0	1	1
Bicycles	2	0	2
	13	**16**	**29**

Ontario St

Bicycles	2	0	0
Trucks	0	0	0
Cars	7	4	0
Totals	**9**	**4**	**0**

East Approach

	Out	In	Total
Cars	339	431	770
Trucks	7	5	12
Bicycles	3	0	3
	349	**436**	**785**

Oak St E

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	0	8	**8**	
0	5	427	**432**	

Peds: 0



Peds: 3

Peds: 3

Peds: 0

Oak St E

Totals	Cars	Trucks	Bicycles
0	0	0	0
8	7	1	0
341	332	6	3

West Approach

	Out	In	Total
Cars	435	339	774
Trucks	5	6	11
Bicycles	0	5	5
	440	**350**	**790**

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
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Peak Hour Summary

Intersection: Oak St E & Ontario St
Site Code: 2107000003
Count Date: May 04, 2021
Period: 16:00 - 18:00

Peak Hour Data (16:45 - 17:45)

Start Time	North Approach Ontario St						South Approach						East Approach Oak St E						West Approach Oak St E						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:45	0		3	0	0	3					0			100	3	0	2	103	1	101		0	0	102	208
17:00	2		1	0	1	3					0			81	1	0	0	82	4	113		0	0	117	202
17:15	2		2	0	1	4					0			65	4	0	0	69	3	114		0	0	117	190
17:30	0		3	0	1	3					0			95	0	0	1	95	0	104		0	0	104	202
Grand Total	**4**		**9**	**0**	**3**	**13**					**0**	**0**		**341**	**8**	**0**	**3**	**349**	**8**	**432**		**0**	**0**	**440**	**802**
Approach %	30.8		69.2	0		-						-		97.7	2.3	0		-	1.8	98.2		0		-	
Totals %	0.5		1.1	0		1.6						0		42.5	1	0		43.5	1	53.9		0		54.9	
PHF	**0.5**		**0.75**	**0**		**0.81**						**0**		**0.85**	**0.5**	**0**		**0.85**	**0.5**	**0.95**		**0**		**0.94**	**0.96**
Cars	4		7	0		11						0		332	7	0		339	8	427		0		435	785
% Cars	100		77.8	0		84.6						0		97.4	87.5	0		97.1	100	98.8		0		98.9	97.9
Trucks	0		0	0		0						0		6	1	0		7	0	5		0		5	12
% Trucks	0		0	0		0						0		1.8	12.5	0		2	0	1.2		0		1.1	1.5
Bicycles	0		2	0		2						0		3	0	0		3	0	0		0		0	5
% Bicycles	0		22.2	0		15.4						0		0.9	0	0		0.9	0	0		0		0	0.6
Peds					3	-					0	-					3	-					0	-	6
% Peds					50	-					0	-					50	-					0	-	

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Project #21-070 - McIntosh Perry

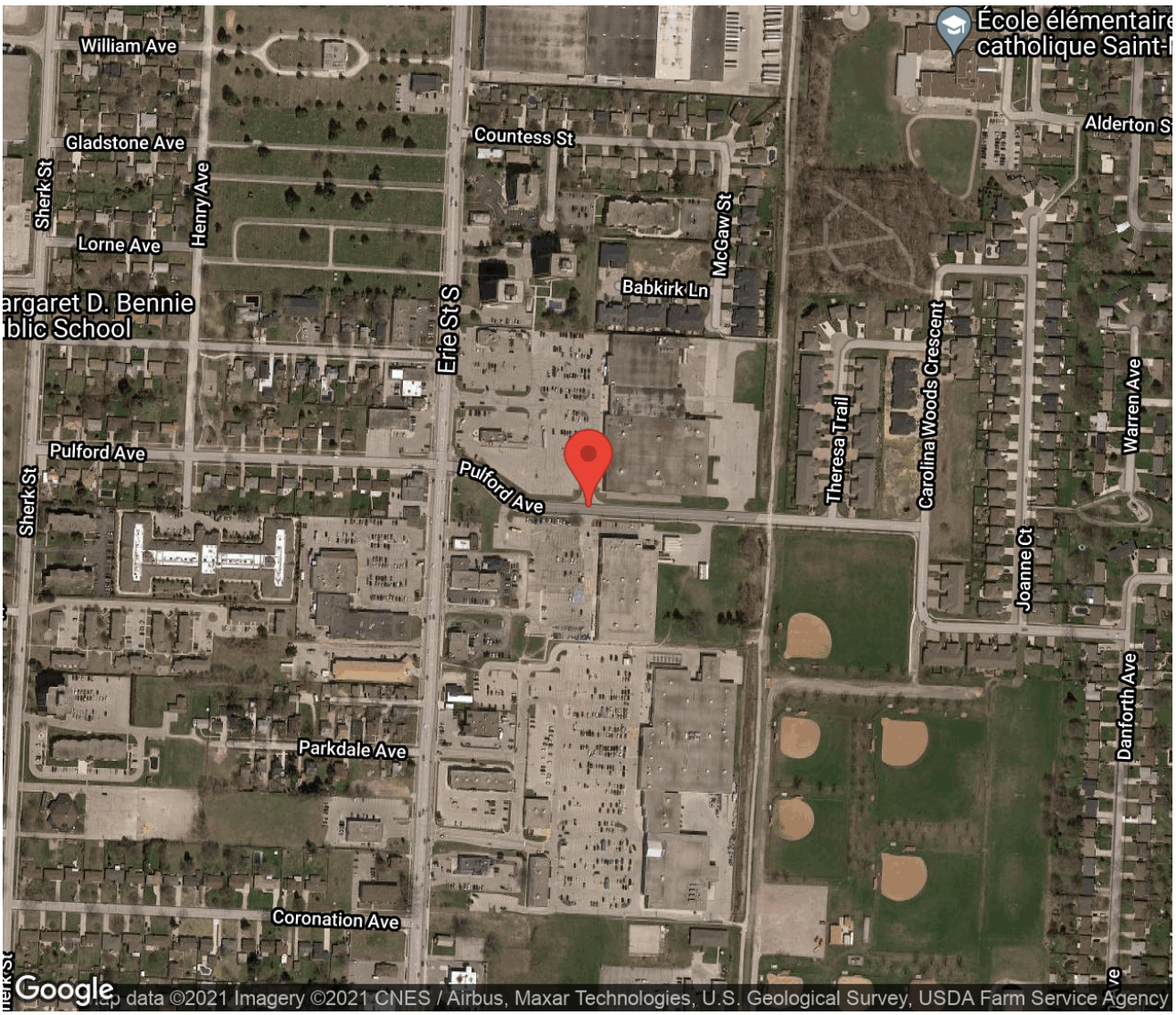
Intersection Count Report

Intersection:	Pulford Ave between Canadian Tire & FreshCo Plaza
Municipality:	Leamington
Count Date:	May 04, 2021
Site Code:	2107000004
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear

Ontario Traffic Inc.
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Traffic Count Map

Intersection:	Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code:	2107000004
Municipality:	Leamington
Count Date:	May 04, 2021



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code:	2107000004
Municipality:	Leamington
Count Date:	May 04, 2021

FreshCo Plaza - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	43	3	17	0	63	0	1	0	0	0	1	1	64
08:00 - 09:00	50	4	24	0	78	0	1	4	3	0	8	2	86
BREAK													
16:00 - 17:00	54	7	48	0	109	0	8	7	7	0	22	3	131
17:00 - 18:00	43	6	34	0	83	0	9	5	9	0	23	2	106
GRAND TOTAL	**190**	**20**	**123**	**0**	**333**	**0**	**19**	**16**	**19**	**0**	**54**	**8**	**387**

Ontario Traffic Inc.
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Traffic Count Summary

Intersection:	Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code:	2107000004
Municipality:	Leamington
Count Date:	May 04, 2021

Pulford Ave - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	**Left**	**Thru**	**Right**	**U-Turn**	**Total**	**Peds**	**Left**	**Thru**	**Right**	**U-Turn**	**Total**	**Peds**	**Total**
07:00 - 08:00	5	33	70	0	108	0	15	14	3	0	32	0	140
08:00 - 09:00	3	52	60	0	115	1	17	17	2	0	36	0	151
BREAK													
16:00 - 17:00	11	63	34	0	108	20	26	78	2	0	106	2	214
17:00 - 18:00	9	69	27	0	105	7	32	100	2	0	134	0	239
GRAND TOTAL	**28**	**217**	**191**	**0**	**436**	**28**	**90**	**209**	**9**	**0**	**308**	**2**	**744**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

North Approach - FreshCo Plaza

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	10	0	3	0	13	1	0	0	0	1	0	0	0	0	0	0
07:15	7	0	3	0	10	0	0	0	0	0	0	0	0	0	0	0
07:30	12	2	2	0	16	0	0	0	0	0	0	0	0	0	0	0
07:45	13	1	7	0	21	0	0	2	0	2	0	0	0	0	0	0
08:00	15	1	5	0	21	0	0	0	0	0	0	0	0	0	0	0
08:15	14	1	3	0	18	0	0	1	0	1	0	0	0	0	0	0
08:30	10	0	6	0	16	0	0	0	0	0	0	0	0	0	0	0
08:45	10	2	8	0	20	1	0	1	0	2	0	0	0	0	0	0
SUBTOTAL	91	7	37	0	135	2	0	4	0	6	0	0	0	0	0	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

North Approach - FreshCo Plaza

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	10	3	15	0	28	0	0	0	0	0	1	0	0	0	1	0
16:15	9	4	12	0	25	0	0	0	0	0	1	0	0	0	1	0
16:30	18	0	9	0	27	0	0	0	0	0	0	0	0	0	0	0
16:45	15	0	12	0	27	0	0	0	0	0	0	0	0	0	0	0
17:00	10	0	9	0	19	0	0	0	0	0	0	0	0	0	0	0
17:15	6	4	9	0	19	0	0	1	0	1	1	1	0	0	2	0
17:30	9	1	12	0	22	0	0	1	0	1	1	0	0	0	1	0
17:45	14	0	2	0	16	0	0	0	0	0	2	0	0	0	2	0
SUBTOTAL	91	12	80	0	183	0	0	2	0	2	6	1	0	0	7	0
GRAND TOTAL	**182**	**19**	**117**	**0**	**318**	**2**	**0**	**6**	**0**	**8**	**6**	**1**	**0**	**0**	**7**	**0**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

South Approach - Canadian Tire

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
08:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:30	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
08:45	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	2	4	3	0	9	0	0	0	0	0	0	0	0	0	0	3

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

South Approach - Canadian Tire

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	2	1	1	0	4	0	0	0	0	0	0	0	0	0	0	0
16:15	2	3	1	0	6	0	0	0	0	0	0	0	0	0	0	0
16:30	0	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0
16:45	4	1	1	0	6	0	0	0	0	0	0	1	0	0	1	3
17:00	4	1	2	0	7	0	0	0	0	0	0	0	0	0	0	0
17:15	4	3	4	0	11	0	0	0	0	0	0	0	0	0	0	0
17:30	1	0	1	0	2	0	0	0	0	0	0	1	0	0	1	2
17:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	17	10	16	0	43	0	0	0	0	0	0	2	0	0	2	5
GRAND TOTAL	**19**	**14**	**19**	**0**	**52**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**8**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Pulford Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
07:00	0	6	19	0	25	0	0	0	0	0	0	0	0	0	0	0
07:15	0	8	14	0	22	0	2	0	0	2	0	0	0	0	0	0
07:30	4	4	16	0	24	0	1	1	0	2	0	0	0	0	0	0
07:45	1	9	20	0	30	0	3	0	0	3	0	0	0	0	0	0
08:00	0	10	11	0	21	0	2	0	0	2	0	0	0	0	0	0
08:15	0	16	14	0	30	0	1	0	0	1	0	1	0	0	1	1
08:30	2	11	15	0	28	0	0	0	0	0	0	0	0	0	0	0
08:45	1	11	19	0	31	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	8	75	128	0	211	0	9	2	0	11	0	1	0	0	1	1

Ontario Traffic Inc.
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Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

East Approach - Pulford Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	2	18	8	0	28	0	0	0	0	0	0	0	0	0	0	9
16:15	3	11	7	0	21	0	0	0	0	0	0	0	0	0	0	4
16:30	4	19	13	0	36	0	0	0	0	0	0	0	0	0	0	3
16:45	2	14	6	0	22	0	1	0	0	1	0	0	0	0	0	4
17:00	2	15	4	0	21	0	0	0	0	0	0	0	0	0	0	4
17:15	2	21	4	0	27	0	0	0	0	0	0	0	1	0	1	0
17:30	3	19	5	0	27	0	0	1	0	1	0	0	0	0	0	3
17:45	2	14	12	0	28	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	20	131	59	0	210	0	1	1	0	2	0	0	1	0	1	27
GRAND TOTAL	**28**	**206**	**187**	**0**	**421**	**0**	**10**	**3**	**0**	**13**	**0**	**1**	**1**	**0**	**2**	**28**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Pulford Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	3	2	0	0	5	1	1	0	0	2	0	0	0	0	0	0
07:15	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	0
07:30	1	2	2	0	5	0	1	0	0	1	0	0	0	0	0	0
07:45	8	3	1	0	12	1	2	0	0	3	0	0	0	0	0	0
08:00	1	5	1	0	7	0	0	0	0	0	0	0	0	0	0	0
08:15	0	5	0	0	5	1	0	0	0	1	0	0	0	0	0	0
08:30	7	2	0	0	9	0	0	0	0	0	0	0	0	0	0	0
08:45	6	5	1	0	12	2	0	0	0	2	0	0	0	0	0	0
SUBTOTAL	27	26	5	0	58	5	5	0	0	10	0	0	0	0	0	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Municipality: Leamington
Count Date: May 04, 2021

West Approach - Pulford Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	5	17	0	0	22	1	0	0	0	1	0	0	0	0	0	0
16:15	7	18	1	0	26	0	0	0	0	0	0	0	0	0	0	0
16:30	5	16	0	0	21	0	1	0	0	1	0	2	0	0	2	2
16:45	8	24	1	0	33	0	0	0	0	0	0	0	0	0	0	0
17:00	7	25	1	0	33	0	0	0	0	0	0	0	0	0	0	0
17:15	11	25	1	0	37	1	0	0	0	1	0	1	0	0	1	0
17:30	9	18	0	0	27	0	0	0	0	0	0	1	0	0	1	0
17:45	4	29	0	0	33	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	56	172	4	0	232	2	2	0	0	4	0	4	0	0	4	2
GRAND TOTAL	**83**	**198**	**9**	**0**	**290**	**7**	**7**	**0**	**0**	**14**	**0**	**4**	**0**	**0**	**4**	**2**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	07:00:00	From:	07:45:00
To:	09:00:00	To:	08:45:00

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Pulford Ave runs E/W

North Approach

	Out	In	Total
Cars	76	79	155
Trucks	3	2	5
Bicycles	0	0	0
	79	**81**	**160**

FreshCo Plaza

Bicycles	0	0	0	0
Trucks	3	0	0	0
Cars	21	3	52	0
Totals	**24**	**3**	**52**	**0**

East Approach

	Out	In	Total
Cars	109	68	177
Trucks	6	2	8
Bicycles	1	0	1
	116	**70**	**186**

Peds: 0

Pulford Ave

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	2	16	**18**	
0	2	15	**17**	
0	0	2	**2**	

Peds: 0

N
W E
S

Peds: 1

Pulford Ave

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	60	60	0	0
	53	46	6	1
	3	3	0	0

Peds: 2

West Approach

	Out	In	Total
Cars	33	68	101
Trucks	4	9	13
Bicycles	0	1	1
	37	**78**	**115**

Totals	**1**	**3**	**1**	**0**
Cars	1	3	1	0
Trucks	0	0	0	0
Bicycles	0	0	0	0

Canadian Tire

South Approach

	Out	In	Total
Cars	5	8	13
Trucks	0	0	0
Bicycles	0	0	0
	5	**8**	**13**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Count Date: May 04, 2021
Period: 07:00 - 09:00

Peak Hour Data (07:45 - 08:45)

Start Time	North Approach FreshCo Plaza						South Approach Canadian Tire						East Approach Pulford Ave						West Approach Pulford Ave						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
07:45	13	1	9	0	0	23	0	0	0	0	0	0	1	12	20	0	0	33	9	5	1	0	0	15	71
08:00	15	1	5	0	0	21	0	0	1	0	2	1	0	12	11	0	0	23	1	5	1	0	0	7	52
08:15	14	1	4	0	0	19	0	1	0	0	0	1	0	18	14	0	1	32	1	5	0	0	0	6	58
08:30	10	0	6	0	0	16	1	2	0	0	0	3	2	11	15	0	0	28	7	2	0	0	0	9	56
Grand Total	**52**	**3**	**24**	**0**	**0**	**79**	**1**	**3**	**1**	**0**	**2**	**5**	**3**	**53**	**60**	**0**	**1**	**116**	**18**	**17**	**2**	**0**	**0**	**37**	**237**
Approach %	65.8	3.8	30.4	0		-	20	60	20	0		-	2.6	45.7	51.7	0		-	48.6	45.9	5.4	0		-	
Totals %	21.9	1.3	10.1	0		33.3	0.4	1.3	0.4	0		2.1	1.3	22.4	25.3	0		48.9	7.6	7.2	0.8	0		15.6	
PHF	**0.87**	**0.75**	**0.67**	**0**		**0.86**	**0.25**	**0.38**	**0.25**	**0**		**0.42**	**0.38**	**0.74**	**0.75**	**0**		**0.88**	**0.5**	**0.85**	**0.5**	**0**		**0.62**	**0.83**
Cars	52	3	21	0		76	1	3	1	0		5	3	46	60	0		109	16	15	2	0		33	223
% Cars	100	100	87.5	0		96.2	100	100	100	0		100	100	86.8	100	0		94	88.9	88.2	100	0		89.2	94.1
Trucks	0	0	3	0		3	0	0	0	0		0	0	6	0	0		6	2	2	0	0		4	13
% Trucks	0	0	12.5	0		3.8	0	0	0	0		0	0	11.3	0	0		5.2	11.1	11.8	0	0		10.8	5.5
Bicycles	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	1
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	1.9	0	0		0.9	0	0	0	0		0	0.4
Peds					0	-					2	-					1	-					0	-	3
% Peds					0	-					66.7	-					33.3	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:30:00
To:	18:00:00	To:	17:30:00

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Count Date: May 04, 2021

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Pulford Ave runs E/W

North Approach

	Out	In	Total
Cars	92	64	156
Trucks	1	1	2
Bicycles	2	2	4
	95	**67**	**162**

FreshCo Plaza

Bicycles	0	1	1	0
Trucks	1	0	0	0
Cars	39	4	49	0
Totals	**40**	**5**	**50**	**0**

Peds: 0

East Approach

	Out	In	Total
Cars	106	150	256
Trucks	1	1	2
Bicycles	1	4	5
	108	**155**	**263**

Pulford Ave

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	1	31	**32**
3	1	90	**94**
0	0	3	**3**

Peds: 2



Peds: 11

Pulford Ave

Totals	Cars	Trucks	Bicycles
0	0	0	0
28	27	0	1
70	69	1	0
10	10	0	0

Peds: 3

West Approach

	Out	In	Total
Cars	124	120	244
Trucks	2	2	4
Bicycles	3	0	3
	129	**122**	**251**

Canadian Tire

Totals	**12**	**7**	**11**	**0**
Cars	12	6	11	0
Trucks	0	0	0	0
Bicycles	0	1	0	0

South Approach

	Out	In	Total
Cars	29	17	46
Trucks	0	0	0
Bicycles	1	1	2
	30	**18**	**48**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Pulford Ave between Canadian Tire & FreshCo Plaza
Site Code: 2107000004
Count Date: May 04, 2021
Period: 16:00 - 18:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach FreshCo Plaza						South Approach Canadian Tire						East Approach Pulford Ave						West Approach Pulford Ave						Total Vehicles
	↰	↑	↱	↩	Peds	Total	↰	↑	↱	↩	Peds	Total	↰	↑	↱	↩	Peds	Total	↰	↑	↱	↩	Peds	Total	
16:30	18	0	9	0	0	27	0	1	4	0	0	5	4	19	13	0	3	36	5	19	0	0	2	24	92
16:45	15	0	12	0	0	27	4	2	1	0	3	7	2	15	6	0	4	23	8	24	1	0	0	33	90
17:00	10	0	9	0	0	19	4	1	2	0	0	7	2	15	4	0	4	21	7	25	1	0	0	33	80
17:15	7	5	10	0	0	22	4	3	4	0	0	11	2	21	5	0	0	28	12	26	1	0	0	39	100
Grand Total	**50**	**5**	**40**	**0**	**0**	**95**	**12**	**7**	**11**	**0**	**3**	**30**	**10**	**70**	**28**	**0**	**11**	**108**	**32**	**94**	**3**	**0**	**2**	**129**	**362**
Approach %	52.6	5.3	42.1	0		-	40	23.3	36.7	0		-	9.3	64.8	25.9	0		-	24.8	72.9	2.3	0		-	
Totals %	13.8	1.4	11	0		26.2	3.3	1.9	3	0		8.3	2.8	19.3	7.7	0		29.8	8.8	26	0.8	0		35.6	
PHF	**0.69**	**0.25**	**0.83**	**0**		**0.88**	**0.75**	**0.58**	**0.69**	**0**		**0.68**	**0.63**	**0.83**	**0.54**	**0**		**0.75**	**0.67**	**0.9**	**0.75**	**0**		**0.83**	**0.91**
Cars	49	4	39	0		92	12	6	11	0		29	10	69	27	0		106	31	90	3	0		124	351
% Cars	98	80	97.5	0		96.8	100	85.7	100	0		96.7	100	98.6	96.4	0		98.1	96.9	95.7	100	0		96.1	97
Trucks	0	0	1	0		1	0	0	0	0		0	0	1	0	0		1	1	1	0	0		2	4
% Trucks	0	0	2.5	0		1.1	0	0	0	0		0	0	1.4	0	0		0.9	3.1	1.1	0	0		1.6	1.1
Bicycles	1	1	0	0		2	0	1	0	0		1	0	0	1	0		1	0	3	0	0		3	7
% Bicycles	2	20	0	0		2.1	0	14.3	0	0		3.3	0	0	3.6	0		0.9	0	3.2	0	0		2.3	1.9
Peds					0	-					3	-					11	-					2	-	16
% Peds					0	-					18.8	-					68.8	-					12.5	-	

RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

e: June 4, 2019
unted By: Parth Bhatt / Cheryl Morden
ather Conditions: Overcast
rsection: Seacliff Drive East at Cherry Lane

Groups Printed- P. Veh. - Transit - Trucks

	Seaciff Drive East W/B					Cherry Lane N/B					Driveway Access S/B					Seaciff Drive East E/B							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:00 AM	0	25	3	(0)	28	7	0	7	(0)	14	0	0	0	(0)	0	1	15	0	(0)	16	0	58	58
06:15 AM	0	33	4	(2)	37	9	0	13	(0)	22	0	0	0	(0)	0	2	27	0	(0)	29	2	88	90
06:30 AM	0	34	5	(0)	39	12	0	8	(0)	20	0	0	0	(0)	0	0	44	0	(0)	44	0	103	103
06:45 AM	0	31	10	(0)	41	16	0	9	(1)	25	0	0	0	(2)	0	5	50	0	(0)	55	3	121	124
Total	0	123	22	(2)	145	44	0	37	(1)	81	0	0	0	(2)	0	8	136	0	(0)	144	5	370	375
07:00 AM	0	49	2	(3)	51	19	0	8	(0)	27	0	0	0	(0)	0	4	33	0	(0)	37	3	115	118
07:15 AM	0	35	11	(0)	46	14	0	13	(1)	27	0	0	0	(0)	0	11	42	0	(0)	53	1	126	127
07:30 AM	0	48	8	(1)	56	23	0	16	(1)	39	0	0	0	(0)	0	6	34	0	(1)	40	3	135	138
07:45 AM	0	60	16	(0)	76	21	0	19	(2)	40	1	0	0	(0)	1	5	52	0	(1)	57	3	174	177
Total	0	192	37	(4)	229	77	0	56	(4)	133	1	0	0	(0)	1	26	161	0	(2)	187	10	550	560
08:00 AM	1	51	19	(3)	71	30	0	16	(2)	46	0	0	1	(0)	1	9	45	0	(0)	54	5	172	177
08:15 AM	0	47	16	(0)	63	20	0	12	(1)	32	0	0	0	(0)	0	10	43	0	(0)	53	1	148	149
08:30 AM	1	53	21	(0)	75	22	0	17	(0)	39	0	0	0	(0)	0	5	41	0	(0)	46	0	160	160
08:45 AM	1	53	16	(0)	70	21	0	18	(1)	39	0	0	0	(0)	0	14	44	0	(2)	58	3	167	170
Total	3	204	72	(3)	279	93	0	63	(4)	156	0	0	1	(0)	1	38	173	0	(2)	211	9	647	656
09:00 AM	0	67	17	(0)	84	16	0	12	(1)	28	0	0	0	(0)	0	15	42	0	(0)	57	1	169	170
09:15 AM	0	39	19	(0)	58	14	0	17	(0)	31	0	0	0	(0)	0	11	48	0	(2)	59	2	148	150
09:30 AM	0	44	13	(0)	57	26	0	15	(1)	41	0	0	0	(0)	0	13	45	0	(0)	58	1	156	157
09:45 AM	0	47	22	(0)	69	19	0	27	(1)	46	0	0	0	(0)	0	16	33	0	(1)	49	2	164	166
Total	0	197	71	(0)	268	75	0	71	(3)	146	0	0	0	(0)	0	55	168	0	(3)	223	6	637	643
10:00 AM	0	66	18	(0)	84	20	0	17	(1)	37	0	0	0	(0)	0	11	44	0	(0)	55	1	176	177
10:15 AM	1	43	13	(0)	57	23	0	20	(0)	43	0	0	1	(0)	1	13	43	1	(0)	57	0	158	158
10:30 AM	0	39	21	(0)	60	15	0	18	(0)	33	1	0	0	(1)	1	9	55	0	(0)	64	1	158	159
10:45 AM	0	39	29	(0)	68	16	0	11	(0)	27	0	0	0	(0)	0	15	37	0	(0)	52	0	147	147
Total	1	187	81	(0)	269	74	0	66	(1)	140	1	0	1	(1)	2	48	179	1	(0)	228	2	639	641
11:00 AM	1	68	16	(0)	85	12	0	20	(2)	32	0	0	0	(0)	0	23	47	0	(4)	70	6	187	193
11:15 AM	0	48	20	(0)	68	20	1	16	(1)	37	0	0	0	(0)	0	15	55	1	(1)	71	2	176	178
11:30 AM	0	53	23	(0)	76	24	0	17	(0)	41	0	0	0	(0)	0	13	51	0	(3)	64	3	181	184
11:45 AM	0	53	33	(0)	86	27	0	11	(0)	38	0	0	0	(0)	0	10	63	0	(0)	73	0	197	197
Total	1	222	92	(0)	315	83	1	64	(3)	148	0	0	0	(0)	0	61	216	1	(8)	278	11	741	752
12:00 PM	0	68	34	(0)	102	24	0	22	(0)	46	0	0	0	(0)	0	17	65	0	(0)	82	0	230	230

RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

Groups Printed- P. Veh. - Transit - Trucks

	Seaciff Drive East W/B					Cherry Lane N/B					Driveway Access S/B					Seaciff Drive East E/B							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
12:15 PM	0	70	25	(2)	95	21	0	19	(1)	40	0	0	0	(0)	0	14	69	0	(1)	83	4	218	222
12:30 PM	0	47	19	(0)	66	22	0	19	(1)	41	0	0	0	(0)	0	14	62	0	(1)	76	2	183	185
12:45 PM	0	57	22	(1)	79	26	0	24	(0)	50	0	0	0	(1)	0	16	55	1	(1)	72	3	201	204
Total	0	242	100	(3)	342	93	0	84	(2)	177	0	0	0	(1)	0	61	251	1	(3)	313	9	832	841
01:00 PM	0	77	21	(1)	98	30	0	20	(1)	50	0	0	0	(0)	0	31	66	0	(0)	97	2	245	247
01:15 PM	1	62	20	(0)	83	17	0	19	(0)	36	0	1	1	(0)	2	13	62	0	(1)	75	1	196	197
01:30 PM	1	71	27	(2)	99	28	0	28	(1)	56	0	0	1	(0)	1	18	63	0	(1)	81	4	237	241
01:45 PM	1	79	38	(0)	118	23	0	18	(3)	41	0	0	0	(0)	0	17	47	0	(1)	64	4	223	227
Total	3	289	106	(3)	398	98	0	85	(5)	183	0	1	2	(0)	3	79	238	0	(3)	317	11	901	912
02:00 PM	0	66	18	(0)	84	35	0	17	(0)	52	0	0	0	(0)	0	15	57	0	(0)	72	0	208	208
02:15 PM	0	61	19	(0)	80	25	0	19	(2)	44	0	0	0	(0)	0	6	59	0	(2)	65	4	189	193
02:30 PM	1	61	25	(0)	87	25	0	20	(0)	45	0	0	0	(0)	0	17	72	0	(0)	89	0	221	221
02:45 PM	0	69	23	(1)	92	21	0	14	(0)	35	0	0	0	(0)	0	8	71	0	(1)	79	2	206	208
Total	1	257	85	(1)	343	106	0	70	(2)	176	0	0	0	(0)	0	46	259	0	(3)	305	6	824	830
03:00 PM	1	73	29	(0)	103	23	0	19	(0)	42	0	0	0	(1)	0	19	67	0	(0)	86	1	231	232
03:15 PM	0	76	23	(0)	99	27	0	19	(0)	46	0	0	0	(0)	0	14	55	0	(1)	69	1	214	215
03:30 PM	0	67	28	(0)	95	16	0	13	(0)	29	0	0	0	(0)	0	16	66	0	(0)	82	0	206	206
03:45 PM	0	69	26	(0)	95	22	0	18	(0)	40	0	0	0	(0)	0	21	64	0	(0)	85	0	220	220
Total	1	285	106	(0)	392	88	0	69	(0)	157	0	0	0	(1)	0	70	252	0	(1)	322	2	871	873
04:00 PM	0	67	25	(2)	92	20	1	21	(0)	42	0	0	0	(0)	0	25	74	0	(0)	99	2	233	235
04:15 PM	0	79	25	(1)	104	18	0	20	(1)	38	0	0	0	(0)	0	16	80	0	(0)	96	2	238	240
04:30 PM	0	80	26	(2)	106	32	0	23	(0)	55	0	0	0	(0)	0	22	87	0	(1)	109	3	270	273
04:45 PM	0	60	34	(0)	94	30	0	15	(1)	45	0	0	0	(0)	0	20	78	0	(1)	98	2	237	239
Total	0	286	110	(5)	396	100	1	79	(2)	180	0	0	0	(0)	0	83	319	0	(2)	402	9	978	987
05:00 PM	0	83	32	(1)	115	29	0	34	(0)	63	0	0	0	(0)	0	26	94	0	(0)	120	1	298	299
05:15 PM	0	67	49	(0)	116	25	0	15	(0)	40	0	0	0	(0)	0	19	78	0	(0)	97	0	253	253
05:30 PM	0	60	25	(2)	85	21	0	20	(1)	41	0	0	0	(0)	0	25	92	0	(0)	117	3	243	246
05:45 PM	0	71	32	(0)	103	21	0	15	(0)	36	0	0	0	(0)	0	10	88	0	(2)	98	2	237	239
Total	0	281	138	(3)	419	96	0	84	(1)	180	0	0	0	(0)	0	80	352	0	(2)	432	6	1031	1037
06:00 PM	2	73	29	(0)	104	36	0	12	(0)	48	0	1	0	(0)	1	21	70	1	(0)	92	0	245	245
06:15 PM	0	70	25	(0)	95	14	0	15	(1)	29	2	0	0	(0)	2	18	63	1	(0)	82	1	208	209
06:30 PM	0	56	17	(0)	73	13	0	18	(2)	31	0	0	0	(0)	0	10	72	0	(2)	82	4	186	190
06:45 PM	0	57	22	(0)	79	21	0	10	(2)	31	0	0	0	(0)	0	7	45	0	(0)	52	2	162	164
Total	2	256	93	(0)	351	84	0	55	(5)	139	2	1	0	(0)	3	56	250	2	(2)	308	7	801	808
07:00 PM	3	60	21	(0)	84	11	0	15	(2)	26	1	0	0	(0)	1	13	50	0	(0)	63	2	174	176

RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

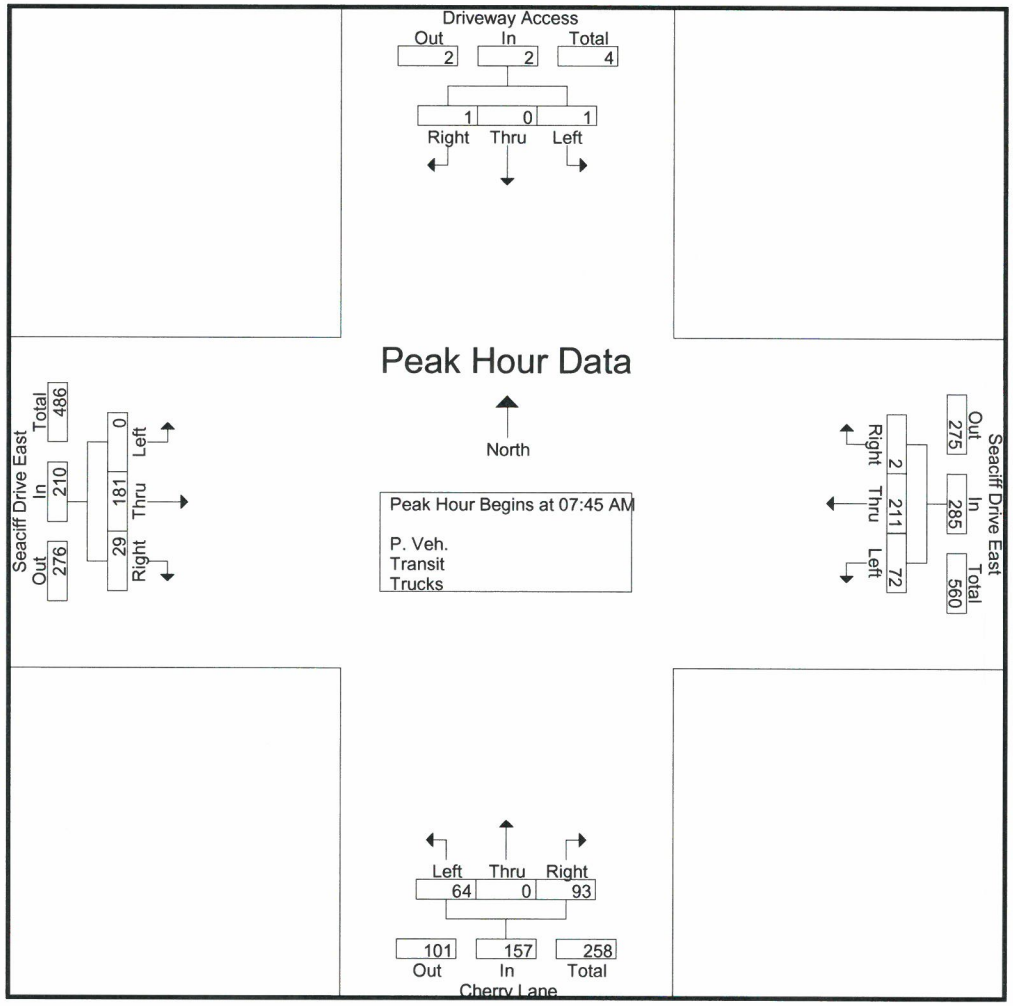
Groups Printed- P. Veh. - Transit - Trucks

	Seaciff Drive East W/B					Cherry Lane N/B					Driveway Access S/B					Seaciff Drive East E/B							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:15 PM	1	71	20	(0)	92	16	1	10	(0)	27	0	0	0	(0)	0	8	48	0	(1)	56	1	175	176
07:30 PM	0	74	23	(3)	97	17	0	14	(0)	31	0	1	0	(0)	1	9	46	0	(1)	55	4	184	188
07:45 PM	0	35	30	(1)	65	13	0	7	(1)	20	0	0	1	(0)	1	8	48	1	(0)	57	2	143	145
Total	4	240	94	(4)	338	57	1	46	(3)	104	1	1	1	(0)	3	38	192	1	(2)	231	9	676	685
08:00 PM	0	69	17	(0)	86	18	0	5	(1)	23	0	0	0	(0)	0	11	43	0	(1)	54	2	163	165
08:15 PM	0	37	14	(0)	51	14	0	5	(2)	19	0	0	0	(0)	0	11	53	0	(0)	64	2	134	136
08:30 PM	0	33	11	(2)	44	14	0	9	(1)	23	0	0	0	(1)	0	18	39	0	(0)	57	4	124	128
08:45 PM	0	26	15	(1)	41	18	0	9	(0)	27	0	0	0	(0)	0	16	56	0	(1)	72	2	140	142
Total	0	165	57	(3)	222	64	0	28	(4)	92	0	0	0	(1)	0	56	191	0	(2)	247	10	561	571
09:00 PM	0	33	17	(0)	50	17	1	7	(0)	25	0	0	0	(0)	0	14	48	0	(0)	62	0	137	137
09:15 PM	0	21	14	(0)	35	18	0	12	(0)	30	0	0	0	(0)	0	9	32	0	(1)	41	1	106	107
09:30 PM	0	16	4	(1)	20	7	1	3	(1)	11	0	0	1	(0)	1	5	19	0	(0)	24	2	56	58
09:45 PM	0	12	5	(1)	17	8	0	2	(0)	10	0	0	0	(0)	0	13	15	1	(0)	29	1	56	57
Total	0	82	40	(2)	122	50	2	24	(1)	76	0	0	1	(0)	1	41	114	1	(1)	156	4	355	359
Grand Total	16	3508	1304	(33)	4828	1282	5	981	(41)	2268	5	3	6	(6)	14	846	3451	7	(36)	4304	116	11414	11530
Apprch %	0.3	72.7	27			56.5	0.2	43.3			35.7	21.4	42.9			19.7	80.2	0.2					
Total %	0.1	30.7	11.4		42.3	11.2	0	8.6		19.9	0	0	0.1		0.1	7.4	30.2	0.1		37.7	1	99	
P. Veh.	16	3360	1292		4701	1268	5	975		2289	5	3	6		20	828	3306	7		4177	0	0	11187
% P. Veh.	100	95.8	99.1	100	96.7	98.9	100	99.4	100	99.1	100	100	100	100	100	97.9	95.8	100	100	96.2	0	0	97
Transit	0	59	8		67	7	0	1		8	0	0	0		0	12	43	0		55	0	0	130
% Transit	0	1.7	0.6	0	1.4	0.5	0	0.1	0	0.3	0	0	0	0	0	1.4	1.2	0	0	1.3	0	0	1.1
Trucks	0	89	4		93	7	0	5		12	0	0	0		0	6	102	0		108	0	0	213
% Trucks	0	2.5	0.3	0	1.9	0.5	0	0.5	0	0.5	0	0	0	0	0	0.7	3	0	0	2.5	0	0	1.8

RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

	Seaciff Drive East W/B				Cherry Lane N/B				Driveway Access S/B				Seaciff Drive East E/B				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
ak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
ak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**60**	16	**76**	21	0	**19**	40	**1**	0	0	**1**	5	**52**	0	**57**	**174**
08:00 AM	**1**	51	19	71	**30**	0	16	**46**	0	0	**1**	1	9	45	0	54	172
08:15 AM	0	47	16	63	20	0	12	32	0	0	0	0	**10**	43	0	53	148
08:30 AM	1	53	**21**	75	22	0	17	39	0	0	0	0	5	41	0	46	160
Total Volume	2	211	72	285	93	0	64	157	1	0	1	2	29	181	0	210	654
% App. Total	0.7	74	25.3		59.2	0	40.8		50	0	50		13.8	86.2	0		
PHF	.500	.879	.857	.938	.775	.000	.842	.853	.250	.000	.250	.500	.725	.870	.000	.921	.940

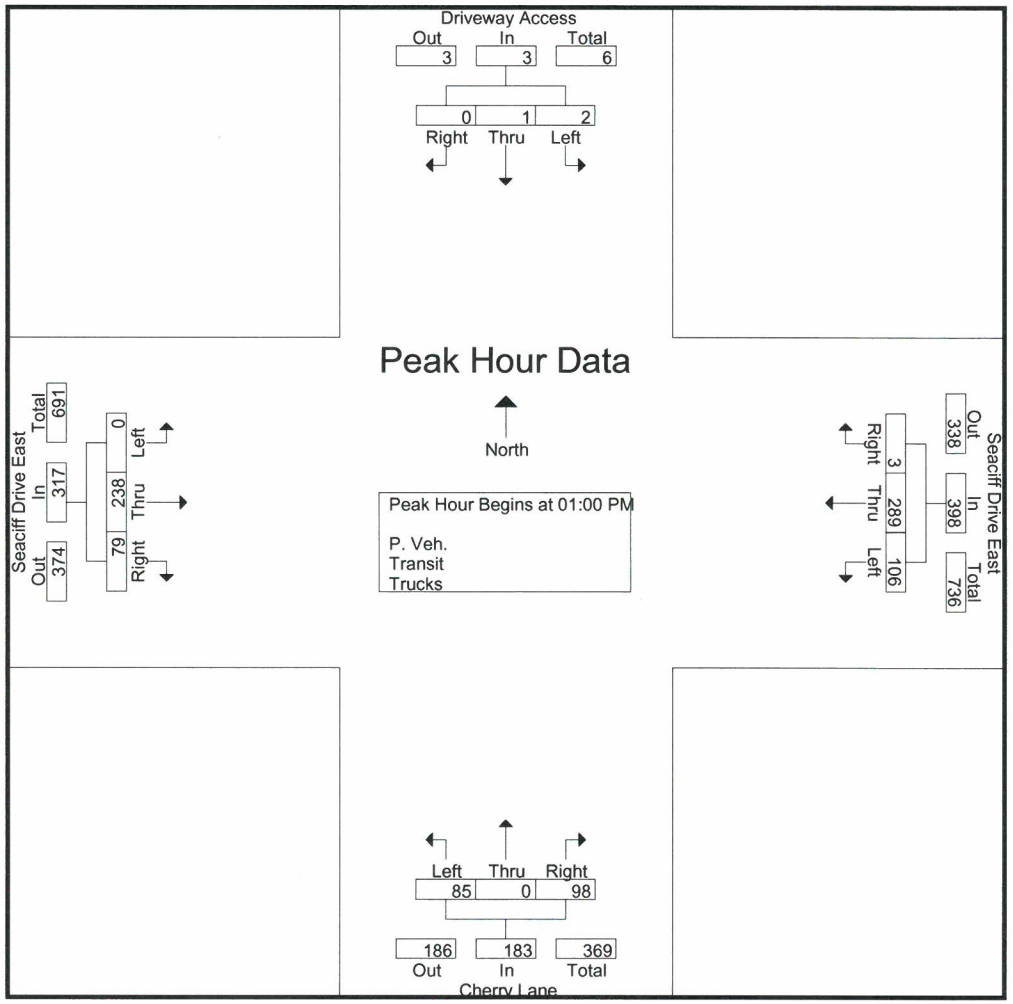
RC SPENCER ASSOCIATES INC.
Consulting Engineers
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Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3



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	Seaciff Drive East W/B				Cherry Lane N/B				Driveway Access S/B				Seaciff Drive East E/B				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
ak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
ak Hour for Entire Intersection Begins at 01:00 PM																	
01:00 PM	0	77	21	98	**30**	0	20	50	0	0	0	0	**31**	**66**	0	**97**	**245**
01:15 PM	**1**	62	20	83	17	0	19	36	0	**1**	**1**	**2**	13	62	0	75	196
01:30 PM	1	71	27	99	28	0	**28**	**56**	0	0	1	1	18	63	0	81	237
01:45 PM	1	**79**	**38**	**118**	23	0	18	41	0	0	0	0	17	47	0	64	223
Total Volume	3	289	106	398	98	0	85	183	0	1	2	3	79	238	0	317	901
% App. Total	0.8	72.6	26.6		53.6	0	46.4		0	33.3	66.7		24.9	75.1	0		
PHF	.750	.915	.697	.843	.817	.000	.759	.817	.000	.250	.500	.375	.637	.902	.000	.817	.919

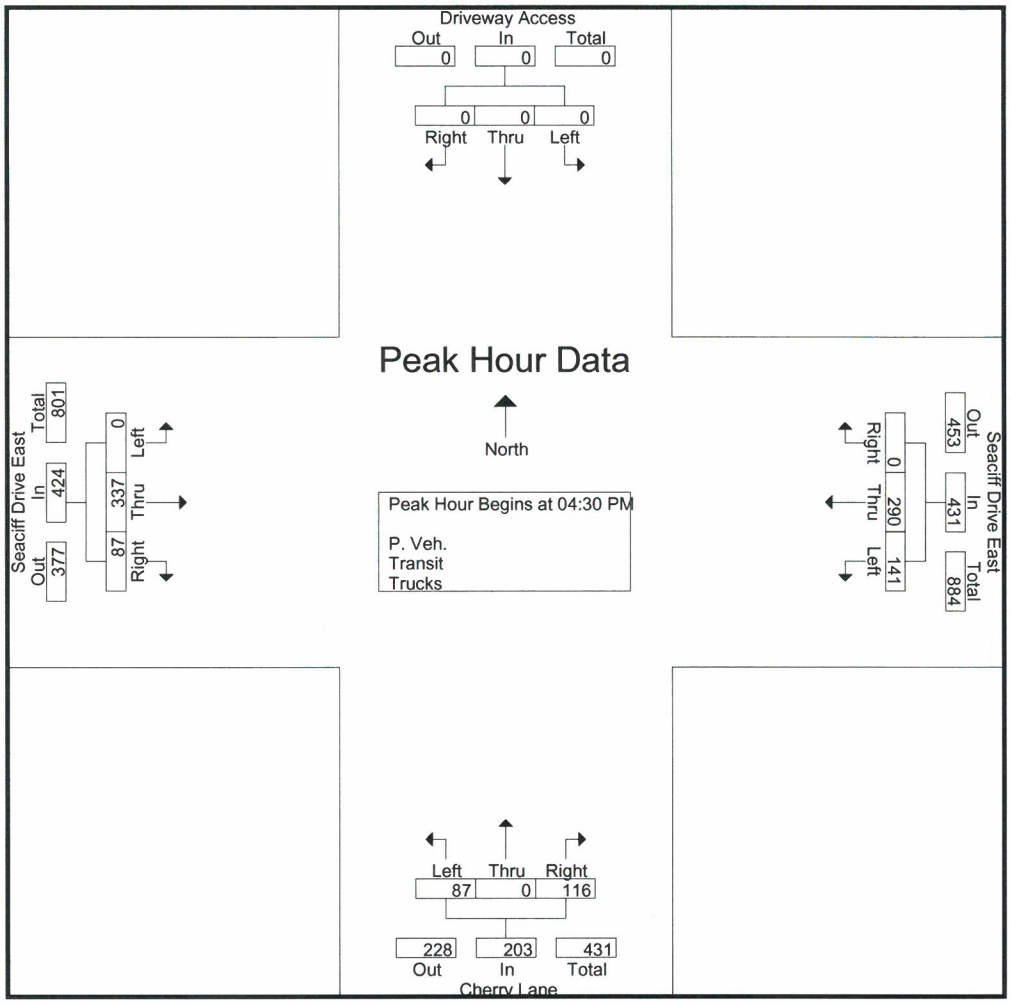
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	Seaciff Drive East W/B				Cherry Lane N/B				Driveway Access S/B				Seaciff Drive East E/B				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
ak Hour Analysis From 02:00 PM to 09:45 PM - Peak 1 of 1																	
ak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	80	26	106	**32**	0	23	55	0	0	0	0	22	87	0	109	270
04:45 PM	0	60	34	94	30	0	15	45	0	0	0	0	20	78	0	98	237
05:00 PM	0	**83**	32	115	29	0	**34**	**63**	0	0	0	0	**26**	**94**	0	**120**	**298**
05:15 PM	0	67	**49**	**116**	25	0	15	40	0	0	0	0	19	78	0	97	253
Total Volume	0	290	141	431	116	0	87	203	0	0	0	0	87	337	0	424	1058
% App. Total	0	67.3	32.7		57.1	0	42.9		0	0	0		20.5	79.5	0		
PHF	.000	.873	.719	.929	.906	.000	.640	.806	.000	.000	.000	.000	.837	.896	.000	.883	.888

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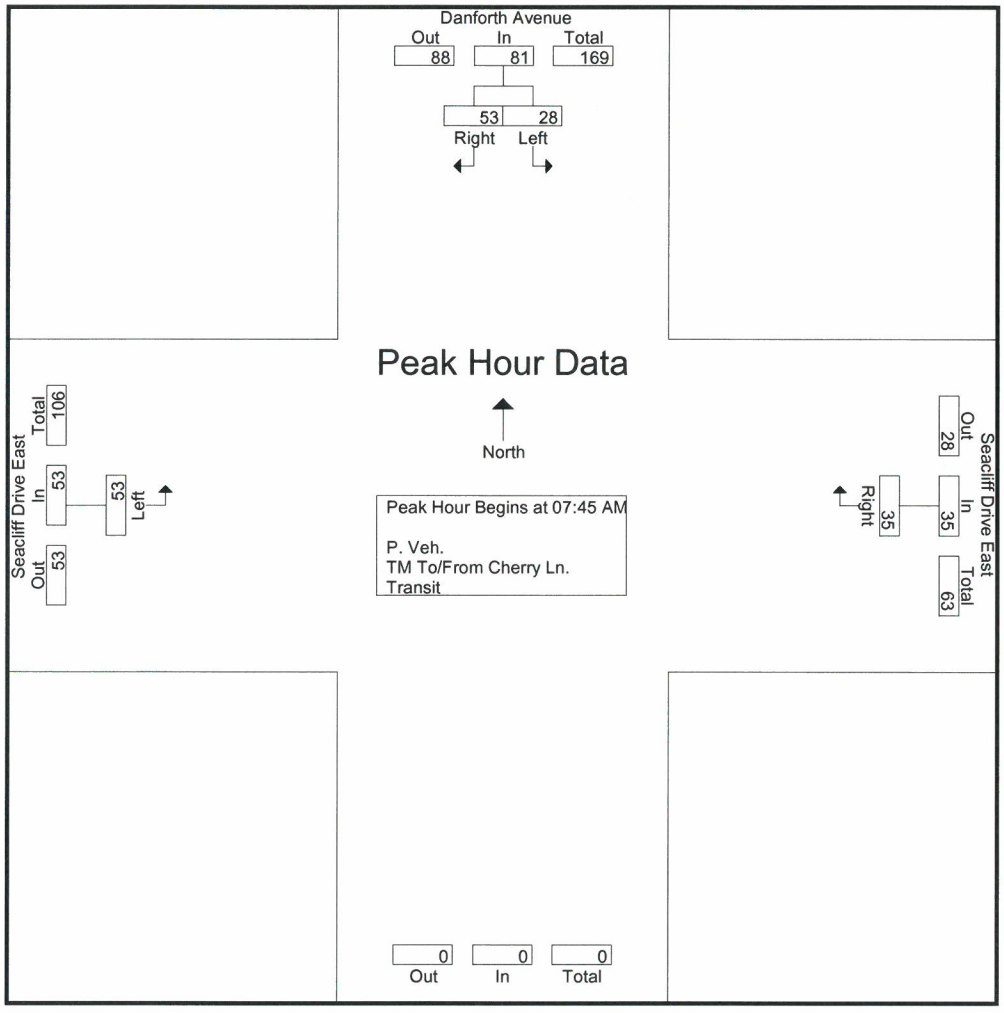
ate: June 13, 2019
Counted By: Parth Bhatt
Weather Conditions: Overcast
tersection: Seacliff Drive East at Danforth Avenue

Groups Printed- P. Veh. - TM To/From Cherry Ln. - Transit

	Seacliff Drive East W/B			Danforth Avenue S/B				Seacliff Drive East E/B					
Start Time	Right	Peds	App. Total	Right	Left	Peds	App. Total	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:45 AM	9	(1)	9	13	9	(0)	22	13	(0)	13	1	44	45
Total	9	(1)	9	13	9	(0)	22	13	(0)	13	1	44	45
08:00 AM	6	(0)	6	13	5	(0)	18	13	(0)	13	0	37	37
08:15 AM	10	(0)	10	10	6	(0)	16	14	(0)	14	0	40	40
08:30 AM	10	(0)	10	17	8	(1)	25	13	(0)	13	1	48	49
BREAK **													
Total	26	(0)	26	40	19	(1)	59	40	(0)	40	1	125	126
** BREAK **													
01:00 PM	6	(0)	6	21	8	(0)	29	18	(0)	18	0	53	53
01:15 PM	2	(1)	2	23	9	(0)	32	14	(0)	14	1	48	49
01:30 PM	9	(1)	9	14	5	(0)	19	18	(0)	18	1	46	47
01:45 PM	6	(1)	6	16	4	(0)	20	19	(0)	19	1	45	46
Total	23	(3)	23	74	26	(0)	100	69	(0)	69	3	192	195
** BREAK **													
04:30 PM	10	(0)	10	28	4	(0)	32	22	(1)	22	1	64	65
04:45 PM	9	(1)	9	20	8	(0)	28	23	(1)	23	2	60	62
Total	19	(1)	19	48	12	(0)	60	45	(2)	45	3	124	127
05:00 PM	12	(0)	12	21	5	(0)	26	24	(0)	24	0	62	62
05:15 PM	4	(0)	4	16	7	(0)	23	16	(0)	16	0	43	43
Grand Total	93	(5)	93	212	78	(1)	290	207	(2)	207	8	590	598
Apprch %	100			73.1	26.9			100					
Total %	15.8		15.8	35.9	13.2		49.2	35.1		35.1	1.3	98.7	
P. Veh.	92		97	105	77		183	75		77	0	0	357
% P. Veh.	98.9	100	99	49.5	98.7	100	62.9	36.2	100	36.8	0	0	59.7
TM To/From Cherry Ln.	0		0	105	0		105	131		131	0	0	236
% TM To/From Cherry Ln.	0	0	0	49.5	0	0	36.1	63.3	0	62.7	0	0	39.5
Transit	1		1	2	1		3	1		1	0	0	5
% Transit	1.1	0	1	0.9	1.3	0	1	0.5	0	0.5	0	0	0.8

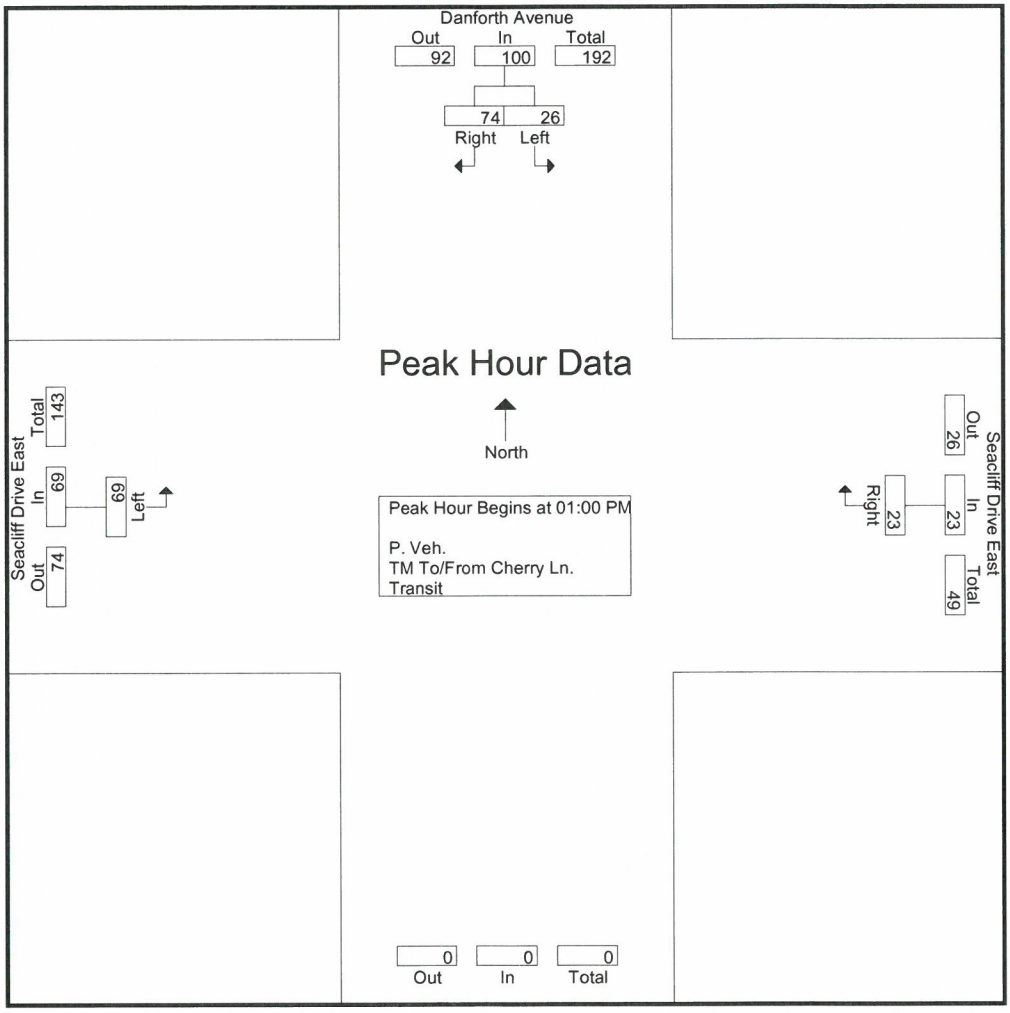
RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

	Seacliff Drive East W/B		Danforth Avenue S/B			Seacliff Drive East E/B		
Start Time	Right	App. Total	Right	Left	App. Total	Left	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 09:45 AM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 07:45 AM								
07:45 AM	9	9	13	**9**	22	13	13	44
08:00 AM	6	6	13	5	18	13	13	37
08:15 AM	**10**	**10**	10	6	16	**14**	**14**	40
08:30 AM	10	10	**17**	8	**25**	13	13	**48**
Total Volume	35	35	53	28	81	53	53	169
% App. Total	100		65.4	34.6		100		
PHF	.875	.875	.779	.778	.810	.946	.946	.880



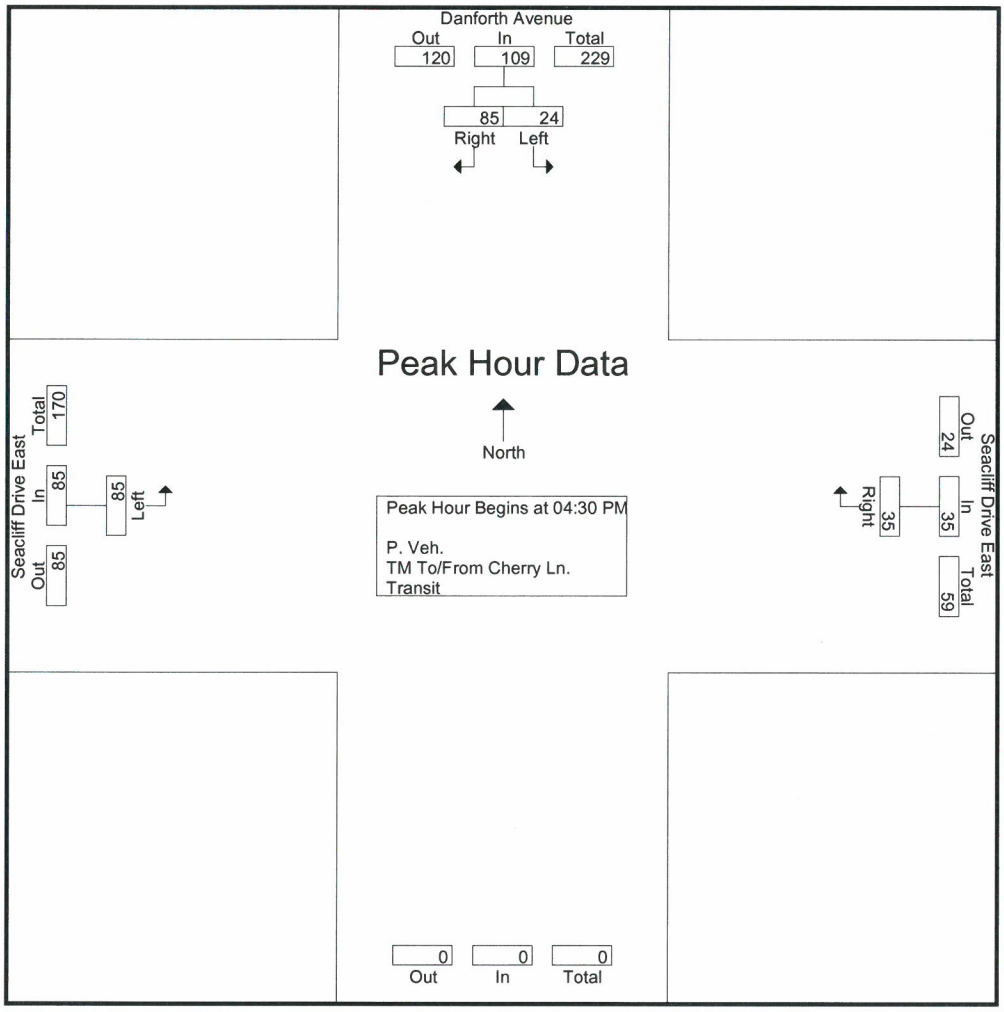
RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

	Seacliff Drive East W/B		Danforth Avenue S/B			Seacliff Drive East E/B		
Start Time	Right	App. Total	Right	Left	App. Total	Left	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 01:00 PM								
01:00 PM	6	6	21	8	29	18	18	**53**
01:15 PM	2	2	**23**	**9**	**32**	14	14	48
01:30 PM	**9**	**9**	14	5	19	18	18	46
01:45 PM	6	6	16	4	20	**19**	**19**	45
Total Volume	23	23	74	26	100	69	69	192
% App. Total	100		74	26		100		
PHF	.639	.639	.804	.722	.781	.908	.908	.906



RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

	Seacliff Drive East W/B		Danforth Avenue S/B			Seacliff Drive East E/B		
Start Time	Right	App. Total	Right	Left	App. Total	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:15 PM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 04:30 PM								
04:30 PM	10	10	**28**	4	**32**	22	22	**64**
04:45 PM	9	9	20	**8**	28	23	23	60
05:00 PM	**12**	**12**	21	5	26	**24**	**24**	62
05:15 PM	4	4	16	7	23	16	16	43
Total Volume	35	35	85	24	109	85	85	229
% App. Total	100		78	22		100		
PHF	.729	.729	.759	.750	.852	.885	.885	.895



RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

Date: September 5, 2019
Counted by: Cheryl Morden / Parth Bhatt
Weather Conditions: Clear
Intersection: Sherk Street at Ellison Avenue

Groups Printed- P. Veh. - Buses - Trucks

	Sherk Street N/B				Sherk Street S/B				Ellison Avenue E/B				Ellison Avenue W/B				
Start Time	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**Peds**	**App. Total**	**Right**	**Left**	**Peds**	**App. Total**	**Peds**	**App. Total**	**Exclu. Total**	**Inclu. Total**	**Int. Total**
07:00 AM	25	5	(0)	30	1	31	(1)	32	10	2	(2)	12	(4)	0	7	74	81
07:15 AM	40	21	(0)	61	8	25	(0)	33	9	2	(2)	11	(1)	0	3	105	108
07:30 AM	49	21	(0)	70	12	37	(2)	49	10	5	(1)	15	(3)	0	6	134	140
07:45 AM	72	43	(0)	115	34	45	(3)	79	41	10	(4)	51	(0)	0	7	245	252
Total	186	90	(0)	276	55	138	(6)	193	70	19	(9)	89	(8)	0	23	558	581
08:00 AM	59	33	(0)	92	26	48	(1)	74	54	3	(32)	57	(0)	0	33	223	256
08:15 AM	52	29	(0)	81	20	45	(0)	65	33	18	(28)	51	(1)	0	29	197	226
08:30 AM	34	13	(0)	47	8	48	(2)	56	17	12	(8)	29	(1)	0	11	132	143
08:45 AM	66	20	(0)	86	9	44	(1)	53	25	12	(0)	37	(0)	0	1	176	177
Total	211	95	(0)	306	63	185	(4)	248	129	45	(68)	174	(2)	0	74	728	802
** BREAK **																	
11:00 AM	43	17	(0)	60	5	80	(0)	85	28	20	(0)	48	(0)	0	0	193	193
11:15 AM	72	19	(0)	91	5	50	(2)	55	26	3	(2)	29	(0)	0	4	175	179
11:30 AM	56	33	(0)	89	8	69	(1)	77	23	5	(2)	28	(0)	0	3	194	197
11:45 AM	59	10	(0)	69	9	72	(1)	81	15	2	(2)	17	(0)	0	3	167	170
Total	230	79	(0)	309	27	271	(4)	298	92	30	(6)	122	(0)	0	10	729	739
12:00 PM	56	28	(0)	84	12	93	(0)	105	25	10	(0)	35	(0)	0	0	224	224
12:15 PM	78	32	(0)	110	13	70	(1)	83	27	7	(2)	34	(2)	0	5	227	232
12:30 PM	82	10	(0)	92	10	63	(0)	73	20	9	(1)	29	(0)	0	1	194	195
12:45 PM	95	16	(0)	111	5	71	(0)	76	22	7	(1)	29	(0)	0	1	216	217
Total	311	86	(0)	397	40	297	(1)	337	94	33	(4)	127	(2)	0	7	861	868
** BREAK **																	
02:30 PM	52	28	(0)	80	16	85	(2)	101	36	8	(21)	44	(2)	0	25	225	250
02:45 PM	68	27	(0)	95	9	61	(1)	70	44	26	(90)	70	(1)	0	92	235	327
Total	120	55	(0)	175	25	146	(3)	171	80	34	(111)	114	(3)	0	117	460	577
03:00 PM	82	31	(0)	113	8	81	(0)	89	26	11	(4)	37	(0)	0	4	239	243
03:15 PM	72	23	(0)	95	8	73	(2)	81	32	5	(3)	37	(1)	0	6	213	219
03:30 PM	68	25	(0)	93	6	78	(1)	84	24	10	(2)	34	(0)	0	3	211	214
03:45 PM	52	22	(0)	74	3	86	(0)	89	33	8	(7)	41	(0)	0	7	204	211
Total	274	101	(0)	375	25	318	(3)	343	115	34	(16)	149	(1)	0	20	867	887
04:00 PM	63	25	(0)	88	10	82	(0)	92	29	10	(0)	39	(0)	0	0	219	219
04:15 PM	60	18	(0)	78	11	68	(2)	79	24	15	(2)	39	(0)	0	4	196	200
04:30 PM	57	23	(2)	80	5	77	(0)	82	32	8	(0)	40	(0)	0	2	202	204
04:45 PM	62	33	(0)	95	6	67	(0)	73	28	14	(0)	42	(0)	0	0	210	210
Total	242	99	(2)	341	32	294	(2)	326	113	47	(2)	160	(0)	0	6	827	833
05:00 PM	64	29	(4)	93	15	90	(0)	105	25	7	(1)	32	(1)	0	6	230	236
05:15 PM	81	23	(1)	104	5	95	(0)	100	24	8	(0)	32	(1)	0	2	236	238
05:30 PM	59	27	(3)	86	8	85	(0)	93	15	10	(4)	25	(0)	0	7	204	211
05:45 PM	63	20	(3)	83	11	53	(1)	64	23	6	(7)	29	(0)	0	11	176	187
Total	267	99	(11)	366	39	323	(1)	362	87	31	(12)	118	(2)	0	26	846	872
06:00 PM	50	26	(2)	76	5	76	(0)	81	20	6	(4)	26	(0)	0	6	183	189
06:15 PM	60	23	(0)	83	6	60	(1)	66	18	9	(2)	27	(0)	0	3	176	179
Grand Total	1951	753	(15)	2704	317	2108	(25)	2425	818	288	(234)	1106	(18)	0	292	6235	6527
Apprch %	72.2	27.8			13.1	86.9			74	26							
Total %	31.3	12.1		43.4	5.1	33.8		38.9	13.1	4.6		17.7		0	4.5	95.5	

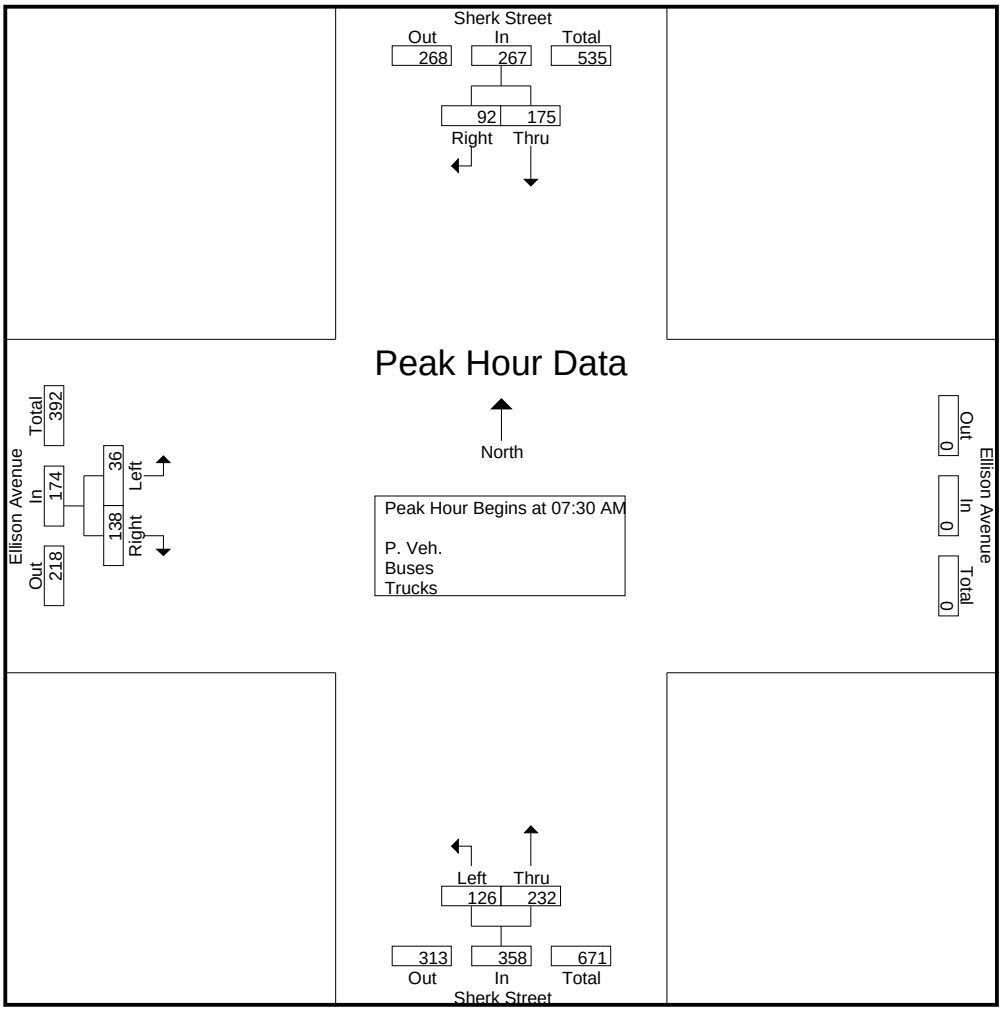
RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

Groups Printed- P. Veh. - Buses - Trucks

	Sherk Street N/B				Sherk Street S/B				Ellison Avenue E/B				Ellison Avenue W/B				
	Thru	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Right	Left	Peds	App. Total	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
P. Veh.	1918	728		2661	303	2078		2406	793	277		1304		18	0	0	6389
% P. Veh.	98.3	96.7	100	97.9	95.6	98.6	100	98.2	96.9	96.2	100	97.3	100	100	0	0	97.9
Buses	20	25		45	12	12		24	23	10		33		0	0	0	102
% Buses	1	3.3	0	1.7	3.8	0.6	0	1	2.8	3.5	0	2.5	0	0	0	0	1.6
Trucks	13	0		13	2	18		20	2	1		3		0	0	0	36
% Trucks	0.7	0	0	0.5	0.6	0.9	0	0.8	0.2	0.3	0	0.2	0	0	0	0	0.6

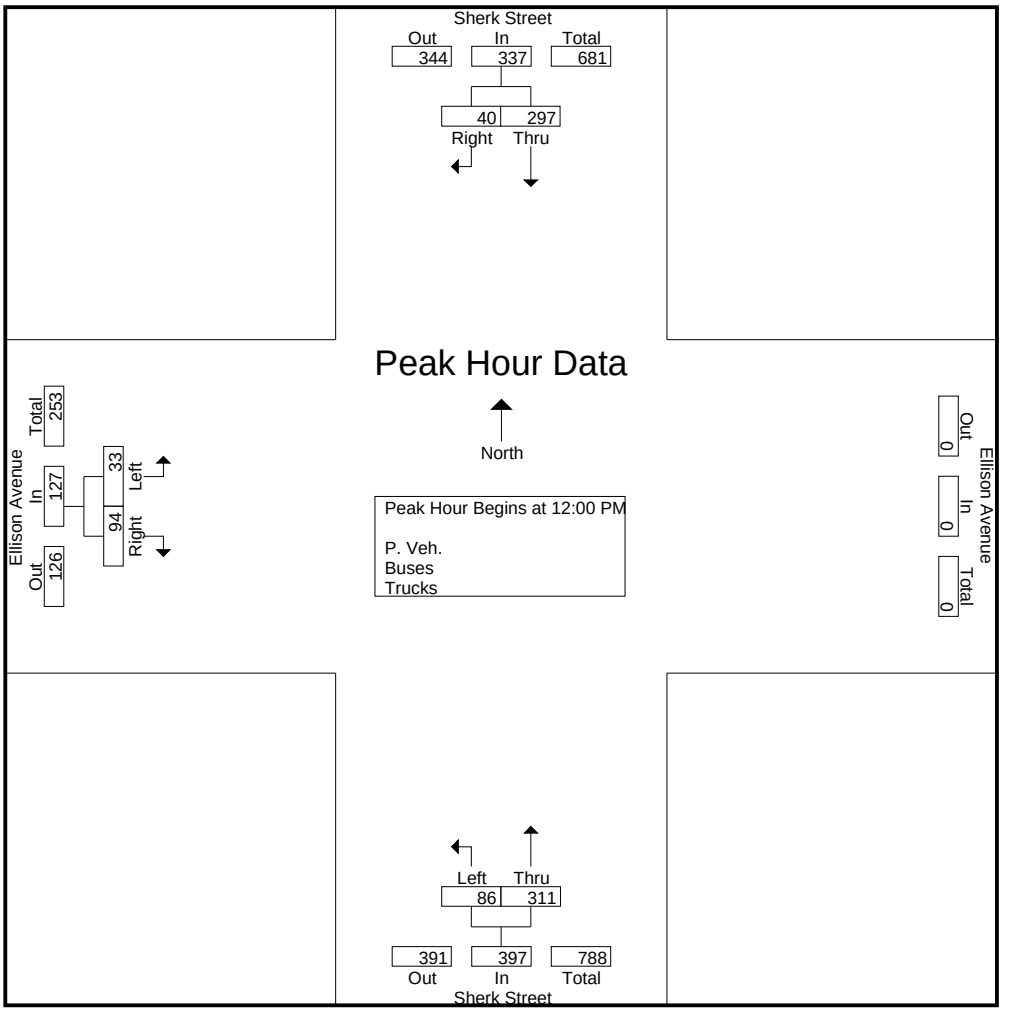
RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

	Sherk Street N/B			Sherk Street S/B			Ellison Avenue E/B			W/B	
Start Time	**Thru**	**Left**	**App. Total**	**Right**	**Thru**	**App. Total**	**Right**	**Left**	**App. Total**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	49	21	70	12	37	49	10	5	15	0	134
07:45 AM	**72**	**43**	**115**	**34**	45	**79**	41	10	51	0	**245**
08:00 AM	59	33	92	26	**48**	74	**54**	3	**57**	0	223
08:15 AM	52	29	81	20	45	65	33	**18**	51	0	197
Total Volume	232	126	358	92	175	267	138	36	174	0	799
% App. Total	64.8	35.2		34.5	65.5		79.3	20.7			
PHF	.806	.733	.778	.676	.911	.845	.639	.500	.763	.000	.815



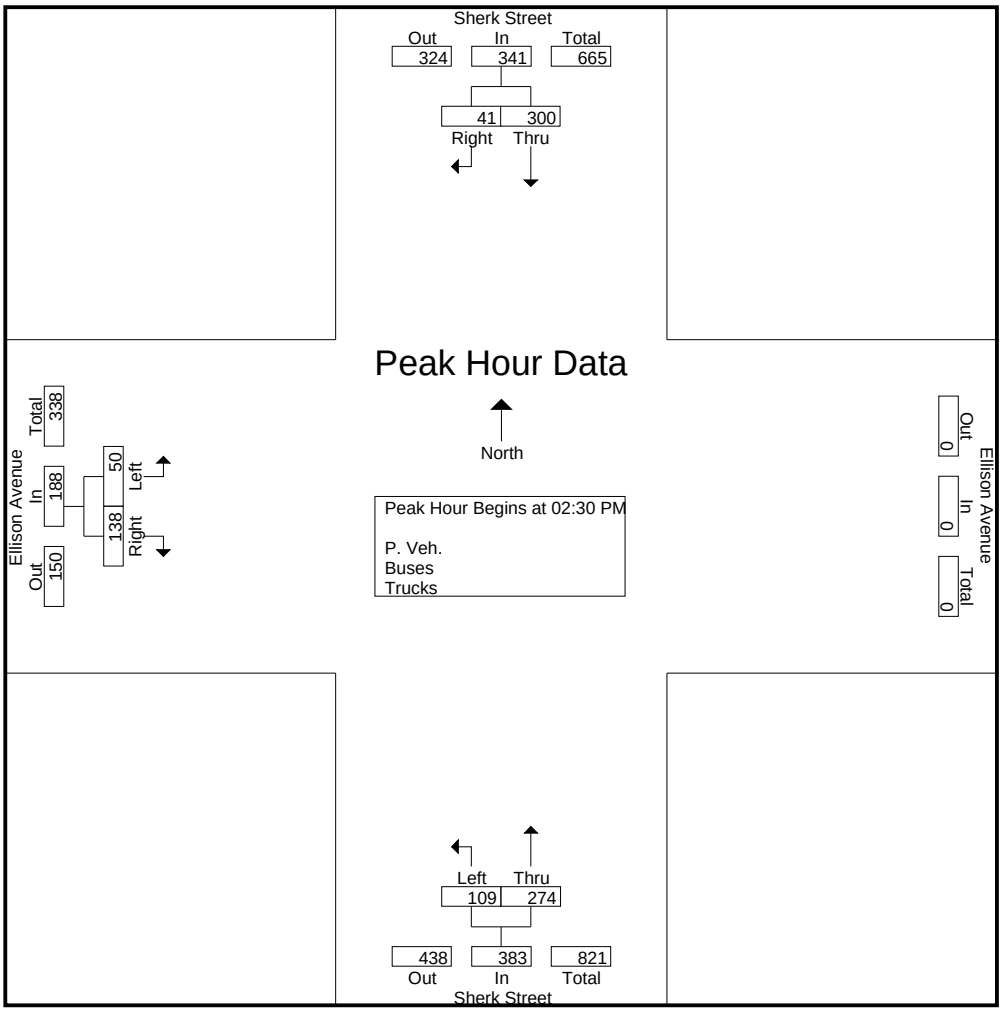
RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

	Sherk Street N/B			Sherk Street S/B			Ellison Avenue E/B			W/B	
Start Time	**Thru**	**Left**	**App. Total**	**Right**	**Thru**	**App. Total**	**Right**	**Left**	**App. Total**	**App. Total**	**Int. Total**
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 12:00 PM											
12:00 PM	56	28	84	12	**93**	**105**	25	**10**	**35**	0	224
12:15 PM	78	**32**	110	**13**	70	83	**27**	7	34	0	**227**
12:30 PM	82	10	92	10	63	73	20	9	29	0	194
12:45 PM	**95**	16	**111**	5	71	76	22	7	29	0	216
Total Volume	311	86	397	40	297	337	94	33	127	0	861
% App. Total	78.3	21.7		11.9	88.1		74	26			
PHF	.818	.672	.894	.769	.798	.802	.870	.825	.907	.000	.948



RC SPENCER ASSOCIATES INC.
Consulting Engineers
Windsor: 800 University Ave. W. - Windsor ON N9A 5R9
Leamington: 18 Talbot St. W. - Leamington ON N8H 1M4
Chatham-Kent: 138 King St. W. Unit 102 - Chatham ON N7M 1E3

	Sherk Street N/B			Sherk Street S/B			Ellison Avenue E/B			W/B	
Start Time	**Thru**	**Left**	**App. Total**	**Right**	**Thru**	**App. Total**	**Right**	**Left**	**App. Total**	**App. Total**	**Int. Total**
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 02:30 PM											
02:30 PM	52	28	80	**16**	**85**	**101**	36	8	44	0	225
02:45 PM	68	27	95	9	61	70	**44**	**26**	**70**	0	235
03:00 PM	**82**	**31**	**113**	8	81	89	26	11	37	0	**239**
03:15 PM	72	23	95	8	73	81	32	5	37	0	213
Total Volume	274	109	383	41	300	341	138	50	188	0	912
% App. Total	71.5	28.5		12	88		73.4	26.6			
PHF	.835	.879	.847	.641	.882	.844	.784	.481	.671	.000	.954

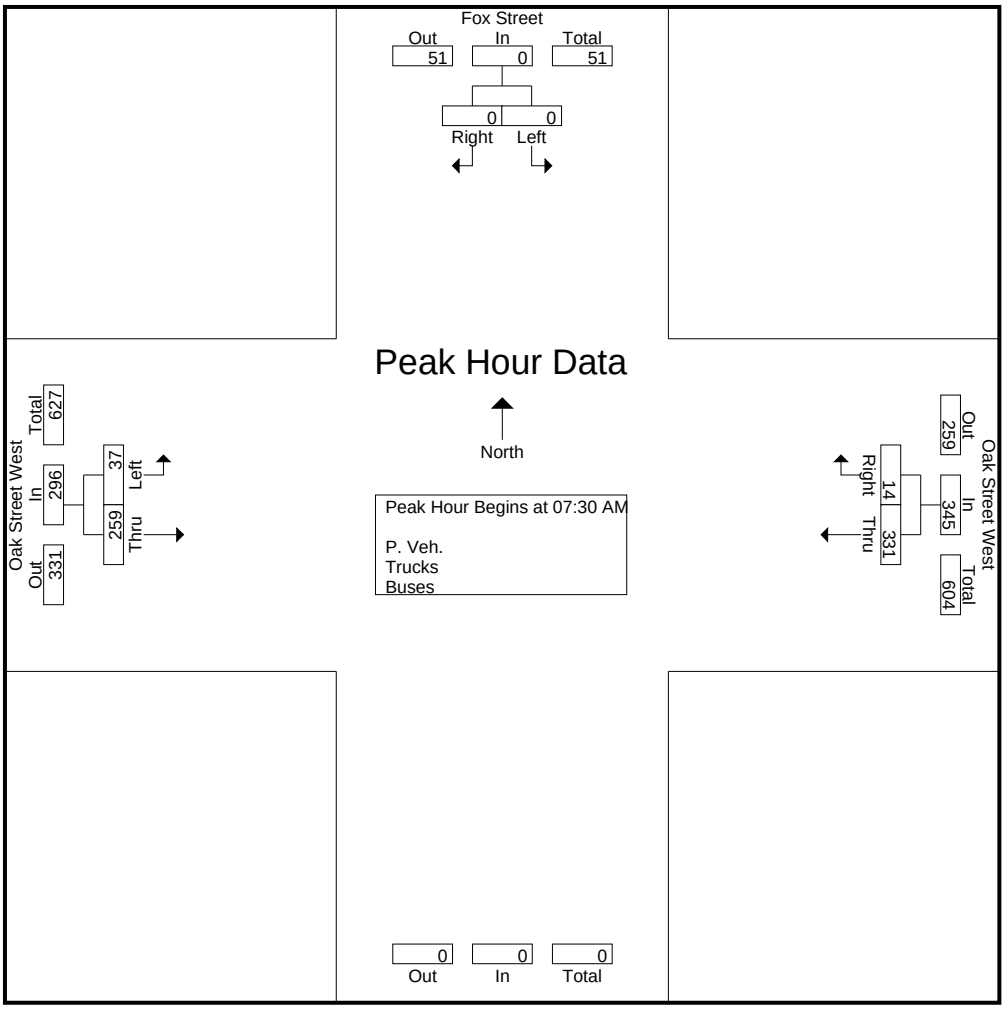


Date: 9 March 2021
Counted by: Cheryl M., Esther K.
Weather Conditions: Clear
Fox Street at Oak Street West

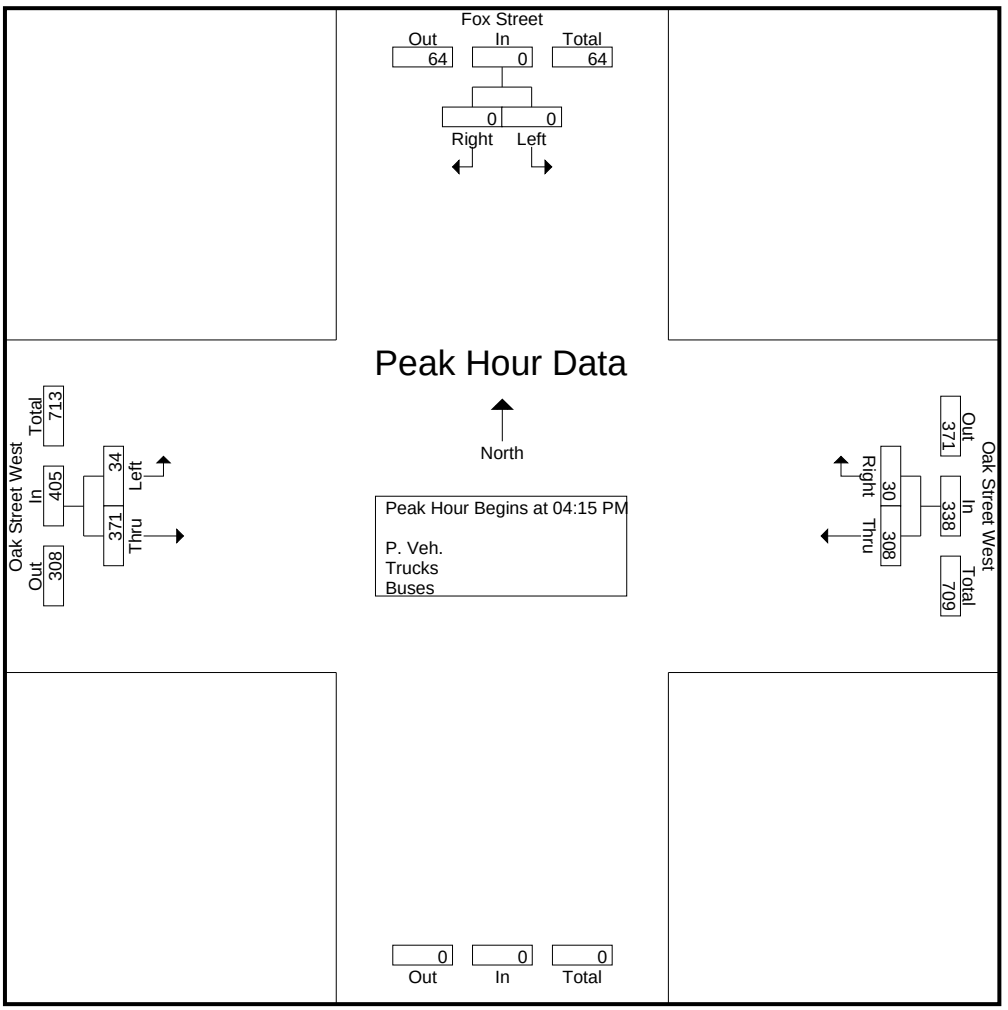
Groups Printed- P. Veh. - Trucks - Buses

	Fox Street S/B				Oak Street West E/B				Oak Street West W/B						
Start Time	Right	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:15 AM	0	0	(0)	0	36	6	(0)	42	2	67	(0)	69	0	111	111
07:30 AM	0	0	(0)	0	46	1	(0)	47	1	77	(5)	78	5	125	130
07:45 AM	0	0	(0)	0	55	10	(0)	65	5	97	(9)	102	9	167	176
Total	0	0	(0)	0	137	17	(0)	154	8	241	(14)	249	14	403	417
08:00 AM	0	0	(0)	0	84	9	(0)	93	4	79	(8)	83	8	176	184
08:15 AM	0	0	(0)	0	74	17	(0)	91	4	78	(5)	82	5	173	178
08:30 AM	0	0	(0)	0	52	3	(0)	55	1	51	(0)	52	0	107	107
*** BREAK ***															
Total	0	0	(0)	0	210	29	(0)	239	9	208	(13)	217	13	456	469
*** BREAK ***															
04:15 PM	0	0	(0)	0	87	14	(0)	101	7	77	(3)	84	3	185	188
04:30 PM	0	0	(0)	0	94	7	(0)	101	9	88	(2)	97	2	198	200
04:45 PM	0	0	(0)	0	68	7	(0)	75	11	74	(1)	85	1	160	161
Total	0	0	(0)	0	249	28	(0)	277	27	239	(6)	266	6	543	549
05:00 PM	0	0	(0)	0	122	6	(0)	128	3	69	(1)	72	1	200	201
05:15 PM	0	0	(0)	0	94	11	(0)	105	10	67	(1)	77	1	182	183
05:30 PM	0	0	(0)	0	65	15	(0)	80	13	63	(0)	76	0	156	156
Grand Total	0	0	(0)	0	877	106	(0)	983	70	887	(35)	957	35	1940	1975
Apprch %	0	0			89.2	10.8			7.3	92.7					
Total %	0	0		0	45.2	5.5		50.7	3.6	45.7		49.3	1.8	98.2	
P. Veh.	0	0		0	849	103		952	70	866		971	0	0	1923
% P. Veh.	0	0	0	0	96.8	97.2	0	96.8	100	97.6	100	97.9	0	0	97.4
Trucks	0	0		0	18	0		18	0	13		13	0	0	31
% Trucks	0	0	0	0	2.1	0	0	1.8	0	1.5	0	1.3	0	0	1.6
Buses	0	0		0	10	3		13	0	8		8	0	0	21
% Buses	0	0	0	0	1.1	2.8	0	1.3	0	0.9	0	0.8	0	0	1.1

	Fox Street S/B			Oak Street West E/B			Oak Street West W/B			
Start Time	Right	Left	App. Total	Thru	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	46	1	47	1	77	78	125
07:45 AM	0	0	0	55	10	65	**5**	**97**	**102**	167
08:00 AM	0	0	0	**84**	9	**93**	4	79	83	**176**
08:15 AM	0	0	0	74	**17**	91	4	78	82	173
Total Volume	0	0	0	259	37	296	14	331	345	641
% App. Total	0	0		87.5	12.5		4.1	95.9		
PHF	.000	.000	.000	.771	.544	.796	.700	.853	.846	.911



	Fox Street S/B			Oak Street West E/B			Oak Street West W/B			
Start Time	Right	Left	App. Total	Thru	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	0	0	87	**14**	101	7	77	84	185
04:30 PM	0	0	0	94	7	101	9	**88**	**97**	198
04:45 PM	0	0	0	68	7	75	**11**	74	85	160
05:00 PM	0	0	0	**122**	6	**128**	3	69	72	**200**
Total Volume	0	0	0	371	34	405	30	308	338	743
% App. Total	0	0		91.6	8.4		8.9	91.1		
PHF	.000	.000	.000	.760	.607	.791	.682	.875	.871	.929

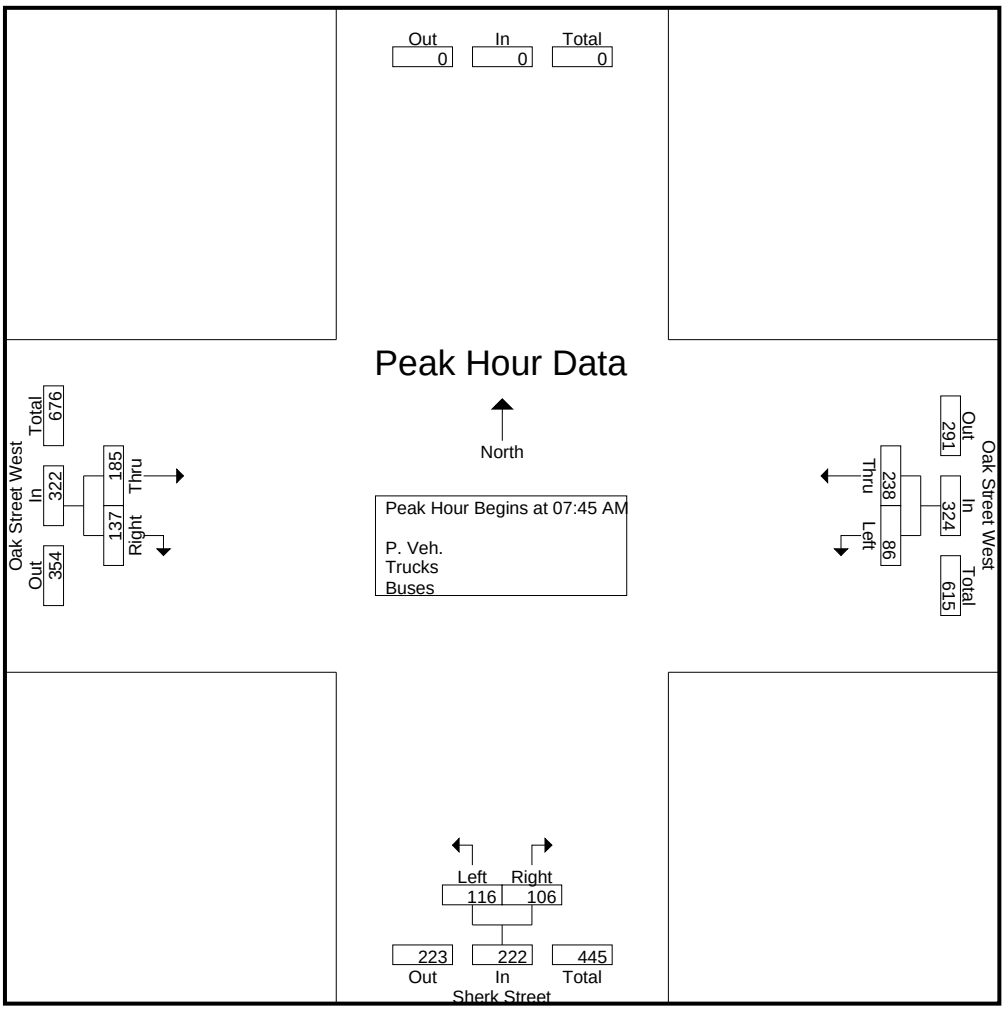


Date: 10 March 2021
Counted by: Matt A., Esther K.
Weather Conditions: Clear
Sherk Street at Oak Street West

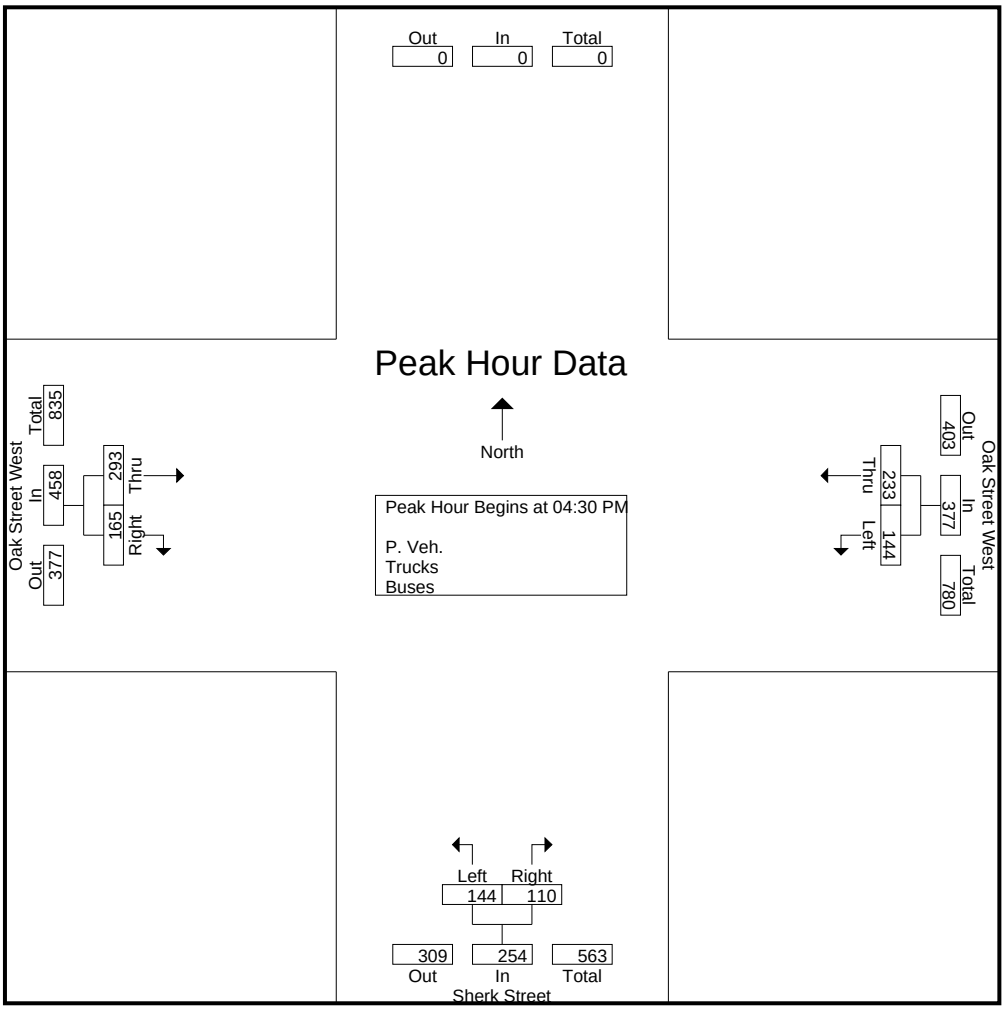
Groups Printed- P. Veh. - Trucks - Buses

	Sherk Street N/B				Oak Street West E/B				Oak Street West W/B						
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:15 AM	15	22	(0)	37	17	28	(0)	45	38	18	(1)	56	1	138	139
07:30 AM	16	24	(0)	40	23	28	(0)	51	58	18	(1)	76	1	167	168
07:45 AM	27	25	(3)	52	35	43	(0)	78	66	26	(8)	92	11	222	233
Total	58	71	(3)	129	75	99	(0)	174	162	62	(10)	224	13	527	540
08:00 AM	20	38	(3)	58	39	62	(0)	101	63	21	(11)	84	14	243	257
08:15 AM	35	26	(2)	61	26	43	(0)	69	58	20	(5)	78	7	208	215
08:30 AM	24	27	(1)	51	37	37	(1)	74	51	19	(3)	70	5	195	200
*** BREAK ***															
Total	79	91	(6)	170	102	142	(1)	244	172	60	(19)	232	26	646	672
*** BREAK ***															
04:15 PM	30	32	(0)	62	36	60	(0)	96	60	25	(1)	85	1	243	244
04:30 PM	25	37	(1)	62	26	57	(0)	83	60	32	(0)	92	1	237	238
04:45 PM	26	27	(0)	53	41	71	(0)	112	59	36	(5)	95	5	260	265
Total	81	96	(1)	177	103	188	(0)	291	179	93	(6)	272	7	740	747
05:00 PM	34	43	(2)	77	42	104	(0)	146	61	47	(0)	108	2	331	333
05:15 PM	25	37	(0)	62	56	61	(0)	117	53	29	(1)	82	1	261	262
05:30 PM	19	20	(0)	39	40	47	(0)	87	59	28	(0)	87	0	213	213
Grand Total	296	358	(12)	654	418	641	(1)	1059	686	319	(36)	1005	49	2718	2767
Apprch %	45.3	54.7			39.5	60.5			68.3	31.7					
Total %	10.9	13.2		24.1	15.4	23.6		39	25.2	11.7		37	1.8	98.2	
P. Veh.	287	349		648	413	624		1038	666	307		1009	0	0	2695
% P. Veh.	97	97.5	100	97.3	98.8	97.3	100	97.9	97.1	96.2	100	96.9	0	0	97.4
Trucks	3	3		6	2	12		14	15	5		20	0	0	40
% Trucks	1	0.8	0	0.9	0.5	1.9	0	1.3	2.2	1.6	0	1.9	0	0	1.4
Buses	6	6		12	3	5		8	5	7		12	0	0	32
% Buses	2	1.7	0	1.8	0.7	0.8	0	0.8	0.7	2.2	0	1.2	0	0	1.2

	Sherk Street N/B			Oak Street West E/B			Oak Street West W/B			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	27	25	52	35	43	78	**66**	**26**	**92**	222
08:00 AM	20	**38**	58	**39**	**62**	**101**	63	21	84	**243**
08:15 AM	**35**	26	**61**	26	43	69	58	20	78	208
08:30 AM	24	27	51	37	37	74	51	19	70	195
Total Volume	106	116	222	137	185	322	238	86	324	868
% App. Total	47.7	52.3		42.5	57.5		73.5	26.5		
PHF	.757	.763	.910	.878	.746	.797	.902	.827	.880	.893



	Sherk Street N/B			Oak Street West E/B			Oak Street West W/B			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	25	37	62	26	57	83	60	32	92	237
04:45 PM	26	27	53	41	71	112	59	36	95	260
05:00 PM	**34**	**43**	**77**	42	**104**	**146**	**61**	**47**	**108**	**331**
05:15 PM	25	37	62	**56**	61	117	53	29	82	261
Total Volume	110	144	254	165	293	458	233	144	377	1089
% App. Total	43.3	56.7		36	64		61.8	38.2		
PHF	.809	.837	.825	.737	.704	.784	.955	.766	.873	.823



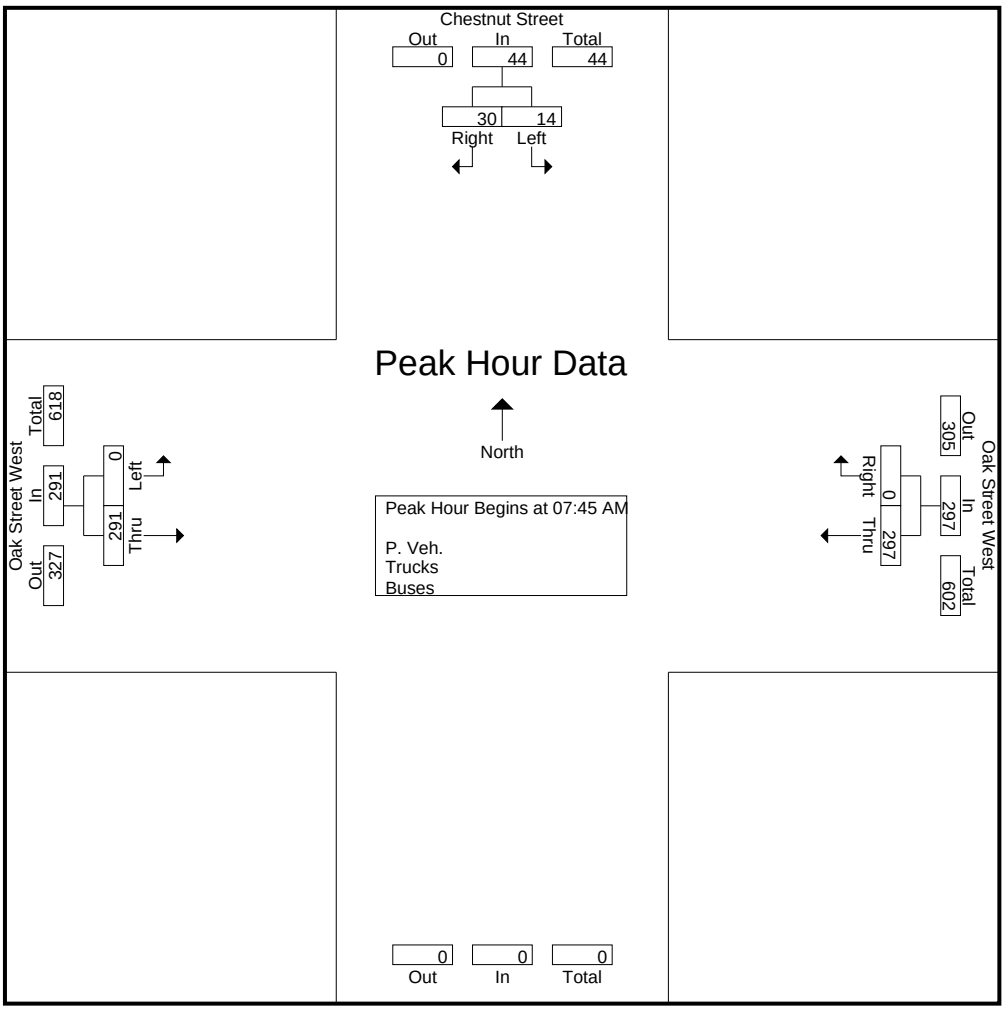
Date: 10 March 2021
Counted by: Matt A., Esther K.
Weather Conditions: Clear
Chestnut Street at Oak Street West

Groups Printed- P. Veh. - Trucks - Buses

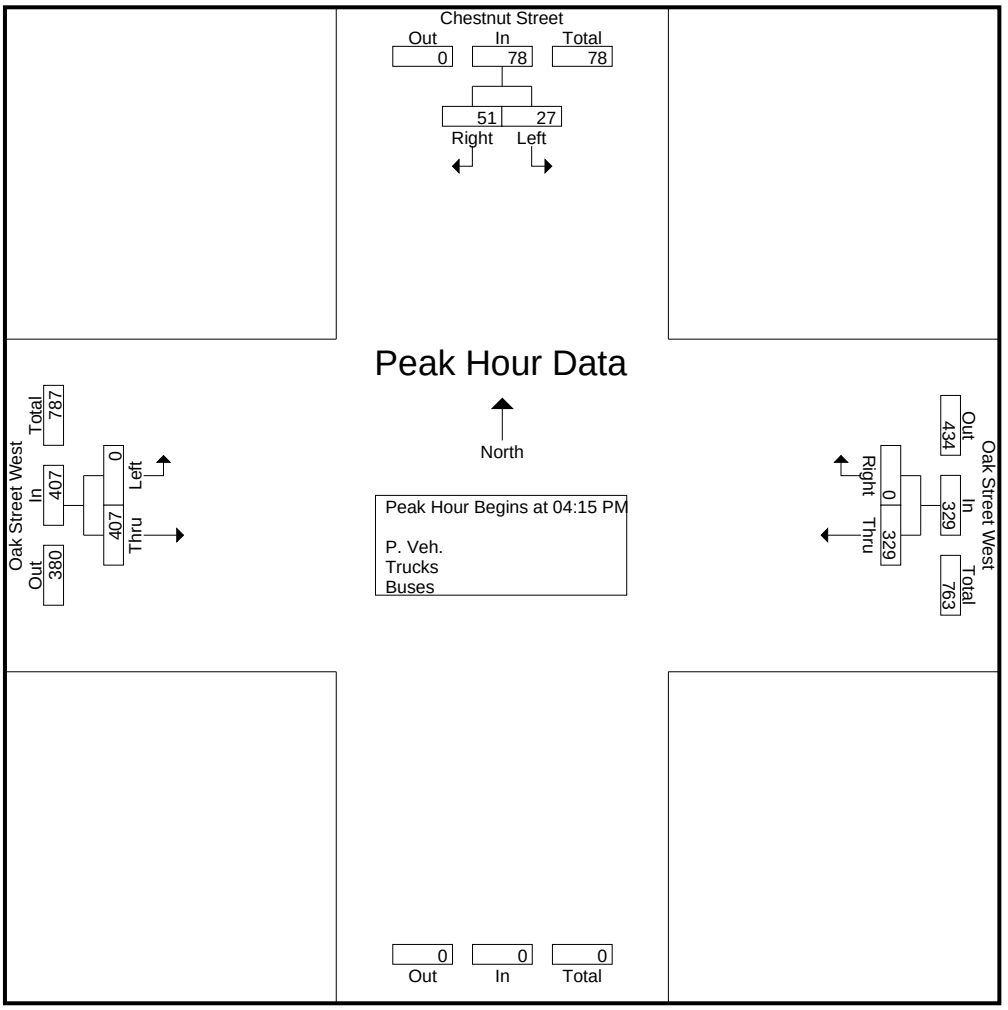
	Chestnut Street S/B				Oak Street West E/B				Oak Street West W/B						
Start Time	Right	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:15 AM	1	2	(1)	3	43	0	(0)	43	0	55	(1)	55	2	101	103
07:30 AM	6	2	(0)	8	44	0	(0)	44	0	74	(1)	74	1	126	127
07:45 AM	8	7	(0)	15	70	0	(0)	70	0	84	(8)	84	8	169	177
Total	15	11	(1)	26	157	0	(0)	157	0	213	(10)	213	11	396	407
08:00 AM	8	2	(0)	10	82	0	(0)	82	0	78	(11)	78	11	170	181
08:15 AM	8	3	(0)	11	78	0	(0)	78	0	71	(5)	71	5	160	165
08:30 AM	6	2	(0)	8	61	0	(1)	61	0	64	(3)	64	4	133	137
*** BREAK ***															
Total	22	7	(0)	29	221	0	(1)	221	0	213	(19)	213	20	463	483
*** BREAK ***															
04:15 PM	6	5	(0)	11	90	0	(0)	90	0	79	(1)	79	1	180	181
04:30 PM	8	6	(0)	14	82	0	(0)	82	0	84	(0)	84	0	180	180
04:45 PM	14	8	(0)	22	97	0	(0)	97	0	81	(5)	81	5	200	205
Total	28	19	(0)	47	269	0	(0)	269	0	244	(6)	244	6	560	566
05:00 PM	23	8	(0)	31	138	0	(0)	138	0	85	(0)	85	0	254	254
05:15 PM	11	5	(0)	16	86	0	(0)	86	0	71	(1)	71	1	173	174
05:30 PM	6	9	(0)	15	65	0	(0)	65	0	78	(0)	78	0	158	158
Grand Total	105	59	(1)	164	936	0	(1)	936	0	904	(36)	904	38	2004	2042
Apprch %	64	36			100	0			0	100					
Total %	5.2	2.9		8.2	46.7	0		46.7	0	45.1		45.1	1.9	98.1	
P. Veh.	102	59		162	911	0		912	0	871		907	0	0	1981
% P. Veh.	97.1	100	100	98.2	97.3	0	100	97.3	0	96.3	100	96.5	0	0	97
Trucks	1	0		1	15	0		15	0	21		21	0	0	37
% Trucks	1	0	0	0.6	1.6	0	0	1.6	0	2.3	0	2.2	0	0	1.8
Buses	2	0		2	10	0		10	0	12		12	0	0	24
% Buses	1.9	0	0	1.2	1.1	0	0	1.1	0	1.3	0	1.3	0	0	1.2



	Chestnut Street S/B			Oak Street West E/B			Oak Street West W/B			
Start Time	Right	Left	App. Total	Thru	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**8**	**7**	**15**	70	0	70	0	**84**	**84**	169
08:00 AM	8	2	10	**82**	0	**82**	0	78	78	**170**
08:15 AM	8	3	11	78	0	78	0	71	71	160
08:30 AM	6	2	8	61	0	61	0	64	64	133
Total Volume	30	14	44	291	0	291	0	297	297	632
% App. Total	68.2	31.8		100	0		0	100		
PHF	.938	.500	.733	.887	.000	.887	.000	.884	.884	.929



	Chestnut Street S/B			Oak Street West E/B			Oak Street West W/B			
Start Time	Right	Left	App. Total	Thru	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	6	5	11	90	0	90	0	79	79	180
04:30 PM	8	6	14	82	0	82	0	84	84	180
04:45 PM	14	**8**	22	97	0	97	0	81	81	200
05:00 PM	**23**	8	**31**	**138**	0	**138**	0	**85**	**85**	**254**
Total Volume	51	27	78	407	0	407	0	329	329	814
% App. Total	65.4	34.6		100	0		0	100		
PHF	.554	.844	.629	.737	.000	.737	.000	.968	.968	.801

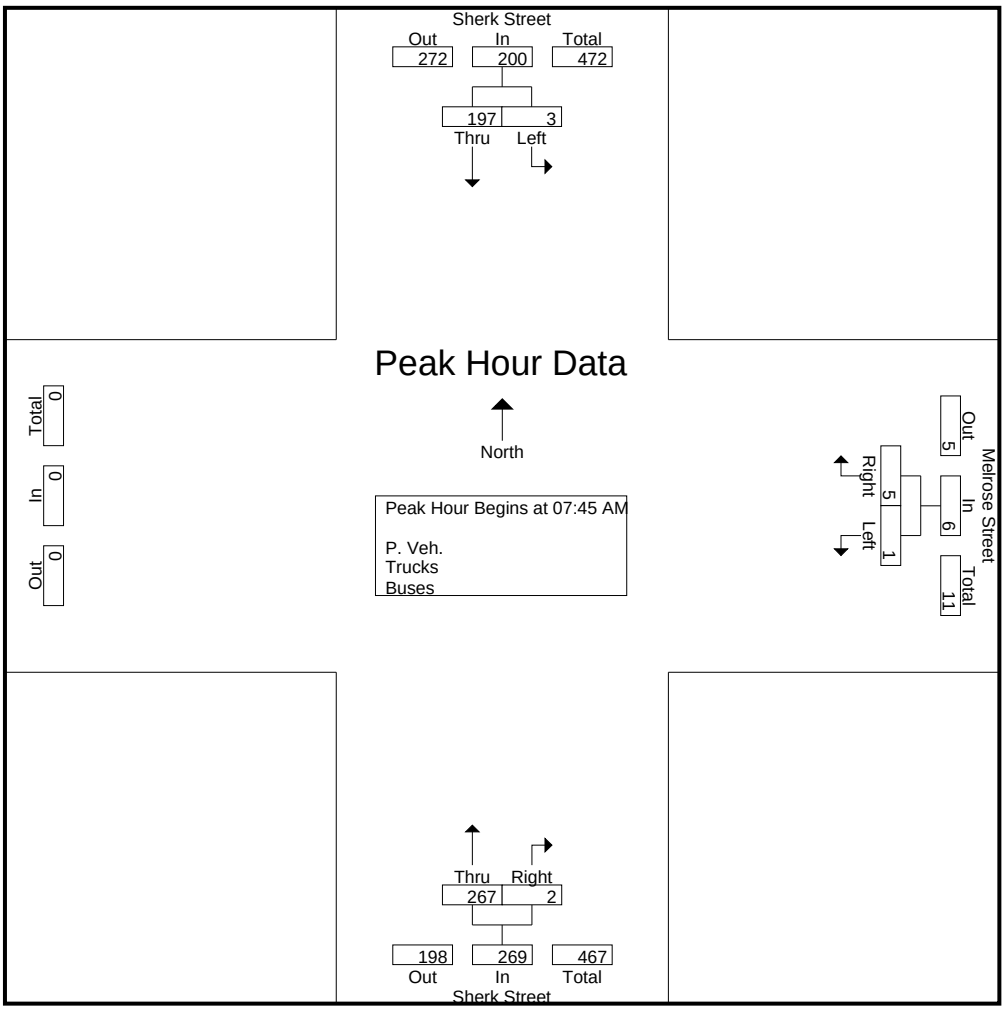


Date: 11 March 2021
Counted by: Cheryl M., Esther K.
Weather Conditions: Clear
Melrose Street at Sherk Street

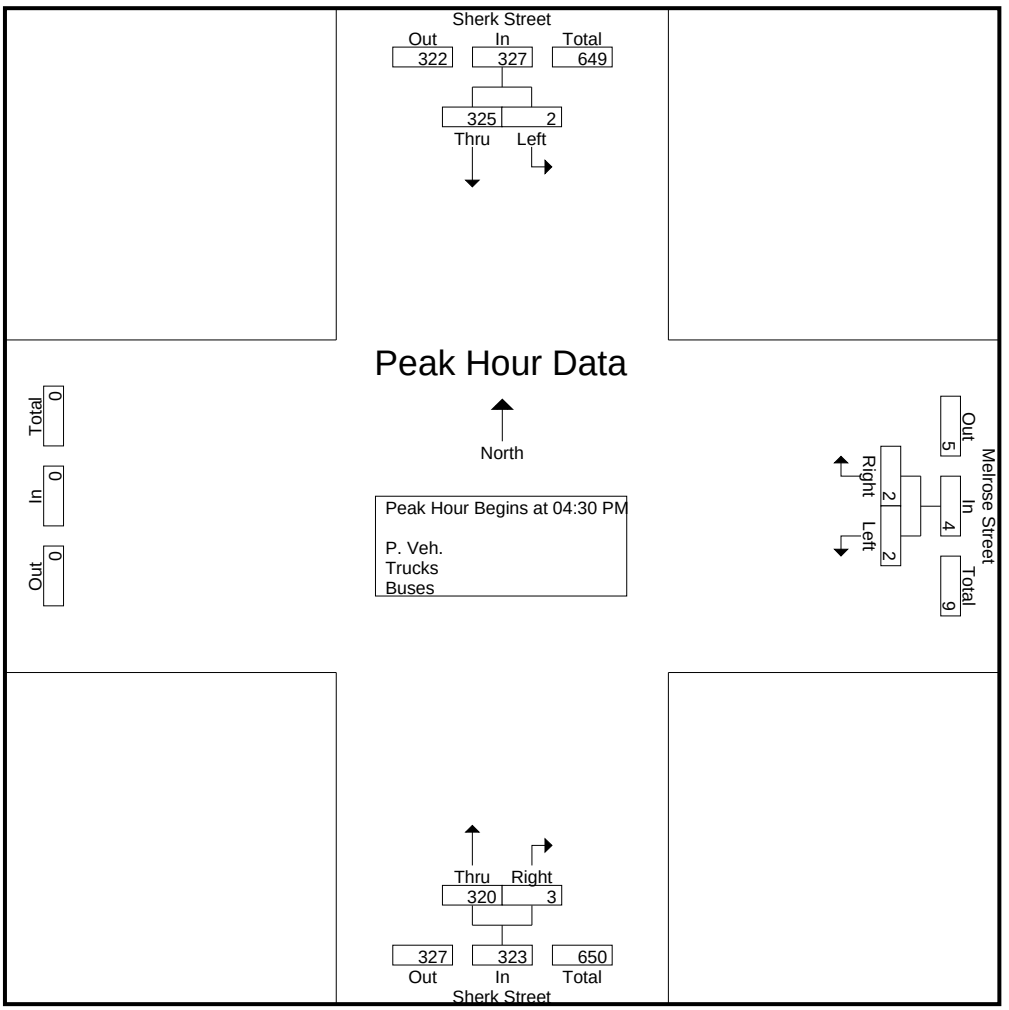
Groups Printed- P. Veh. - Trucks - Buses

	Sherk Street N/B				Sherk Street S/B				Melrose Street W/B						
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:15 AM	1	29	(0)	30	29	0	(0)	29	0	1	(0)	1	0	60	60
07:30 AM	0	55	(1)	55	33	0	(0)	33	0	0	(0)	0	1	88	89
07:45 AM	0	85	(1)	85	42	1	(0)	43	2	0	(0)	2	1	130	131
Total	1	169	(2)	170	104	1	(0)	105	2	1	(0)	3	2	278	280
08:00 AM	1	82	(2)	83	59	1	(0)	60	1	1	(0)	2	2	145	147
08:15 AM	1	49	(5)	50	50	0	(0)	50	1	0	(3)	1	8	101	109
08:30 AM	0	51	(1)	51	46	1	(0)	47	1	0	(0)	1	1	99	100
*** BREAK ***															
Total	2	182	(8)	184	155	2	(0)	157	3	1	(3)	4	11	345	356
*** BREAK ***															
04:15 PM	0	82	(0)	82	78	2	(0)	80	0	2	(0)	2	0	164	164
04:30 PM	1	75	(0)	76	90	0	(0)	90	1	1	(0)	2	0	168	168
04:45 PM	0	92	(2)	92	70	0	(0)	70	0	1	(2)	1	4	163	167
Total	1	249	(2)	250	238	2	(0)	240	1	4	(2)	5	4	495	499
05:00 PM	0	73	(1)	73	74	0	(0)	74	1	0	(0)	1	1	148	149
05:15 PM	2	80	(4)	82	91	2	(0)	93	0	0	(0)	0	4	175	179
05:30 PM	0	74	(3)	74	80	0	(0)	80	0	0	(0)	0	3	154	157
Grand Total	6	827	(20)	833	742	7	(0)	749	7	6	(5)	13	25	1595	1620
Apprch %	0.7	99.3			99.1	0.9			53.8	46.2					
Total %	0.4	51.8		52.2	46.5	0.4		47	0.4	0.4		0.8	1.5	98.5	
P. Veh.	6	809		835	722	7		729	7	6		18	0	0	1582
% P. Veh.	100	97.8	100	97.9	97.3	100	0	97.3	100	100	100	100	0	0	97.7
Trucks	0	1		1	3	0		3	0	0		0	0	0	4
% Trucks	0	0.1	0	0.1	0.4	0	0	0.4	0	0	0	0	0	0	0.2
Buses	0	17		17	17	0		17	0	0		0	0	0	34
% Buses	0	2.1	0	2	2.3	0	0	2.3	0	0	0	0	0	0	2.1

	Sherk Street N/B			Sherk Street S/B			Melrose Street W/B			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	**85**	**85**	42	**1**	43	**2**	0	**2**	130
08:00 AM	**1**	82	83	**59**	1	**60**	1	**1**	2	**145**
08:15 AM	1	49	50	50	0	50	1	0	1	101
08:30 AM	0	51	51	46	1	47	1	0	1	99
Total Volume	2	267	269	197	3	200	5	1	6	475
% App. Total	0.7	99.3		98.5	1.5		83.3	16.7		
PHF	.500	.785	.791	.835	.750	.833	.625	.250	.750	.819



	Sherk Street N/B			Sherk Street S/B			Melrose Street W/B			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	75	76	90	0	90	**1**	**1**	**2**	168
04:45 PM	0	**92**	**92**	70	0	70	0	1	1	163
05:00 PM	0	73	73	74	0	74	1	0	1	148
05:15 PM	**2**	80	82	**91**	**2**	**93**	0	0	0	**175**
Total Volume	3	320	323	325	2	327	2	2	4	654
% App. Total	0.9	99.1		99.4	0.6		50	50		
PHF	.375	.870	.878	.893	.250	.879	.500	.500	.500	.934



Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Sherk Street, Not Available
Performed By
Kayla McDonald
Date
April 11, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
1242	
% Bank 1	**% Bank 2**
97.3%	0.0%
% Bank 3	**% Bank 4**
0.0%	2.7%
Pedestrians Volume	
47	

Peak Hour Data

Time Period	Northbound Shrek Street							0							Westbound Oak St W							Eastbound Oak St W							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
7:45 AM	0	66	0	41	0	0	107	0	0	0	0	8	0	0	0	42	103	0	1	0	145	0	0	50	42	0	0	92	344	9
8:00 AM	0	56	0	35	0	0	91	0	1	0	0	19	2	1	0	37	119	0	1	5	156	0	0	87	46	0	0	133	381	27
8:15 AM	0	41	0	52	0	0	93	0	0	0	0	4	1	0	0	33	64	0	2	0	97	0	0	75	38	0	0	113	303	7
8:30 AM	0	33	0	24	0	0	57	0	0	0	0	2	1	0	0	34	60	0	0	1	94	0	0	35	28	0	0	63	214	4

Vehicle Movement Summary

Movement / Details	Northbound Shrek Street														Westbound Oak St W							Eastbound Oak St W							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	196	0	152	0	0	348	0	1	0	0	33	4	1	0	146	346	0	4	6	492	0	0	247	154	0	0	401	1242	47
PHF	-	0.74	-	0.73	-	-	0.81	-	0.25	-	-	0.43	0.50	0.25	-	0.87	0.73	-	0.50	0.30	0.79	-	-	0.71	0.84	-	-	0.75	0.81	0.44
% Bank 1	0.0%	98.5%	0.0%	94.7%				0.0%	100.0%	0.0%	0.0%				0.0%	95.9%	98.6%	0.0%				0.0%	0.0%	97.2%	97.4%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	1.5%	0.0%	5.3%				0.0%	0.0%	0.0%	0.0%				0.0%	4.1%	1.4%	0.0%				0.0%	0.0%	2.8%	2.6%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Sherk Street, Not Available
Performed By
Kayla McDonald
Date
April 11, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
1021	
% Bank 1	**% Bank 2**
97.5%	0.0%
% Bank 3	**% Bank 4**
0.0%	2.5%
Pedestrians Volume	
15	

Peak Hour Data

Time Period	Northbound Shrek St							Southbound Shrek St							Westbound Oak St W							Eastbound Oak St W							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
11:15 AM	0	47	0	33	0	0	80	0	0	0	2	2	0	2	0	26	39	0	0	0	65	0	1	54	39	0	0	94	241	2
11:30 AM	0	40	0	36	0	0	76	0	0	0	0	12	0	0	0	46	47	0	0	0	93	0	0	46	36	0	0	82	251	12
11:45 AM	0	50	0	31	0	0	81	0	0	0	0	0	0	0	0	29	47	0	0	0	76	0	0	46	39	0	0	85	242	0
12:00 PM	0	31	0	53	0	0	84	0	0	0	0	0	0	0	0	26	55	0	0	1	81	0	0	77	45	0	0	122	287	1

Vehicle Movement Summary

Movement / Details	Northbound Shrek St							Southbound Shrek St							Westbound Oak St W							Eastbound Oak St W							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	168	0	153	0	0	321	0	0	0	2	14	0	2	0	127	188	0	0	1	315	0	1	223	159	0	0	383	1021	15
PHF	-	0.84	-	0.72	-	-	0.96	-	-	-	0.25	0.29	-	0.25	-	0.69	0.85	-	-	0.25	0.85	-	0.25	0.72	0.88	-	-	0.78	0.89	0.31
% Bank 1	0.0%	99.4%	0.0%	94.1%				0.0%	0.0%	0.0%	100.0%				0.0%	96.1%	97.9%	0.0%				0.0%	100.0%	97.3%	99.4%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.6%	0.0%	5.9%				0.0%	0.0%	0.0%	0.0%				0.0%	3.9%	2.1%	0.0%				0.0%	0.0%	2.7%	0.6%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Sherk Street, Not Available
Performed By
Kayla McDonald
Date
April 11, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
1300	
% Bank 1	**% Bank 2**
99.1%	0.0%
% Bank 3	**% Bank 4**
0.0%	0.9%
Pedestrians Volume	
10	

Peak Hour Data

Time Period	Northbound Shrek St							Southbound Shrek St							Westbound Oak St W							Eastbound Oak St W							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
4:30 PM	0	44	0	33	0	0	77	0	0	0	0	0	0	0	0	38	61	0	0	4	99	0	0	71	49	0	0	120	296	4
4:45 PM	0	43	0	33	0	0	76	0	0	0	0	0	0	0	0	34	69	1	0	0	104	0	0	68	48	0	0	116	296	0
5:00 PM	0	40	0	45	1	0	85	0	0	0	0	1	0	0	0	48	82	0	1	0	130	0	0	83	77	0	0	160	375	3
5:15 PM	0	36	0	45	1	0	81	0	0	0	0	0	0	0	0	45	58	1	0	2	104	0	0	78	70	0	0	148	333	3

Vehicle Movement Summary

Movement / Details	Northbound Shrek St							Southbound Shrek St							Westbound Oak St W							Eastbound Oak St W							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	163	0	156	2	0	319	0	0	0	0	1	0	0	0	165	270	2	1	6	437	0	0	300	244	0	0	544	1300	10
PHF	-	0.93	-	0.87	0.50	-	0.94	-	-	-	-	0.25	-	-	-	0.86	0.82	0.50	0.25	0.38	0.84	-	-	0.90	0.79	-	-	0.85	0.87	0.63
% Bank 1	0.0%	99.4%	0.0%	99.4%				0.0%	0.0%	0.0%	0.0%				0.0%	99.4%	98.5%	100.0%				0.0%	0.0%	98.7%	99.6%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.6%	0.0%	0.6%				0.0%	0.0%	0.0%	0.0%				0.0%	0.6%	1.5%	0.0%				0.0%	0.0%	1.3%	0.4%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Poplar Street , Not Available
Performed By
Bill Marshall
Date
April 9, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
303	
% Bank 1	**% Bank 2**
98.1%	0.0%
% Bank 3	**% Bank 4**
0.0%	1.9%
Pedestrians Volume	
30	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West													Southbound Poplar Street							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
8:00 AM	0	3	132	0	0	0	135	0	0	157	4	0	0	161	0	0	0	0	0	0	0	0	1	0	6	21	0	7	303	21
8:15 AM	0	1	90	0	0	0	91	0	0	80	14	0	0	94	0	0	0	0	0	0	0	0	8	0	4	3	0	12	197	3
8:30 AM	0	2	56	0	0	0	58	0	0	82	7	0	0	89	0	0	0	0	0	0	0	0	3	0	1	2	2	4	151	4
8:45 AM	0	2	76	0	0	0	78	0	0	84	4	0	0	88	0	0	0	0	0	0	0	0	5	0	1	2	0	6	172	2

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West													Southbound Poplar Street							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	8	354	0	0	0	362	0	0	403	29	0	0	432	0	0	0	0	0	0	0	0	17	0	12	28	2	29	823	30
PHF	-	0.67	0.67	-	-	-	0.67	-	-	0.64	0.52	-	-	0.67	-	-	-	-	-	-	-	-	0.53	-	0.50	0.33	0.25	0.60	0.68	0.36
% Bank 1	0.0%	100.0%	97.5%	0.0%				0.0%	0.0%	98.5%	96.6%				0.0%	0.0%	0.0%	0.0%				0.0%	100.0%	0.0%	100.0%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.0%	2.5%	0.0%				0.0%	0.0%	1.5%	3.4%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Poplar Street , Not Available
Performed By
Bill Marshall
Date
April 9, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
769	
% Bank 1	**% Bank 2**
#DIV/0!	#DIV/0!
% Bank 3	**% Bank 4**
#DIV/0!	#DIV/0!
Pedestrians Volume	
17	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West													Southbound Poplar Street							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
Total	0	10	375	0	0	0	385	0	0	331	33	0	0	364	0	0	0	0	0	0	0	0	14	0	6	14	3	20	769	17
HV%	0	0	0.0267	#DIV/0!	0	0	#DIV/0!	0	#DIV/0!	0.0211	0.0606	0	0	#DIV/0!	0	0	0	0	0	0	0	0	0	#DIV/0!	0	0	0	#DIV/0!	#DIV/0!	0
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West													Southbound Poplar Street							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	10	375.03	#DIV/0!	0	0	#DIV/0!	0	#DIV/0!	331.02	33.061	0	0	#DIV/0!	0	0	0	0	0	0	0	0	14	#DIV/0!	6	14	3	#DIV/0!	#DIV/0!	17
PHF	-	0.25	0.25	#DIV/0!	-	-	#DIV/0!	-	#DIV/0!	0.25	0.25	-	-	#DIV/0!	-	-	-	-	-	-	-	-	0.25	#DIV/0!	0.25	0.25	0.25	#DIV/0!	#DIV/0!	0.25
% Bank 1	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Poplar Street , Not Available
Performed By
Bill Marshall
Date
April 9, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
971	
% Bank 1	**% Bank 2**
98.9%	0.0%
% Bank 3	**% Bank 4**
0.0%	1.1%
Pedestrians Volume	
4	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West													Southbound Poplar Street							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
4:15 PM	0	3	125	0	0	0	128	0	0	95	11	0	0	106	0	0	0	0	0	0	0	0	7	0	2	0	0	9	243	0
4:30 PM	0	1	116	0	0	0	117	0	0	85	15	0	0	100	0	0	0	0	0	0	0	0	3	0	1	0	0	4	221	0
4:45 PM	0	0	111	0	0	0	111	0	0	104	11	0	0	115	0	0	0	0	0	0	0	0	6	0	4	0	1	10	236	1
5:00 PM	0	3	158	0	0	0	161	0	0	94	8	0	0	102	0	0	0	0	0	0	0	0	6	0	2	1	2	8	271	3

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West													Southbound Poplar Street							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	7	510	0	0	0	517	0	0	378	45	0	0	423	0	0	0	0	0	0	0	0	22	0	9	1	3	31	971	4
PHF	-	0.58	0.81	-	-	-	0.80	-	-	0.91	0.75	-	-	0.92	-	-	-	-	-	-	-	-	0.79	-	0.56	0.25	0.38	0.78	0.90	0.33
% Bank 1	0.0%	100.0%	99.0%	0.0%				0.0%	0.0%	98.7%	97.8%				0.0%	0.0%	0.0%	0.0%				0.0%	100.0%	0.0%	100.0%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.0%	1.0%	0.0%				0.0%	0.0%	1.3%	2.2%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Industrial Road, Not Available
Performed By
Bill Marshall
Date
Tuesday, April 09, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
916	
% Bank 1	**% Bank 2**
96.3%	0.0%
% Bank 3	**% Bank 4**
0.0%	3.7%
Pedestrians Volume	
77	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West												Southbound Industrial Road							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
7:40 AM	0	5	67	2	0	0	74	0	11	108	10	0	0	129	0	1	0	8	0	19	9	0	0	0	0	0	0	0	212	19
7:55 AM	0	11	102	5	0	0	118	0	13	136	11	0	0	160	0	3	0	13	2	30	16	0	5	0	2	3	0	7	301	35
8:10 AM	0	4	106	0	0	1	110	0	12	87	10	0	0	109	0	2	0	10	2	17	12	0	5	0	3	0	0	8	239	20
8:25 AM	0	6	57	0	0	0	63	0	6	79	7	0	0	92	0	0	0	4	0	3	4	0	3	0	2	0	0	5	164	3

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West														Southbound Industrial Road							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	26	332	7	0	1	365	0	42	410	38	0	0	490	0	6	0	35	4	69	41	0	13	0	7	3	0	20	916	77
PHF	-	0.59	0.78	0.35	-	0.25	0.77	-	0.81	0.75	0.86	-	-	0.77	-	0.50	-	0.67	0.50	0.58	0.64	-	0.65	-	0.58	0.25	-	0.63	0.76	0.55
% Bank 1	0.0%	100.0%	95.5%	85.7%				0.0%	97.6%	97.3%	97.4%				0.0%	66.7%	0.0%	100.0%				0.0%	84.6%	0.0%	85.7%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.0%	4.5%	14.3%				0.0%	2.4%	2.7%	2.6%				0.0%	33.3%	0.0%	0.0%				0.0%	15.4%	0.0%	14.3%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Industrial Road, Not Available
Performed By
Bill Marshall
Date
Tuesday, April 09, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
862	
% Bank 1	**% Bank 2**
97.1%	0.0%
% Bank 3	**% Bank 4**
0.0%	2.9%
Pedestrians Volume	
41	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West												Southbound Industrial Road							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
11:10 AM	0	9	67	1	2	2	77	0	1	80	2	0	0	83	0	0	0	3	1	6	3	0	9	0	1	0	1	10	173	12
11:25 AM	0	4	89	1	2	0	94	0	2	115	6	0	0	123	0	0	0	3	1	9	3	0	10	0	10	2	2	20	240	16
11:40 AM	0	1	81	0	0	0	82	0	7	92	3	0	0	102	0	1	0	6	0	8	7	0	2	0	7	0	0	9	200	8
11:55 AM	0	2	123	0	0	0	125	0	4	98	4	0	0	106	0	1	0	1	0	1	2	0	8	0	8	2	2	16	249	5

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West														Southbound Industrial Road							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	16	360	2	4	2	378	0	14	385	15	0	0	414	0	2	0	13	2	24	15	0	29	0	26	4	5	55	862	41
PHF	-	0.44	0.73	0.50	0.50	0.25	0.76	-	0.50	0.84	0.63	-	-	0.84	-	0.50	-	0.54	0.50	0.67	0.54	-	0.73	-	0.65	0.50	0.63	0.69	0.87	0.64
% Bank 1	0.0%	93.8%	98.6%	100.0%				0.0%	92.9%	97.1%	86.7%				0.0%	50.0%	0.0%	100.0%				0.0%	89.7%	0.0%	96.2%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	6.3%	1.4%	0.0%				0.0%	7.1%	2.9%	13.3%				0.0%	50.0%	0.0%	0.0%				0.0%	10.3%	0.0%	3.8%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Industrial Road, Not Available
Performed By
Bill Marshall
Date
Tuesday, April 09, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
854	
% Bank 1	**% Bank 2**
97.7%	0.0%
% Bank 3	**% Bank 4**
0.0%	2.3%
Pedestrians Volume	
15	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West												Southbound Industrial Road							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
4:25 PM	0	2	88	1	0	0	91	0	3	109	4	0	0	116	0	9	0	7	0	0	16	0	1	0	0	0	0	1	224	0
4:40 PM	0	1	86	1	0	0	88	0	1	104	1	0	0	106	0	2	0	6	2	1	8	0	2	0	3	1	3	5	207	7
4:55 PM	0	2	111	0	0	0	113	0	0	76	0	0	0	76	0	1	0	0	2	0	1	0	7	0	1	2	0	8	198	4
5:10 PM	0	0	137	0	0	0	137	0	0	76	1	0	0	77	0	0	0	0	2	1	0	0	4	0	7	0	1	11	225	4

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West														Southbound Industrial Road							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	5	422	2	0	0	429	0	4	365	6	0	0	375	0	12	0	13	6	2	25	0	14	0	11	3	4	25	854	15
PHF	-	0.63	0.77	0.50	-	-	0.78	-	0.33	0.84	0.38	-	-	0.81	-	0.33	-	0.46	0.75	0.50	0.39	-	0.50	-	0.39	0.38	0.33	0.57	0.95	0.54
% Bank 1	0.0%	100.0%	98.6%	50.0%				0.0%	75.0%	98.1%	66.7%				0.0%	100.0%	0.0%	92.3%				0.0%	85.7%	0.0%	100.0%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.0%	1.4%	50.0%				0.0%	25.0%	1.9%	33.3%				0.0%	0.0%	0.0%	7.7%				0.0%	14.3%	0.0%	0.0%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Westmoreland Avenue , Not Available
Performed By
Kayla McDonald
Date
April 9, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
909	
% Bank 1	**% Bank 2**
94.9%	0.0%
% Bank 3	**% Bank 4**
0.0%	5.1%
Pedestrians Volume	
81	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West							Northbound Westmoreland Ave							Southbound Westmoreland Avenue							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
7:45 AM	0	29	65	6	0	14	100	0	0	58	30	0	0	88	0	5	21	4	0	4	30	0	13	8	18	6	2	39	257	26
8:00 AM	0	65	68	7	0	16	140	0	6	55	31	2	0	92	0	7	37	2	2	1	46	0	20	15	43	11	0	78	356	32
8:15 AM	0	11	56	7	4	4	74	0	1	49	2	2	0	52	0	3	4	0	0	1	7	0	3	2	17	6	3	22	155	20
8:30 AM	0	2	71	3	0	3	76	0	1	55	1	0	0	57	0	4	1	1	0	0	6	0	0	0	2	0	0	2	141	3

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West							Northbound Westmoreland Ave							Southbound Westmoreland Avenue							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	107	260	23	4	37	390	0	8	217	64	4	0	289	0	19	63	7	2	6	89	0	36	25	80	23	5	141	909	81
PHF	-	0.41	0.92	0.82	0.25	0.58	0.70	-	0.33	0.94	0.52	0.50	-	0.79	-	0.68	0.43	0.44	0.25	0.38	0.48	-	0.45	0.42	0.47	0.52	0.42	0.45	0.64	0.63
% Bank 1	0.0%	99.1%	95.4%	100.0%				0.0%	75.0%	94.9%	93.8%				0.0%	100.0%	93.7%	100.0%				0.0%	77.8%	92.0%	97.5%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.9%	4.6%	0.0%				0.0%	25.0%	5.1%	6.3%				0.0%	0.0%	6.3%	0.0%				0.0%	22.2%	8.0%	2.5%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Westmoreland Avenue , Not Available
Performed By
Kayla McDonald
Date
April 9, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
826	
% Bank 1	**% Bank 2**
97.7%	0.0%
% Bank 3	**% Bank 4**
0.0%	2.3%
Pedestrians Volume	
149	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West							Northbound Westmoreland Ave							Southbound Westmoreland Avenue							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
11:15 AM	0	0	64	6	5	2	70	0	10	60	13	12	32	83	0	0	4	4	6	1	8	0	4	7	3	0	1	14	175	59
11:30 AM	0	3	60	4	12	0	67	0	29	79	11	7	42	119	0	1	10	5	6	1	16	0	13	7	3	0	0	23	225	68
11:45 AM	0	3	81	0	2	0	84	0	3	77	10	0	13	90	0	0	2	4	3	0	6	0	9	1	3	1	1	13	193	20
12:00 PM	0	3	108	0	0	0	111	0	2	90	14	1	1	106	0	0	0	2	0	0	2	0	12	1	1	0	0	14	233	2

Vehicle Movement Summary

Movement / Details	Eastbound Oak Street West							Westbound Oak Street West							Northbound Westmoreland Ave							Southbound Westmoreland Avenue							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	9	313	10	19	2	332	0	44	306	48	20	88	398	0	1	16	15	15	2	32	0	38	16	10	1	2	64	826	149
PHF	-	0.75	0.72	0.42	0.40	0.25	0.75	-	0.38	0.85	0.86	0.42	0.52	0.84	-	0.25	0.40	0.75	0.63	0.50	0.50	-	0.73	0.57	0.83	0.25	0.50	0.70	0.89	0.55
% Bank 1	0.0%	77.8%	98.7%	100.0%				0.0%	97.7%	96.4%	100.0%				0.0%	100.0%	100.0%	100.0%				0.0%	97.4%	100.0%	100.0%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	22.2%	1.3%	0.0%				0.0%	2.3%	3.6%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	2.6%	0.0%	0.0%					

Turning Movement Count Report

Report Generated Using Turning Movement Count for Android by PortableStudies.com

Study Information

Study Summary

Count Name
Oak Street Analysis
Location
Oak Street West at Westmoreland Avenue , Not Available
Performed By
Kayla McDonald
Date
April 9, 2019

Notes

U = U Turn L = Left Turn T = Thru R = Right Turn
P1 = Pedestrian Direction 1 P2 = Pedestrian Direction 2
Veh = Total Vehicles for Approach

Peak Hour Volume	
801	
% Bank 1	**% Bank 2**
98.3%	0.0%
% Bank 3	**% Bank 4**
0.0%	1.7%
Pedestrians Volume	
12	

Peak Hour Data

Time Period	Eastbound Oak Street West							Westbound Oak Street West							Northbound Westmoreland Ave							Southbound Westmoreland Avenue							Total Vehicles	Total Pedestrians
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh		
4:00 PM	0	3	81	3	0	3	87	0	2	88	12	2	0	102	0	5	7	6	0	1	18	0	6	2	5	0	0	13	220	6
4:15 PM	0	2	89	1	0	0	92	0	2	68	11	0	0	81	0	2	2	2	0	0	6	0	1	3	5	0	1	9	188	1
4:30 PM	0	1	110	3	0	0	114	0	4	68	9	1	0	81	0	1	3	1	0	0	5	0	11	0	1	0	0	12	212	1
4:45 PM	0	3	75	0	0	1	78	0	2	68	15	0	2	85	0	3	1	1	0	1	5	0	10	0	3	0	0	13	181	4

Vehicle Movement Summary

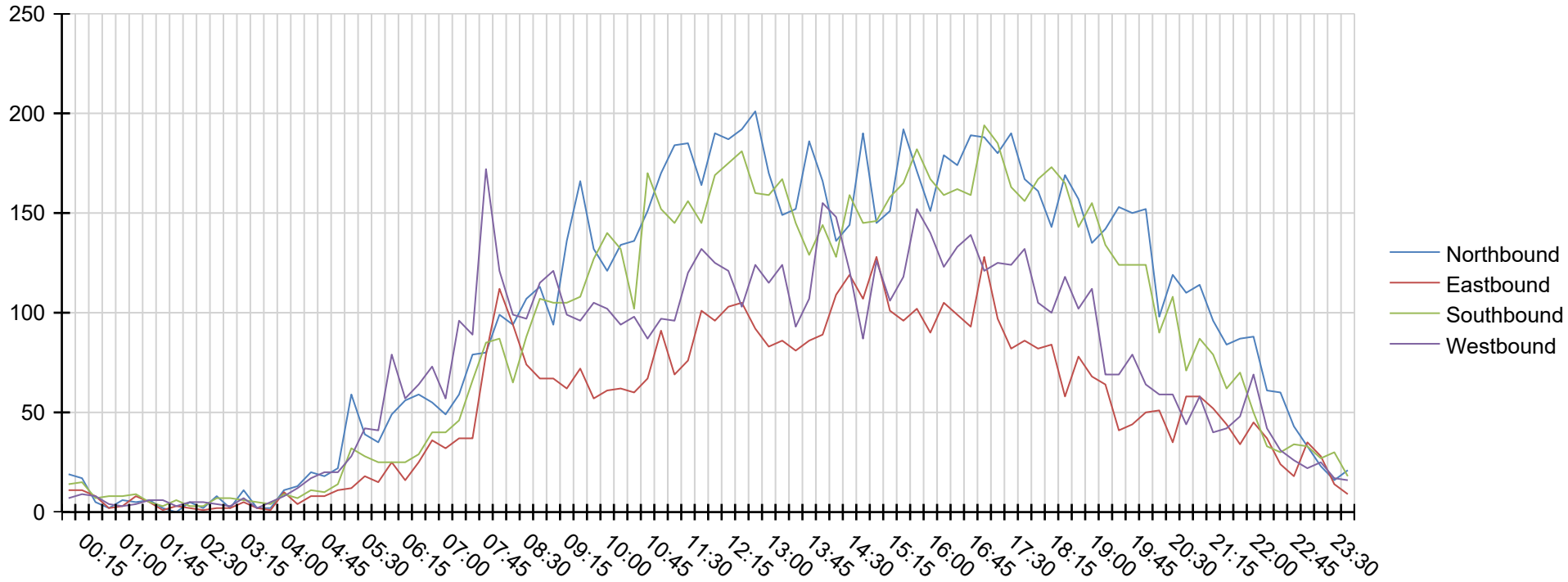
Movement / Details	Eastbound Oak Street West							Westbound Oak Street West							Northbound Westmoreland Ave							Southbound Westmoreland Avenue							Entire Intersection	
	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	U	L	T	R	P1	P2	Veh	Vehicles	Pedestrians
Movement Volume	0	9	355	7	0	4	371	0	10	292	47	3	2	349	0	11	13	10	0	2	34	0	28	5	14	0	1	47	801	12
PHF	-	0.75	0.81	0.58	-	0.33	0.81	-	0.63	0.83	0.78	0.38	0.25	0.86	-	0.55	0.46	0.42	-	0.50	0.47	-	0.64	0.42	0.70	-	0.25	0.90	0.91	0.50
% Bank 1	0.0%	100.0%	98.3%	100.0%				0.0%	100.0%	97.3%	100.0%				0.0%	100.0%	100.0%	100.0%				0.0%	100.0%	100.0%	100.0%					
% Bank 2	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Need a custom report?**	
% Bank 3	0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				**Contact: support@portablestudies.com**	
% Bank 4	0.0%	0.0%	1.7%	0.0%				0.0%	0.0%	2.7%	0.0%				0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%					

GRIDSMART®

Turning Movement Counts

Intersection Erie St & Oak St
Date 2020-02-28

	Right	Through	Left	UTurn	Total
Northbound	3079	5136	1317	6	9538
Eastbound	1035	3029	1042		5106
Southbound	1239	5703	1580	2	8524
Westbound	1339	3267	2398	9	7013
Total	**6692**	**17135**	**6337**	**17**	**30181**



GRIDSMART®

Turning Movement Counts

Intersection Erie St & Oak St
Date 2020-02-28

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	R	T	L	U	R	T	L	U
00:00	7	11	1		2	9		1	9	4			3	4	
00:15	6	9	2		3	4	4	3	9	3		6	1	2	
00:30	2	3			1	5	2		4	3		3	3	2	
00:45			2			1	1	2	4	2		1	3		
01:00	1	5				2	1		6	2		2	1		
01:15	2	3			1	6	1	2	3	4		2	1	1	
01:30	3	3				4	1	2	2	1		2	1	3	
01:45		2				1			1	2		3	1	2	
02:00						1	2	1	3	2			1	2	
02:15	1	4				1	1		1	2		1	2	2	
02:30		2					1		2	1			1	4	
02:45	2	4	2			2		2	1	4		2	2		
03:00	1		1			1	1	2	3	2		1	1	1	
03:15	5	6			1	3	1	2	3	1		4	1	2	
03:30		1	1			1	1	1	3	1		1	1		
03:45	1	1				1		1	2	1		3	2		
04:00	5	4	2			9	1	5	2	2		2	1	5	
04:15	7	6				1	3		4	3		2	8	2	
04:30	7	12	1		1	6	1	2	2	7		10	3	4	
04:45	7	8	3			7	1	1	7	2		3	9	8	
05:00	12	8	2		1	7	3	2	6	6		6	7	7	
05:15	20	26	13		2	10		7	14	11		11	13	4	
05:30	17	19	3		4	8	6	8	11	9		7	26	9	
05:45	17	15	3		5	8	2	4	16	5		12	22	7	
06:00	20	23	6		2	16	7	6	16	3		22	41	16	
06:15	19	29	6	2	4	11	1	5	15	5		13	30	14	

GRIDSMART®

Turning Movement Counts

Intersection Erie St & Oak St
Date 2020-02-28

	Northbound				Eastbound			Southbound				Westbound			
	R	T	L	U	R	T	L	R	T	L	U	R	T	L	U
06:30	20	30	9		4	18	3	8	17	4		10	42	12	
06:45	13	33	9		4	27	5	10	24	6		9	49	15	
07:00	15	26	8		5	23	4	10	19	11		19	28	10	
07:15	20	34	5		5	24	8	7	29	10		14	50	32	
07:30	11	53	15		6	22	9	18	40	8		12	64	13	
07:45	23	44	13		10	56	13	28	41	16		18	126	28	
08:00	29	52	18		7	94	11	13	47	27		12	98	11	
08:15	27	54	13		9	67	18	13	37	15		16	57	26	
08:30	36	57	14		15	46	13	10	61	17		18	55	24	
08:45	33	71	9		11	44	12	13	66	28		24	59	32	
09:00	33	49	12		12	40	15	13	72	20		21	60	40	
09:15	24	95	17		16	33	13	16	74	15		12	52	35	
09:30	49	98	19		13	44	15	6	93	9		16	44	36	
09:45	49	67	16		15	32	10	15	93	19		21	40	44	
10:00	41	65	15		14	32	15	11	108	21		21	39	42	
10:15	53	70	11		12	41	9	19	97	16		17	40	36	1
10:30	43	75	18		14	31	15	11	81	10		11	32	55	
10:45	52	76	23		22	33	12	31	116	23		17	33	37	
11:00	53	95	22		21	55	15	22	109	21		10	44	43	
11:15	65	94	25		18	41	10	22	102	21		19	38	39	
11:30	76	79	30		17	42	17	16	117	23		19	52	48	1
11:45	57	75	32		25	49	27	14	109	22		27	54	51	
12:00	74	85	31		21	47	28	35	107	27		21	47	56	1
12:15	56	104	27		32	40	31	31	129	15		25	43	53	
12:30	63	107	22		29	57	19	32	122	27		18	48	37	
12:45	59	106	36		13	60	19	20	117	23		17	69	38	

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Turning Movement Counts

Intersection Erie St & Oak St
Date 2020-02-28

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	R	T	L	U	R	T	L	U
13:00	53	89	28		20	53	10	20	114	25		20	53	42	
13:15	45	82	22		20	53	13	21	119	27		21	59	43	1
13:30	43	83	26		14	50	17	22	101	22		13	46	34	
13:45	69	95	22		19	45	22	23	90	16		19	46	42	
14:00	51	91	24		22	50	17	20	105	19		32	61	62	
14:15	40	76	20		22	64	23	21	88	19		20	81	47	
14:30	52	77	15		25	79	15	9	116	34		14	57	50	
14:45	65	97	28		23	70	14	19	99	27		11	44	32	
15:00	51	75	19		27	75	26	22	101	22	1	23	63	40	
15:15	43	82	26		26	57	18	17	103	38		18	47	41	
15:30	49	119	24		29	54	13	16	116	33		21	56	41	
15:45	61	87	22	1	20	59	23	30	115	37		24	77	51	
16:00	61	70	20		22	52	16	26	109	32		13	71	55	1
16:15	68	91	20		20	69	16	16	116	27		23	50	50	
16:30	50	102	22		18	54	27	25	106	31		20	58	55	
16:45	75	90	23	1	19	56	18	17	103	39		35	60	44	
17:00	70	98	20		26	81	21	28	139	27		31	42	48	
17:15	61	91	28		20	52	25	24	121	40		26	58	41	
17:30	65	90	35		15	47	20	19	111	33		27	50	47	
17:45	56	89	22		17	46	23	21	99	36		30	52	50	
18:00	46	95	20		16	52	14	25	107	35		19	46	40	
18:15	47	80	16		12	48	24	30	109	34		23	44	33	
18:30	43	108	18		5	34	19	27	106	32		28	43	46	1
18:45	44	91	22		12	48	18	21	96	26		21	44	36	1
19:00	42	73	20		14	40	14	20	102	33		31	42	39	
19:15	44	78	20		15	31	18	20	90	23	1	18	21	30	

GRIDSMART®

Turning Movement Counts

Intersection Erie St & Oak St
Date 2020-02-28

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	R	T	L	U	R	T	L	U
19:30	54	83	15	1	13	12	16	17	82	25		22	20	27	
19:45	48	73	29		12	23	9	9	87	28		22	28	28	1
20:00	37	96	19		14	27	9	16	80	28		22	23	19	
20:15	30	58	10		15	28	8	14	60	16		10	24	25	
20:30	35	71	13		8	22	5	14	76	18		13	26	20	
20:45	28	65	17		8	35	15	10	48	13		12	18	14	
21:00	32	68	14		11	37	10	19	48	20		12	27	19	
21:15	25	52	19		10	30	12	14	49	16		7	15	18	
21:30	30	46	8		10	25	9	5	45	12		8	20	14	
21:45	30	49	7	1	6	22	6	9	43	18		4	24	20	
22:00	26	44	18		9	25	11	13	23	14		16	36	17	
22:15	21	30	10		3	21	13	6	17	10		11	23	7	1
22:30	14	32	14		5	15	4	7	15	8		5	17	9	
22:45	14	26	3		5	8	5	9	14	11		9	10	7	
23:00	7	20	6		7	24	4	6	21	6		5	11	6	
23:15	9	8	6		1	20	7	4	12	11		8	12	5	
23:30	4	9	3		1	8	5	3	18	9		3	9	5	
23:45	5	9	7		2	5	2	2	8	8		6	5	5	
Total	**3079**	**5136**	**1317**	**6**	**1035**	**3029**	**1042**	**1239**	**5703**	**1580**	**2**	**1339**	**3267**	**2398**	**9**

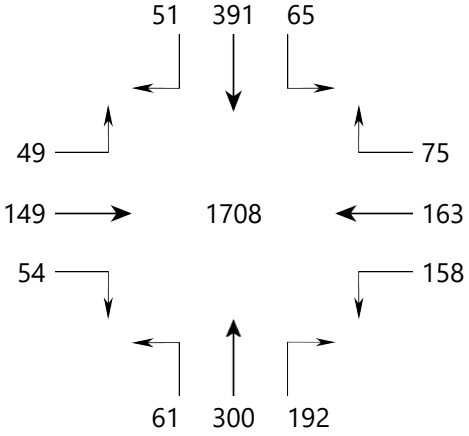
GRIDSMART®

Turning Movement Counts

Intersection Erie St & Oak St
Date 2020-02-28

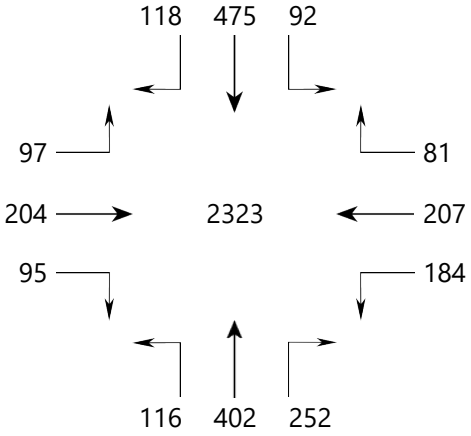
AM PEAK HOUR VOLUME (0:00-10:45)

FROM 09:30 TO 10:30



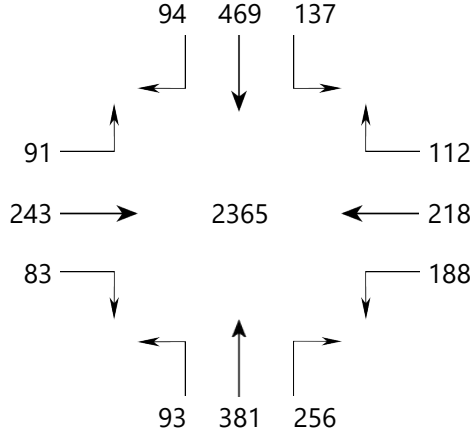
MID-DAY PEAK HOUR VOLUME (11:00-14:00)

FROM 12:00 TO 13:00



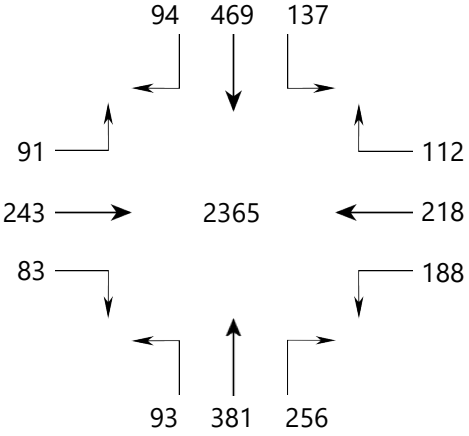
PM PEAK HOUR VOLUME (14:15-23:45)

FROM 16:30 TO 17:30



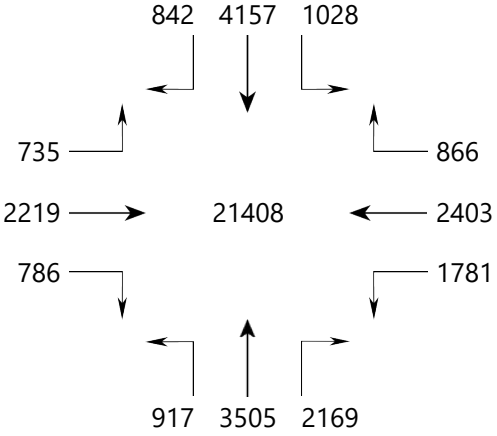
OVERALL PEAK HOUR VOLUME

FROM 16:30 TO 17:30



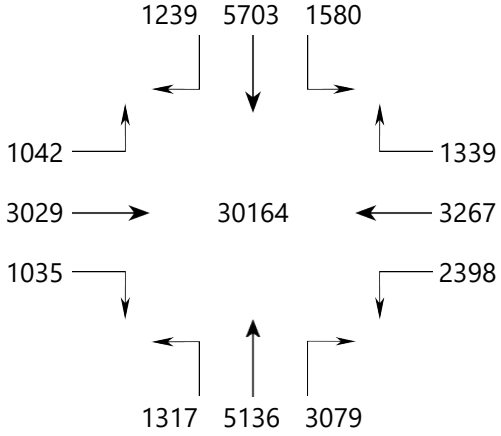
DAYTIME TOTAL VOLUME

FROM 07:00 TO 18:00



SELECTED TIME VOLUME

FROM 00:00 TO 23:59

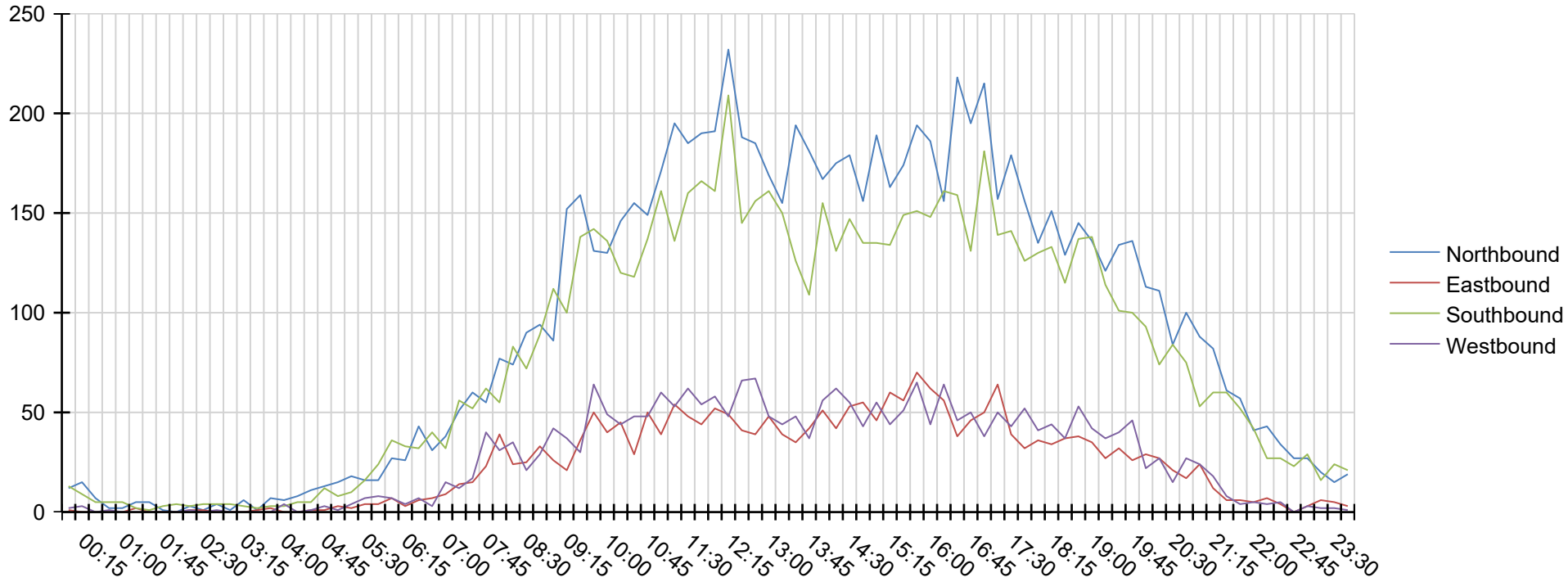


GRIDSMART®

Turning Movement Counts

Intersection Erie St & Pulford St
Date 2020-02-28

	Right	Through	Left	UTurn	Total
Northbound	1051	7105	894	3	9053
Eastbound	1362	427	518	8	2315
Southbound	274	6824	588	3	7689
Westbound	692	738	1158	1	2589
Total	**3379**	**15094**	**3158**	**15**	**21646**



GRIDSMART®

Turning Movement Counts

Intersection Erie St & Pulford St
Date 2020-02-28

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	U	R	T	L	U	R	T	L	U
00:00		12					1		1	11	1			1	1	
00:15		15								8	1		2	1		
00:30	1	6								5						
00:45		2								5				1		
01:00		2								4	1					
01:15		5			2					2						
01:30	1	4								1						
01:45		1								3						
02:00										4						
02:15		2	1		1					2	1		1			
02:30		1					1			4						
02:45	1	2	1						1	3			1			
03:00		1								4						
03:15	1	5								3						
03:30		1				1				2						
03:45		3	4				2		1	2						
04:00	2	4								3			2		2	
04:15		8								5						
04:30		11			1					5				1		
04:45	1	11	1		1					12			3			
05:00		15					3			7	1		1			
05:15		18					2		2	8			3		1	
05:30		15	1			2	2		5	11			5	1	1	
05:45		16					4		1	22	1		4	2	2	
06:00	2	25			3	1	3		6	30			3	2	2	
06:15	1	24	1		1	2			3	30				3	1	

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Turning Movement Counts

Intersection Erie St & Pulford St
Date 2020-02-28

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	U	R	T	L	U	R	T	L	U
06:30	2	39	2		4	1	1		2	29	1			6	1	
06:45	2	27	2		3	1	3		5	34	1			2	1	
07:00	3	34	1		4	1	4		2	29	1		7	3	5	
07:15	3	45	3		6	3	5		6	49	1		3	4	5	
07:30	1	55	4		11	2	2		2	44	6		3	13	1	
07:45	2	52	1		14	6	3		3	54	5		11	19	10	
08:00	5	68	4		24	5	10		5	46	4		6	16	9	
08:15	4	61	9		12	4	8		7	75	1		6	12	17	
08:30	3	82	5		19	1	5		3	65	4		6	7	8	
08:45	3	86	5		17	7	9		3	81	5		12	9	8	
09:00	12	68	6		21	2	3		3	97	12		11	10	21	
09:15	18	125	9		16	3	2		5	88	7		17	5	15	
09:30	22	130	7		18	10	8		5	123	10		8	7	15	
09:45	21	98	12		39	6	5		4	122	16		13	23	28	
10:00	20	94	16		23	8	9		6	114	16		12	11	26	
10:15	17	108	21		28	7	10		1	111	8		10	14	20	
10:30	21	119	15		26		3		3	111	4		11	9	28	
10:45	18	117	14		29	7	14		1	125	11		11	6	31	
11:00	24	127	20		22	6	10	1	4	140	17		15	17	28	
11:15	33	143	19		33	7	12	2	5	123	8		9	17	27	
11:30	27	135	23		37	6	5		3	146	11		15	17	30	
11:45	31	137	22		27	9	8		2	145	19		16	11	27	
12:00	22	149	20		34	12	6		2	138	21		26	10	22	
12:15	45	169	17	1	35	8	6		7	186	16		13	14	21	
12:30	21	148	19		28	6	7		4	130	11		19	13	34	
12:45	24	135	26		25	8	6		7	136	13		27	15	25	

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Turning Movement Counts

Intersection Erie St & Pulford St
Date 2020-02-28

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	U	R	T	L	U	R	T	L	U
13:00	16	144	9		31	5	12		1	151	9		12	9	27	
13:15	21	117	17		26	4	9		2	140	8		10	13	21	
13:30	29	142	22	1	22	4	9		2	103	21		9	17	22	
13:45	17	147	17		28	7	7		4	98	6	1	9	6	22	
14:00	16	127	24		34	3	14		6	138	11		15	16	25	
14:15	26	124	25		24	7	11		4	119	8		9	26	27	
14:30	17	142	20		35	10	8		4	132	11		14	15	26	
14:45	15	122	19		32	11	10	2	7	115	13		15	13	15	
15:00	21	144	24		23	10	13		6	114	15		12	17	26	
15:15	28	115	20		33	15	12		3	123	8		12	17	15	
15:30	19	129	26		33	10	12	1	2	139	8		9	9	33	
15:45	15	160	19		41	17	12		5	131	15		19	11	35	
16:00	23	142	21		38	12	12		6	126	16		10	12	22	
16:15	21	115	20		38	6	11	1	9	138	14		11	23	30	
16:30	19	173	25	1	19	9	10		2	141	16		14	12	19	1
16:45	20	157	18		26	14	6		3	122	6		5	14	31	
17:00	22	170	23		33	6	10	1	4	169	8		14	13	11	
17:15	16	121	20		45	10	9		5	116	18		19	13	18	
17:30	21	135	23		23	7	9		4	122	15		14	12	17	
17:45	14	131	11		16	6	10		5	111	10		12	24	16	
18:00	12	114	9		17	8	11		7	111	12		10	14	17	
18:15	17	117	17		13	10	11		4	117	11	1	13	10	21	
18:30	18	97	14		15	8	14		3	108	4		7	6	24	
18:45	21	112	12		19	7	12		7	122	8		10	18	25	
19:00	17	104	15		20	6	9		6	119	12	1	10	16	16	
19:15	18	86	17		9	8	10			105	9		14	7	16	

GRIDSMART®

Turning Movement Counts

Intersection Erie St & Pulford St
Date 2020-02-28

	Northbound				Eastbound				Southbound				Westbound			
	R	T	L	U	R	T	L	U	R	T	L	U	R	T	L	U
19:30	17	104	13		18	5	9		5	87	9		8	11	21	
19:45	17	102	17		9	7	10		5	92	3		14	11	21	
20:00	9	96	8		13	9	7		3	82	8		5	4	13	
20:15	20	82	9		8	10	9		2	64	8		10	10	7	
20:30	3	73	8		10	6	5		5	70	9		5	3	7	
20:45	9	82	9		9	5	3		5	64	6		8	5	14	
21:00	13	70	5		12	5	7		1	52			3	11	10	
21:15	16	61	5		8	1	3		4	53	3		4	6	8	
21:30	7	50	4		3	3				57	3		2	3	3	
21:45	5	49	3		2	2	2		4	46	2		2		2	
22:00	3	36	2			2	3		2	37	3		3	2		
22:15	5	34	4		3	2	2		2	22	3		3	1		
22:30	2	31	1		2	1	1		1	26			1	3	1	
22:45	4	22	1							23						
23:00	5	19	3		1	2				29			2	1		
23:15	1	17	2		5	1			2	12	2		1	1		
23:30		13	2		1	4			2	22				1	1	
23:45	2	17			1		2			19	2		1			
Total	**1051**	**7105**	**894**	**3**	**1362**	**427**	**518**	**8**	**274**	**6824**	**588**	**3**	**692**	**738**	**1158**	**1**

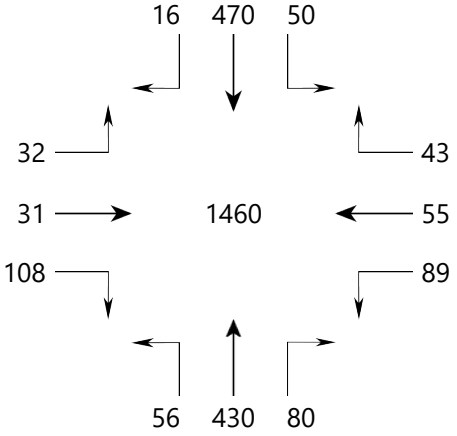
GRIDSMART®

Turning Movement Counts

Intersection Erie St & Pulford St
Date 2020-02-28

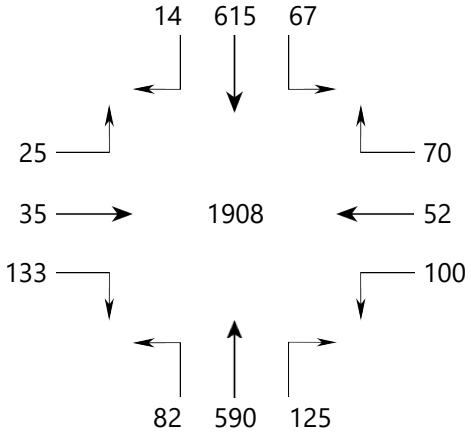
AM PEAK HOUR VOLUME (0:00-10:45)

FROM 09:30 TO 10:30



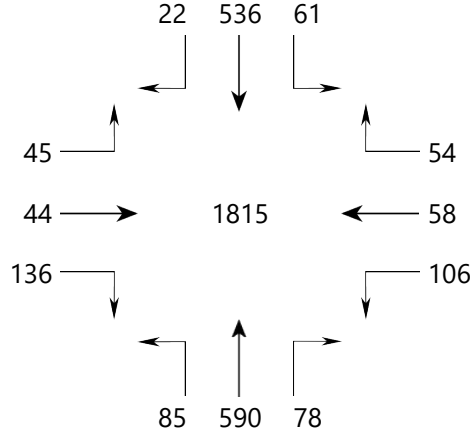
MID-DAY PEAK HOUR VOLUME (11:00-14:00)

FROM 11:30 TO 12:30



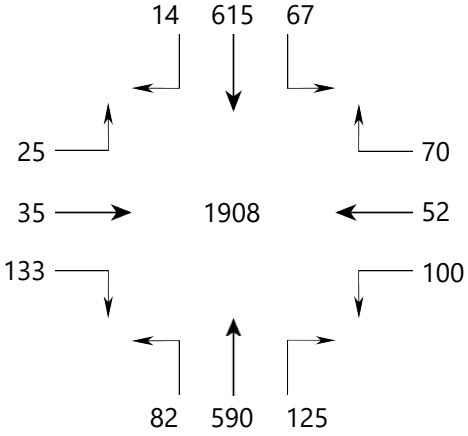
PM PEAK HOUR VOLUME (14:15-23:45)

FROM 15:45 TO 16:45



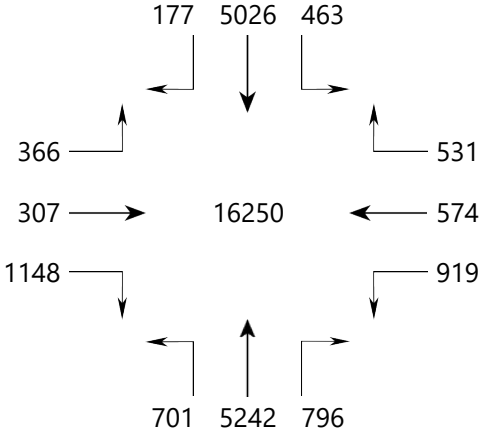
OVERALL PEAK HOUR VOLUME

FROM 11:30 TO 12:30



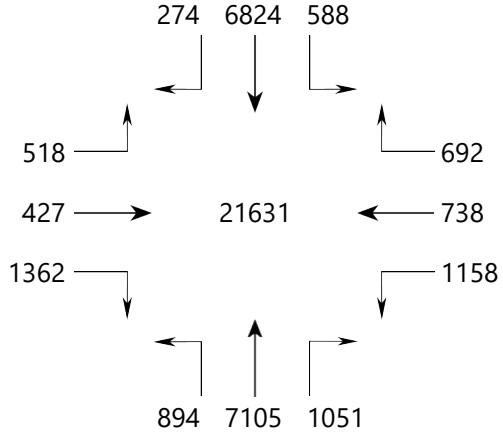
DAYTIME TOTAL VOLUME

FROM 07:00 TO 18:00



SELECTED TIME VOLUME

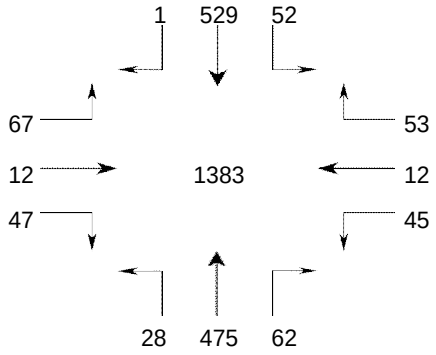
FROM 00:00 TO 23:59



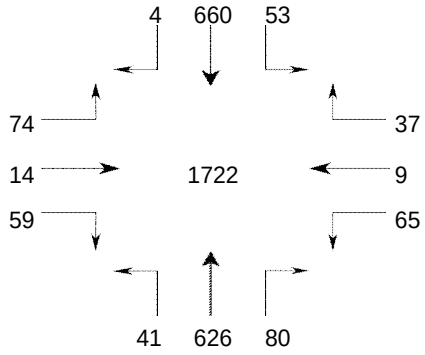
Turning Movement Counts

Intersection Erie St & TD Bank
Date 2020-07-03

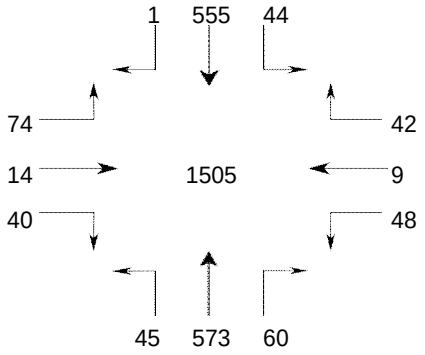
AM PEAK HOUR VOLUME (0:00-10:45)
FROM 09:45 TO 10:45



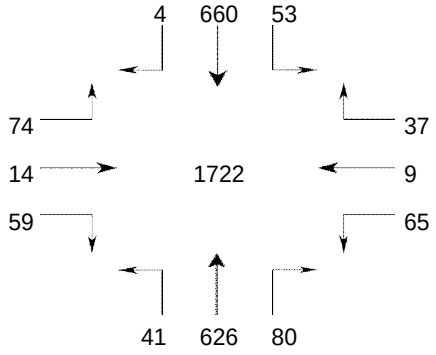
MID-DAY PEAK HOUR VOLUME (11:00-14:00)
FROM 12:00 TO 13:00



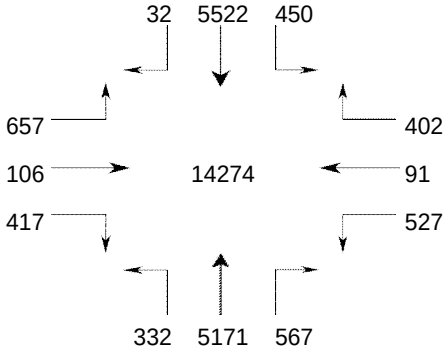
PM PEAK HOUR VOLUME (14:15-23:45)
FROM 14:15 TO 15:15



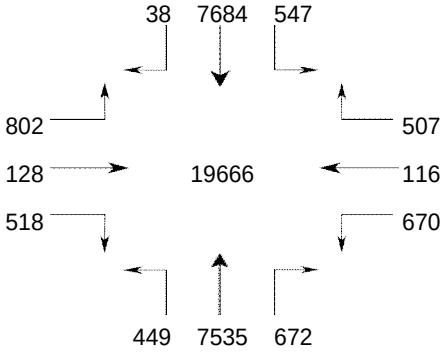
OVERALL PEAK HOUR VOLUME
FROM 12:00 TO 13:00



DAYTIME TOTAL VOLUME
FROM 07:00 TO 18:00



SELECTED TIME VOLUME
FROM 00:00 TO 23:59



TRAFFIC SIGNAL TIMING

McINTOSH PERRY

GENERIC SIGNAL TIMING SHEET

ACTUATED __x__ PRE-TIMED _____ SIGNAL TO BE MAINTAINED BY: ____Town of Leamington_

LOCATION: __Oak St. at Westmoreland Ave.__ SIGNAL TO BE OPERATED BY: ____Town of Leamington____

MAIN STREET: ____Oak St.____ TIMING DEVELOPED BY: ____Dillon Consulting____

DATE TIMING DEVELOPED: ____May 3, 2017____

GENERIC TIMING IDENTIFIED HERE SHALL BE TRANSCRIBED ONTO "OFFICIAL" TIMING SHEETS FOR THE TRAFFIC SIGNAL CONTROLLER BEING USED AT THIS SIGNALIZED INTERSECTION. A COPY OF THE "OFFICIAL" LOCAL TIMING SHEETS AND COORDINATION SHEETS IF USED, SHALL BE ATTACHED TO THIS FORM.

OPERATIONAL NOTES:

1) Westbound left turn phase shall be callable during north/south phase only. Signals shall rest in green and "walk" for east/west phase until a call is placed for the north/south phase.
2) If the east/west "flashing don't walk interval" begins in response to a north/south vehicle call that is subsequently dropped prior to the start of the east/west amber interval, the east/west pedestrian signals shall return to the walk interval at the conclusion of the flashing don't walk interval.
3) Flash mode: all red.

FUNCTION/OPERATION	**MOVEMENT (FAZE)** [NB LEFT]	[NB THRU]	[WB LEFT]	[WB THRU]	[SB LEFT]	[SB THRU]	[EB LEFT]	[EB THRU]
PERMITTED MOVEMENTS	**-**	**x**	**x**	**x**	**-**	x	**-**	**x**
RED LOCK	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
AMBER LOCK	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
VEHICLE RECALL	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
PEDESTRIAN RECALL	**na**	**-**	**na**	**x**	**na**	**-**	**na**	**x**
VEHICLE MAX RECALL	**-**	**-**	**-**	**x**	**-**	**-**	**-**	**x**
OVERLAP A	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
OVERLAP B	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
PROT/PERM LEFT TURN ARROW	**-**	**na**	**x**	**na**	**-**	**na**	**-**	**na**
PROT/PERM FAST FLASH ADVANCE GREEN	**-**	**na**	**-**	**na**	**-**	**na**	**-**	**na**
FULLY PROTECTED LEFT TURN	**-**	**na**	**-**	**na**	**-**	**na**	**-**	**na**
DISPLAY AMBER ON STARTUP	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
PLACE PEDESTRIAN CALLS ON STARTUP	**-**	**-**	**-**	**x**	**-**	**-**	**-**	**x**
PLACE VEHICLE CALLS ON STARTUP	**-**	**-**	**-**	**x**	**-**	**-**	**-**	**x**
REST IN WALK	**na**	**-**	**na**	**x**	**na**	**-**	**na**	**x**
MOVEMENTS MUST GAP OUT SIMUL'LY	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
DOUBLE ENTRY	**na**	**x**	**na**	**x**	**na**	**x**	**na**	**x**
EXCLUSIVE PHASING BY APPROACH	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

na --- not applicable

INTERVAL TIMES	**MOVEMENT (FAZE)**							
	[NB LEFT]	[NB THRU]	[WB LEFT]	[WB THRU]	[SB LEFT]	[SB THRU]	[EB LEFT]	[EB THRU]
WALK	**na**	7	**na**	7	**na**	7	**na**	7
ALT WALK	**na**	9	**na**	7	**na**	9	**na**	7
FLASHING DON'T WALK	**na**	12	**na**	16	**na**	12	**na**	16
MINIMUM GREEN	-	7	7	30	-	7	-	30
VEHICLE EXTENSION (PASSAGE TIME)	-	2.0	3.0	-	-	2.0	-	-
MAX GREEN (INCLUDES MIN GREEN)	-	21	11	30	-	21	-	30
MAX GREEN 2 (ALTERNATE MAX GREEN)	-	-	-	-	-	-	-	-
AMBER CLEARANCE	-	3.3	3.0	3.3	-	3.3	-	3.3
ALL RED CLEARANCE	-	2.7	1.0	2.6	-	2.7	-	2.6
MAX GAP (VEH. EXTENSION)	-	-	-	-	-	-	-	-
MIN GAP (VEH. EXTENSION)	-	-	-	-	-	-	-	-
REDUCE GAP BY	-	-	-	-	-	-	-	-
REDUCE GAP EVERY	-	-	-	-	-	-	-	-
MAX INITIAL GREEN TIME (VAR. INIT)	-	-	-	-	-	-	-	-
TIME ADDED/VEHICLE (VAR. INIT)	-	-	-	-	-	-	-	-

na --- not applicable

DETECTOR SETUP	**MOVEMENT (FAZE)**							
	[NB LEFT]	[NB THRU]	[WB LEFT]	[WB THRU]	[SB LEFT]	[SB THRU]	[EB LEFT]	[EB THRU]
DELAY TIME ON PRESENCE DETECTION	-	5.0	-	-	-	5.0	-	-
DELAY TIME ON LONG DIST. DETECTION	-	-	-	-	-	-	-	-
CARRY-OVER ON PRESENCE DETECTION	-	-	-	-	-	-	-	-
CARRY-OVER ON LONG DIST. DETECTION	-	-	-	-	-	-	-	-

PRE-EMPTION	**MOVEMENT (FAZE)**							
	[NB LEFT]	[NB THRU]	[WB LEFT]	[WB THRU]	[SB LEFT]	[SB THRU]	[EB LEFT]	[EB THRU]
1ST EMERG. PRE-EMPT MOVEMENTS	-	-	-	**x**	-	-	-	**x**
1ST EMERG. PRE-EMPT DELAY TIME	-	-	-	-	-	-	-	-
1ST EMERG. PRE-EMPT CLEARANCE TIME	-	-	-	-	-	-	-	-
2ND EMERG. PRE-EMPT MOVEMENTS	-	-	-	-	-	-	-	-
2ND EMERG. PRE-EMPT DELAY TIME	-	-	-	-	-	-	-	-
2ND EMERG. PRE-EMPT CLEAR'CE TIME	-	-	-	-	-	-	-	-
RR PRE-EMPT TRACK CLEAR'CE MV'MTS	-	-	-	-	-	-	-	-
RR PRE-EMPT CLEARANCE TIME	-	-	-	-	-	-	-	-
RR PRE-EMPT DELAY TIME	-	-	-	-	-	-	-	-
RR PRE-EMPT LIMITED SERVICE MV'NTS	-	-	-	-	-	-	-	-

TIME OF DAY OPERATIONS	TIME OF DAY [START]	[END]	DAY OF WEEK S M	T W	T F S	MOVEMENT (FAZE) [NB LEFT]	[NB THRU]	[WB LEFT]	[WB THRU]	[SB LEFT]	[SB THRU]	[EB LEFT]	[EB THRU]
PHASE OMIT	0:00	7:30	- x	x x	x x -	-	na	x	na	-	na	-	na
PHASE OMIT	8:30	14:00	- x	x x	x x -	-	na	x	na	-	na	-	na
PHASE OMIT	15:00	24:00	- x	x x	x x -	-	na	x	na	-	na	-	na
PHASE OMIT	0:00	24:00	x -	- -	- - x	-	na	x	na	-	na	-	na
MAX RECALL			- -	- -	- - -	-	-	-	-	-	-	-	-
PED RECALL			- -	- -	- - -	na	-	na	-	na	-	na	-
MIN RECALL			- -	- -	- - -	-	-	-	-	-	-	-	-
MAX GREEN 2			- -	- -	- - -	-	-	-	-	-	-	-	-
REST IN WALK			- -	- -	- - -	na	-	na	-	na	-	na	-
ALT WALK	7:30	8:30	- x	x x	x x -	na	x	na	-	na	x	na	-
ALT WALK	14:00	15:00	- x	x x	x x -	na	x	na	-	na	x	na	-
AMBER LOCK			- -	- -	- - -	-	-	-	-	-	-	-	-
RED LOCK			- -	- -	- - -	-	-	-	-	-	-	-	-

na --- not applicable

MEMO

TO: File
FROM: Brent Hooton
DATE: March 9, 2017
SUBJECT: **Signal Timing Parameters**
Oak Street at Westmoreland Avenue, Leamington
OUR FILE: 15-2488

1.0 Purpose

This memo documents the parameters underlying the proposed signal timings at Oak Street and Westmoreland Avenue.

2.0 Clearance intervals

	E/W	N/S
Posted speed limit	50 km/h	40 km/h*
Clearance distance	36 m	30 m
Amber interval	3.3 s	3.0 s
All-red interval	2.6 s	2.7 s
Total clearance interval	5.9 s	5.7 s

Notes:
* No posted speed limit; 40 km/h applied given that most NB and SB vehicles will be slowing to turn left or right.
Clearance distance includes 6.0 m vehicle length.
Amber and all-red intervals as per OTM Book 12.

Westbound left turn phase:
Clearance length for EB through lane: 22.5 m (3.2 s @ 25 km/h; 2.8 s @ 30 km/h; approx. 15 m EB before reaching conflict area – 1.1 s @ 50 km/h + 1.0 s reaction time = 2.1 s)
Clearance length for south crosswalk: 29 m (4.2 s @ 25 km/h; 3.4 s @ 30 km/h; assume 2-3 s for peds before reaching conflict area)
Therefore: 3.0 s amber / 1.0 s all-red

3.0 Pedestrian Intervals

	E/W	N/S
Walking speed	1.2 m/s	1.2 m/s
Curb-to-curb distance	13.8 m (north side) 19.0 m (south side)	12.0 m (west side) 14.1 m (east side)
Crossing time (longest crosswalk)	15.8 s	11.8 s
Amber + all-red intervals	5.9 s	5.7 s
Flashing don't walk interval - minimum - rounded	 15.8 s 16.0 s	 11.8 s 12.0 s

Notes:
~~Pedestrian clearance interval extends across flashing don't walk interval plus vehicular clearance interval (amber + all-red).~~
Updated May 3 – changed so that full pedestrian clearance interval is served prior to amber + all-red as directed by client. Also changed so that pedestrian crossing time reflects longest distance within the crosswalk, rather than measured along the centre line.

4.0 Passage time / extensions

Passage / extension time based on guidance / calculations documented in NCHRP Report 812 (*Signal Timing Manual*), which reflect a 3-second headway.

North/south
Detectors are 12 m (40') long.
- At 25 mph (40 km/h): 1.4 s
- At 30 mph (48 km/h): 1.6 s
- At 35 mph (56 km/h): 1.8 s

Applied 2.0 s to account for school buses requiring more time to accelerate and/or requiring longer headways.

Westbound left turn
Detector is 2.7 m long (diamond); used 6' length calculations.
At 25 mph (40 km/h): 2.3 s (marginally shorter for slower travel speeds).
Applied 3.0 s to account for school buses requiring more time to accelerate and/or requiring longer headways.

5.0 Time of day programming

School arrival and dismissal times are as follows (as per Mark Beens at Glos Associates Inc.):
- Arrival 8:15 AM
- Dismissal 2:15 PM

The westbound left turn phase has been set to be callable for one hour in the morning (starting 45 minutes before arrival) and one hour in the afternoon (starting 15 minutes before dismissal). This has been set through disabling the phase at all other times.

An alternate walk interval has been assigned (9 ~~15~~ seconds) on the north-south phase, to be applicable at the same times /days as the westbound left turn phase is callable.

6.0 Green times

Side street maximum green time is equivalent to sum of alt walk + flashing don't walk intervals (~~15~~ 9 + ~~6~~ 12 = 21 seconds). Minimum green time (with no ped calls) is 7 seconds.

Main street maximum green time is set to 30 seconds such that the maximum cycle length is approximately 60 seconds (assuming continual demand for side street phase), or approximately 80 seconds during school peak times when westbound left turn phase is callable.

Synchro files prepared using proposed timings and projected AM and PM volumes from traffic study (site PHF = 0.60) indicate the following operations:

- Overall level of service: LOS B (AM), LOS B (PM)
- Side street level of service: LOS C (AM), LOS B-C (PM)
- Maximum v/c ratio: 0.49 AM (EBT), 0.66 PM (EBT)

Synchro assumes that E/W phase can cycle directly to WBL phase, whereas the timing forms specify that WBL should be callable during N/S phase only. Synchro delays and v/c will be overstated for EB approach and understated for WBL movement.

INTERSECTION: Sherk Street & Oak Street

TIME PERIOD: AM Peak

14-Apr-09

Semi-Actuated Mode of Operation

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"					
	Advanced green clearance, "SOLID DON'T WALK"					
	PHASE TOTAL					
4	Green, "WALK"	9				
	Green, "FLASHING DON'T WALK"	12				
	Amber, "SOLID DON'T WALK"	4				
	Red, "DON'T WALK"	2				
	PHASE TOTAL	*27*				
	Advanced green, "SOLID DON'T WALK"				7	
	Advanced green clearance, "SOLID DON'T WALK"				3	
	PHASE TOTAL			*0*	*15*	
2/6	Green, "WALK"			12	27	
	Green, "FLASHING DON'T WALK"					
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*18*	*33*	
	RING TOTAL	**27**	**0**	**33**	**33**	**60**

Offset Reference:
Offset:

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 No pedestrian indications crossing the west or south legs of the intersection

INTERSECTION: Sherk Street & Oak Street

TIME PERIOD: Midday

Semi-Actuated Mode of Operation

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"					
	Advanced green clearance, "SOLID DON'T WALK"					
	PHASE TOTAL					
4	Green, "WALK"	9				
	Green, "FLASHING DON'T WALK"	12				
	Amber, "SOLID DON'T WALK"	4				
	Red, "DON'T WALK"	2				
	PHASE TOTAL	*27*				
	Advanced green, "SOLID DON'T WALK"				7	
	Advanced green clearance, "SOLID DON'T WALK"				3	
	PHASE TOTAL			*0*	*15*	
2/6	Green, "WALK"			12	27	
	Green, "FLASHING DON'T WALK"					
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*18*	*33*	
	RING TOTAL	**27**	**0**	**33**	**33**	**60**

Offset Reference:
Offset:

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 No pedestrian indications crossing the west or south legs of the intersection

INTERSECTION: Sherk Street & Oak Street **TIME PERIOD:** PM Peak

Semi-Actuated Mode of Operation

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"					
	Advanced green clearance, "SOLID DON'T WALK"					
	PHASE TOTAL					
4/8	Green, "WALK"	8				
	Green, "FLASHING DON'T WALK"	12				
	Amber, "SOLID DON'T WALK"	4				
	Red, "DON'T WALK"	2				
	PHASE TOTAL	*26*				
	Advanced green, "SOLID DON'T WALK"				7	
	Advanced green clearance, "SOLID DON'T WALK"				3	
	PHASE TOTAL			*0*	*15*	
2/6	Green, "WALK"			13	28	
	Green, "FLASHING DON'T WALK"					
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*19*	*34*	
	RING TOTAL	26	0	34	34	60

Offset Reference:
Offset:

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 No pedestrian indications crossing the west or south legs of the intersection

INTERSECTION: Sherk Street & Oak Street **TIME PERIOD:** Overnight

Semi-Actuated Mode of Operation

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"					
	Advanced green clearance, "SOLID DON'T WALK"					
	PHASE TOTAL					
4/8	Green, "WALK"	10				
	Green, "FLASHING DON'T WALK"	12				
	Amber, "SOLID DON'T WALK"	4				
	Red, "DON'T WALK"	2				
	PHASE TOTAL	*28*				
	Advanced green, "SOLID DON'T WALK"					
	Advanced green clearance, "SOLID DON'T WALK"					
	PHASE TOTAL					
2/6	Green, "WALK"			16	16	
	Green, "FLASHING DON'T WALK"					
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*22*	*22*	
	RING TOTAL	28	0	22	22	50

Offset Reference:
Offset:

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 No pedestrian indications crossing the west or south legs of the intersection
4 WB advance left turn phase turned off overnight

INTERSECTION: Erie Street & Oak Street			TIME PERIOD: Day Timings (7 am - 9 pm) Cycle Length: 90 sec			Offset =		7-Aug-13 N/A
Movement	SBL	NBTR	EBL	WBTR	NBL	SBTR	WBL	EBTR
Phase	1	2	3	4	5	6	7	8
Min Green	5.0	26.0	5.0	10.0	5.0	28.0	5.0	10.0
Gap Ext	3.0			3.0			3.0	3.0
Max Green 1	7.0	26.0	5.0	31.0	5.0	28.0	10.0	26.0
Max Green 2								
Recall	none	Max	none	none	none	Max	none	none
Amber (Solid Don't Walk)	3.0	3.5	3.0	3.5	3.0	3.5	3.0	3.5
All Red (Solid Don't Walk)		3.0		3.0		3.0		3.0
All Red or Solid Adv Grn	1.0		1.0		1.0		1.0	
Walk	0.0	6.0	0.0	6.0	0.0	6.0	0.0	6.0
PCL (Flashing Don't Walk)	0.0	20.0	0.0	20.0	0.0	20.0	0.0	20.0

INTERSECTION: Erie Street & Oak Street			TIME PERIOD: Night Timings (9 pm - 7 am) Cycle Length: 65 sec			Offset =		7-Aug-13 N/A
Movement	SBL	NBTR	EBL	WBTR	NBL	SBTR	WBL	EBTR
Phase	1	2	3	4	5	6	7	8
Min Green	0.0	26.0	0.0	10.0	0.0	26.0	0.0	10.0
Gap Ext				3.0				3.0
Max Green 1	0.0	26.0	0.0	26.0	0.0	26.0	0.0	26.0
Max Green 2								
Recall	none	Max	none	none	none	Max	none	none
Amber (Solid Don't Walk)	0.0	3.5	0.0	3.5	0.0	3.5	0.0	3.5
All Red (Solid Don't Walk)		3.0		3.0		3.0		3.0
All Red or Solid Adv Grn								
Walk	0.0	6.0	0.0	6.0	0.0	6.0	0.0	6.0
PCL (Flashing Don't Walk)	0.0	20.0	0.0	20.0	0.0	20.0	0.0	20.0

INTERSECTION: Erie Street & Oak Street			TIME PERIOD: Default Timings Cycle Length: 90 sec			Offset =		7-Aug-13 N/A
Movement	SBL	NBTR	EBL	WBTR	NBL	SBTR	WBL	EBTR
Phase	1	2	3	4	5	6	7	8
Min Green	5.0	26.0	5.0	10.0	5.0	28.0	5.0	10.0
Gap Ext	3.0			3.0			3.0	3.0
Max Green 1	7.0	26.0	5.0	31.0	5.0	28.0	10.0	26.0
Max Green 2								
Recall	none	Max	none	none	none	Max	none	none
Amber (Solid Don't Walk)	3.0	3.5	3.0	3.5	3.0	3.5	3.0	3.5
All Red (Solid Don't Walk)		3.0		3.0		3.0		3.0
All Red or Solid Adv Grn	1.0		1.0		1.0		1.0	
Walk	0.0	6.0	0.0	6.0	0.0	6.0	0.0	6.0
PCL (Flashing Don't Walk)	0.0	20.0	0.0	20.0	0.0	20.0	0.0	20.0

Feb 29, 2008

INTERSECTION: Erie Street & Pulford Avenue **TIME PERIOD:** AM Peak

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
1	Advanced green, "SOLID DON'T WALK"	0	11			
	Advanced green clearance, "SOLID DON'T WALK"	0	3			
	PHASE TOTAL	*0*	*14*			
2/6	Green, "WALK"	10	24			
	Green, "FLASHING DON'T WALK"	15	15			
	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*31*	*45*			
4/8	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
	Green, "WALK"			11	11	
	Green, "FLASHING DON'T WALK"			18	18	
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*35*	*35*	
	RING TOTAL	**45**	**45**	**35**	**35**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 72

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & Pulford Avenue **TIME PERIOD:** Midday

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
1	Advanced green, "SOLID DON'T WALK"	0	10			
	Advanced green clearance, "SOLID DON'T WALK"	0	4			
	PHASE TOTAL	*0*	*14*			
2/6	Green, "WALK"	10	24			
	Green, "FLASHING DON'T WALK"	15	15			
	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*31*	*45*			
4/8	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
	Green, "WALK"			11	11	
	Green, "FLASHING DON'T WALK"			18	18	
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*35*	*35*	
	RING TOTAL	**45**	**45**	**35**	**35**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 75

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & Pulford Avenue **TIME PERIOD:** PM Peak

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
1	Advanced green, "SOLID DON'T WALK"	0	10			
	Advanced green clearance, "SOLID DON'T WALK"	0	4			
	PHASE TOTAL	*0*	*14*			
2/6	Green, "WALK"	10	24			
	Green, "FLASHING DON'T WALK"	15	15			
	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*31*	*45*			
4/8	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
	Green, "WALK"			11	11	
	Green, "FLASHING DON'T WALK"			18	18	
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*35*	*35*	
	RING TOTAL	**45**	**45**	**35**	**35**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 2

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & Pulford Avenue **TIME PERIOD:** Overnight

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
2/6	Advanced green, "SOLID DON'T WALK"	0	0			
	Advanced green clearance, "SOLID DON'T WALK"	0	0			
	PHASE TOTAL	*0*	*0*			
	Green, "WALK"	7	7			
	Green, "FLASHING DON'T WALK"	15	15			
	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*28*	*28*			
4/8	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
	Green, "WALK"			7	7	
	Green, "FLASHING DON'T WALK"			18	18	
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*31*	*31*	
	RING TOTAL	**28**	**28**	**31**	**31**	**59**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 9

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & TD Bank Entrance **TIME PERIOD:** AM Peak

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
1/5	Advanced green, "SOLID DON'T WALK"	12	12			
	Advanced green clearance, "SOLID DON'T WALK"	3	3			
	PHASE TOTAL	*15*	*15*			
2/6	Green, "WALK"	12	12			
	Green, "FLASHING DON'T WALK"	14	14			
	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*32*	*32*			
4/8	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
	Green, "WALK"			9	9	
	Green, "FLASHING DON'T WALK"			18	18	
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*33*	*33*	
	RING TOTAL	**47**	**47**	**33**	**33**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 65

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & TD Bank Entrance **TIME PERIOD:** Midday

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"	12	12			
	Advanced green clearance, "SOLID DON'T WALK"	3	3			
	PHASE TOTAL	*15*	*15*			
2/6	Green, "WALK"	12	12			
	Green, "FLASHING DON'T WALK"	14	14			
	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*32*	*32*			
	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
4/8	Green, "WALK"			9	9	
	Green, "FLASHING DON'T WALK"			18	18	
	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*33*	*33*	
	RING TOTAL	**47**	**47**	**33**	**33**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 9

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & TD Bank Entrance **TIME PERIOD:** PM Peak

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"	12	12			
	Advanced green clearance, "SOLID DON'T WALK"	3	3			
	PHASE TOTAL	*15*	*15*			
	Green, "WALK"	12	12			
	Green, "FLASHING DON'T WALK"	14	14			
2/6	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*32*	*32*			
	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
	Green, "WALK"			9	9	
	Green, "FLASHING DON'T WALK"			18	18	
4/8	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*33*	*33*	
	RING TOTAL	**47**	**47**	**33**	**33**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 4

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & TD Bank Entrance **TIME PERIOD:** Overnight

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"	0	0			
	Advanced green clearance, "SOLID DON'T WALK"	0	0			
	PHASE TOTAL	*0*	*0*			
	Green, "WALK"	7	7			
	Green, "FLASHING DON'T WALK"	14	14			
2/6	Amber, "SOLID DON'T WALK"	4	4			
	Red, "DON'T WALK"	2	2			
	PHASE TOTAL	*27*	*27*			
	Advanced green, "SOLID DON'T WALK"			0	0	
	Advanced green clearance, "SOLID DON'T WALK"			0	0	
	PHASE TOTAL			*0*	*0*	
	Green, "WALK"			4	4	
	Green, "FLASHING DON'T WALK"			18	18	
4/8	Amber, "SOLID DON'T WALK"			4	4	
	Red, "DON'T WALK"			2	2	
	PHASE TOTAL			*28*	*28*	
	RING TOTAL	**27**	**27**	**28**	**28**	**55**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 0

Notes: *Timings based on future geometry.*
1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 East/west green times are maximums and are applicable when a pedestrian call is received.
4 If no pedestrian call is received, a minimum east/west green of 7 seconds will be provided.
If ongoing vehicular demand is present, extensions will be provided up to the maximum ("WALK" + "FLASHING DON'T WALK").
5 Unused extension time to apply to north/south "Green + WALK" interval.

INTERSECTION: Erie Street & Walmart	TIME PERIOD: AM Peak Timings (07:00 - 09:00)	28-Aug-13
Cycle Length: 80 sec	Monday to Saturday	Offset = 46

Movement	SBL	NBTR		WBTR	NBL	SBTR		EBTR
Phase	1	2	3	4	5	6	7	8
Min Green	6.0	29.0		10.0	6.0	29.0		10.0
Gap Ext	3.0			3.0				3.0
Max Green 1	9.0	29.0		26.0	9.0	29.0		26.0
Max Green 2								
Recall	none	Max		none	none	Max		none
Amber (Solid Don't Walk)	3.0	4.0		4.0	3.0	4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red or Solid Adv Grn	1.0				1.0			
Walk	0.0	10.0		7.0	0.0	10.0		7.0
PCL (Flashing Don't Walk)	0.0	19.0		17.0	0.0	19.0		17.0

INTERSECTION: Erie Street & Walmart	TIME PERIOD: PM Peak Timings (14:00 - 16:00)	28-Aug-13
Cycle Length: 80 sec	Every Day (Sunday to Saturday)	Offset = 14

Movement	SBL	NBTR		WBTR	NBL	SBTR		EBTR
Phase	1	2	3	4	5	6	7	8
Min Green	6.0	29.0		10.0	6.0	29.0		10.0
Gap Ext	3.0			3.0				3.0
Max Green 1	9.0	29.0		26.0	9.0	29.0		26.0
Max Green 2								
Recall	none	Max		none	none	Max		none
Amber (Solid Don't Walk)	3.0	4.0		4.0	3.0	4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red or Solid Adv Grn	1.0				1.0			
Walk	0.0	10.0		7.0	0.0	10.0		7.0
PCL (Flashing Don't Walk)	0.0	19.0		17.0	0.0	19.0		17.0

80.0

INTERSECTION: Erie Street & Walmart	TIME PERIOD: Noon Peak (11:30 - 13:30)	28-Aug-13
Cycle Length: 80 sec	Every Day (Sunday to Saturday)	Offset = 40

Movement	SBL	NBTR		WBTR	NBL	SBTR		EBTR
Phase	1	2	3	4	5	6	7	8
Min Green	6.0	29.0		10.0	6.0	29.0		10.0
Gap Ext	3.0			3.0				3.0
Max Green 1	9.0	29.0		26.0	9.0	29.0		26.0
Max Green 2								
Recall	none	Max		none	none	Max		none
Amber (Solid Don't Walk)	3.0	4.0		4.0	3.0	4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red or Solid Adv Grn	1.0				1.0			
Walk	0.0	10.0		7.0	0.0	10.0		7.0
PCL (Flashing Don't Walk)	0.0	19.0		17.0	0.0	19.0		17.0

INTERSECTION: Erie Street & Walmart	TIME PERIOD: Offpeak and Default	28-Aug-13
Cycle Length: 60 sec	(Anytime outside of those time periods)	Offset = N/A

Movement		NBTR		WBTR		SBTR		EBTR
Phase	1	2	3	4	5	6	7	8
Min Green		25.0		10.0		25.0		10.0
Gap Ext				3.0				3.0
Max Green 1		25.0		23.0		25.0		23.0
Max Green 2								
Recall		Max		none		Max		none
Amber (Solid Don't Walk)		4.0		4.0		4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red or Solid Adv Grn								
Walk		6.0		6.0		6.0		6.0
PCL (Flashing Don't Walk)		19.0		17.0		19.0		17.0

Note: Uncoordinated signals to rest at the end of Main Street Walk

INTERSECTION: Erie Street & Seacliff Drive **TIME PERIOD:** AM Peak

16-Sep-10 LDG

Actuated-Coordinated

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"	7	7			
	Advanced green clearance, "SOLID DON'T WALK"	3	3			
	PHASE TOTAL	*10*	*10*			
	Green, "WALK"	7	7			
	Green, "FLASHING DON'T WALK"	17	17			
4	Amber, "SOLID DON'T WALK"	3.5	3.5			
	Red, "DON'T WALK"	3	3			
	PHASE TOTAL	*30.5*	*30.5*			
	Advanced green, "SOLID DON'T WALK"			7	7	
	Advanced green clearance, "SOLID DON'T WALK"			3	3	
	PHASE TOTAL			*10*	*10*	
	Green, "WALK"			7	7	
	Green, "FLASHING DON'T WALK"			16	16	
2/6	Amber, "SOLID DON'T WALK"			3.5	3.5	
	Red, "DON'T WALK"			3	3	
	PHASE TOTAL			*29.5*	*29.5*	
	RING TOTAL	**40.5**	**40.5**	**39.5**	**39.5**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 6

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 Phase 2 is northbound, phase 6 is southbound
4 Max Recall Phases 4/8 (EB & WB)

INTERSECTION: Erie Street & Seacliff Drive **TIME PERIOD:** Midday

Actuated-Coordinated

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"	7	7			
	Advanced green clearance, "SOLID DON'T WALK"	3	3			
	PHASE TOTAL	*10*	*10*			
	Green, "WALK"	7	7			
	Green, "FLASHING DON'T WALK"	17	17			
4	Amber, "SOLID DON'T WALK"	3.5	3.5			
	Red, "DON'T WALK"	3	3			
	PHASE TOTAL	*30.5*	*30.5*			
	Advanced green, "SOLID DON'T WALK"			7	7	
	Advanced green clearance, "SOLID DON'T WALK"			3	3	
	PHASE TOTAL			*10*	*10*	
	Green, "WALK"			7	7	
	Green, "FLASHING DON'T WALK"			16	16	
2/6	Amber, "SOLID DON'T WALK"			3.5	3.5	
	Red, "DON'T WALK"			3	3	
	PHASE TOTAL			*29.5*	*29.5*	
	RING TOTAL	**40.5**	**40.5**	**39.5**	**39.5**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 30

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 Phase 2 is northbound, phase 6 is southbound
4 Max Recall Phases 4/8 (EB & WB)

INTERSECTION: Erie Street & Seacliff Drive **TIME PERIOD:** PM Peak

Actuated-Coordinated

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
1/5	Advanced green, "SOLID DON'T WALK"	7	7			
	Advanced green clearance, "SOLID DON'T WALK"	3	3			
	PHASE TOTAL	*10*	*10*			
4/8	Green, "WALK"	7	7			
	Green, "FLASHING DON'T WALK"	17	17			
	Amber, "SOLID DON'T WALK"	3.5	3.5			
	Red, "DON'T WALK"	3	3			
	PHASE TOTAL	*30.5*	*30.5*			
3/7	Advanced green, "SOLID DON'T WALK"			7	7	
	Advanced green clearance, "SOLID DON'T WALK"			3	3	
	PHASE TOTAL			*10*	*10*	
2/6	Green, "WALK"			7	7	
	Green, "FLASHING DON'T WALK"			16	16	
	Amber, "SOLID DON'T WALK"			3.5	3.5	
	Red, "DON'T WALK"			3	3	
	PHASE TOTAL			*29.5*	*29.5*	
	RING TOTAL	**40.5**	**40.5**	**39.5**	**39.5**	**80**

Offset Reference: Start of Amber, NB & SB (phases 2 & 6)
Offset: 0

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 Phase 2 is northbound, phase 6 is southbound
4 Max Recall Phases 4/8 (EB & WB)

INTERSECTION: Erie Street & Seacliff Drive **TIME PERIOD:** Overnight

Actuated - Uncoordinated

PHASE	INTERSECTION	N/B	S/B	E/B	W/B	CYCLE LENGTH
	Advanced green, "SOLID DON'T WALK"	7	7			
	Advanced green clearance, "SOLID DON'T WALK"	3	3			
	PHASE TOTAL	*10*	*10*			
4/8	Green, "WALK"	7	7			
	Green, "FLASHING DON'T WALK"	17	17			
	Amber, "SOLID DON'T WALK"	3.5	3.5			
	Red, "DON'T WALK"	3	3			
	PHASE TOTAL	*30.5*	*30.5*			
	Advanced green, "SOLID DON'T WALK"			7	7	
	Advanced green clearance, "SOLID DON'T WALK"			3	3	
	PHASE TOTAL			*10*	*10*	
2/6	Green, "WALK"			7	7	
	Green, "FLASHING DON'T WALK"			16	16	
	Amber, "SOLID DON'T WALK"			3.5	3.5	
	Red, "DON'T WALK"			3	3	
	PHASE TOTAL			*29.5*	*29.5*	
	RING TOTAL	**40.5**	**40.5**	**39.5**	**39.5**	**80**

Offset Reference:
Offset:

Notes:

1 "WALK" time calculated using total green time minus Green, "FLASHING DON'T WALK"
2 FLASHING DON'T WALK time calculated based upon time to cross at 1.2 m/s.
3 Phase 2 is northbound, phase 6 is southbound
4 Max Recall Phases 2/6 & 4/8 (NB, SB, EB & WB Thru movements)

INTERSECTION: Seacliff Drive & Sherk Street			TIME PERIOD: Daytime (7:00 - 21:00)					08-Dec-16
Cycle Length: 78 sec.							Offset =	N/A
Movement		EBTR		NBTRL	EBL	WBTR		SBRL
Phase	1	2	3	4	5	6	7	8
Min Green		30.0		10.0	8.0	30.0		10.0
Gap Ext				3.0	3.0			3.0
Max Green 1		30.0		22.0	11.0	30.0		22.0
Max Green 2								
Recall		max		none	none	max		none
Amber (Solid Don't Walk)		4.0		4.0	3.0	4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red for Solid Adv Green								
Walk		15.0		7.0	0.0	15.0		7.0
PCL (Flashing Don't Walk)		15.0		15.0	0.0	15.0		15.0

Note 1: *Uncoordinated signals to rest at the end of Main Street Walk(audible shuts off) until a call comes in.*

Note 2: *Ensure that the Main Street audible pedestrian signal may still be in the situation described in Note 1.*

Note 3: *The signal should revert to Main Street Green Walk if the side street call is dropped before the Main Street signal goes to amber (ie. right turns made before signal changes or easbound lefts tripping southbound left detection).*

Note 4: *Accessible pedestrian signal pushbuttons need to be held for 3 seconds to activate the audible signals and have a confirmation tone emitted from the unit that confirms to the user that the audible signals have been activated.*

Note 5: *If the signal is resting on main street green walk with audible shut off (excepting the pushbutton locator tone), if a person presses and holds the pushbutton to cross Sherk/driveway, the audible walk signal/PCL tones should activate immediately without needing to go to side street green first.*

Note 6: *The controller needs to be tested using a test board with indicator lights to ensure all timings and displays are working as expected prior to installation in the field.*

INTERSECTION: Seacliff Drive & Sherk Street			TIME PERIOD: Overnight (21:00 - 7:00)				08-Dec-16
Cycle Length: 56 sec.						Offset =	N/A
Movement	EBL	EBTR		NBTRL		WBTR		SBRL
Phase	1	2	3	4	5	6	7	8
Min Green		22.0		10.0		22.0		10.0
Gap Ext				3.0				3.0
Max Green 1		22.0		22.0		22.0		22.0
Max Green 2								
Recall		max		none		max		none
Amber (Solid Don't Walk)		4.0		4.0		4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red for Solid Adv Green								
Walk		7.0		7.0		7.0		7.0
PCL (Flashing Don't Walk)		15.0		15.0		15.0		15.0

Note 1: *Uncoordinated signals to rest at the end of Main Street Walk(audible shuts off) until a call comes in.*

Note 2: *Ensure that the Main Street audible pedestrian signal may still be in the situation described in Note 1.*

Note 3: *The signal should revert to Main Street Green Walk if the side street call is dropped before the Main Street signal goes to amber (ie. right turns made before signal changes or easbound lefts tripping southbound left detection).*

Note 4: *Accessible pedestrian signal pushbuttons need to be held for 3 seconds to activate the audible signals and have a confirmation tone emitted from the unit that confirms to the user that the audible signals have been activated.*

Note 5: *If the signal is resting on main street green walk with audible shut off (excepting the pushbutton locator tone), if a person presses and holds the pushbutton to cross Sherk/driveway, the audible walk signal/PCL tones should activate immediately without needing to go to side street green first.*

Note 6: *The controller needs to be tested using a test board with indicator lights to ensure all timings and displays are working as expected prior to installation in the field.*

INTERSECTION: Seacliff Drive & Cherry Lane			TIME PERIOD: Daytime (7:00 - 21:00)					22-Jan-22
Cycle Length: 74 sec.							Offset =	N/A
Movement	WBL	EBTR/BIKE		BIKE/PED		WBT		NBLR
Phase	1	2	3	4	5	6	7	8
Min Green	8.0	28.0		10.0		28.0		10.0
Gap Ext	3.0			3.0				3.0
Max Green 1	11.0	28.0		20.0		28.0		20.0
Max Green 2								
Recall	none	max		none		max		none
Amber (Solid Don't Walk)	3.0	4.0		4.0		4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red for Solid Adv Green								
Walk	0.0	20.0		7.0				
PCL (Flashing Don't Walk)	0.0	8.0		13.0				

Note 1: *Uncoordinated signals to rest at the end of Main Street Walk (audible shuts off) until a call comes in.*

Note 2: *Ensure that the Main Street audible pedestrian signal may still be in the situation described in Note 1.*

Note 3: *The signal should revert to Main Street Green Walk if the side street call is dropped before the Main Street signal goes to amber (ie. right turns made before signal changes or easbound lefts tripping southbound left detection).*

Note 4: *Accessible pedestrian signal pushbuttons need to be held for 3 seconds to activate the audible signals and have a confirmation tone emitted from the unit that confirms to the user that the audible signals have been activated.*

Note 5: *If the signal is resting on main street green walk with audible shut off (excepting the pushbutton locator tone), if a person presses and holds the pushbutton to cross Cherry Lane, the audible walk signal/PCL tones should activate immediately without needing to go to side street green first.*

Note 6: *The controller needs to be tested using a test board with indicator lights to ensure all timings and displays are working as expected prior to installation in the field.*

INTERSECTION: Seacliff Drive & Cherry Lane		TIME PERIOD: Overnight (21:00 - 7:00)						22-Jan-22
Cycle Length: 37 sec.							Offset =	N/A
Movement		EBTR/BIKE		BIKE/PED		WBT		NBLR
Phase	1	2	3	4	5	6	7	8
Min Green		15.0		10.0		15.0		10.0
Gap Ext				3.0				3.0
Max Green 1		15.0		20.0		15.0		20.0
Max Green 2								
Recall		max		none		max		none
Amber (Solid Don't Walk)		4.0		4.0		4.0		4.0
All Red (Solid Don't Walk)		2.0		2.0		2.0		2.0
All Red for Solid Adv Green								
Walk		7.0		7.0				
PCL (Flashing Don't Walk)		8.0		13.0				

Note 1: *Uncoordinated signals to rest at the end of Main Street Walk (audible shuts off) until a call comes in.*

Note 2: *Ensure that the Main Street audible pedestrian signal may still be in the situation described in Note 1.*

Note 3: *The signal should revert to Main Street Green Walk if the side street call is dropped before the Main Street signal goes to amber (ie. right turns made before signal changes or easbound lefts tripping southbound left detection).*

Note 4: *Accessible pedestrian signal pushbuttons need to be held for 3 seconds to activate the audible signals and have a confirmation tone emitted from the unit that confirms to the user that the audible signals have been activated.*

Note 5: *If the signal is resting on main street green walk with audible shut off (excepting the pushbutton locator tone), if a person presses and holds the pushbutton to cross Cherry Lane, the audible walk signal/PCL tones should activate immediately without needing to go to side street green first.*

Note 6: *The controller needs to be tested using a test board with indicator lights to ensure all timings and displays are working as expected prior to installation in the field.*

APPENDIX B – CAPACITY ANALYSIS REPORTS

McINTOSH PERRY

EXISTING CONDITIONS

McINTOSH PERRY

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	313	23	12	318	94	19	63	8	43	25	80
Future Volume (vph)	107	313	23	12	318	94	19	63	8	43	25	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97	1.00			0.98			0.99	0.97		0.93	
Frt		0.990			0.966				0.850		0.927	
Flt Protected	0.950			0.950				0.988			0.986	
Satd. Flow (prot)	1805	1746	0	1805	1666	0	0	1877	1615	0	1626	0
Flt Permitted	0.396			0.368				0.815			0.857	
Satd. Flow (perm)	728	1746	0	699	1666	0	0	1527	1567	0	1410	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			32				97		75	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	28		8	8		28	41		4	4		41
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Heavy Vehicles (%)	0%	8%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	167	489	36	19	497	147	30	98	13	67	39	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	525	0	19	644	0	0	128	13	0	231	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	8	8			21		4	4	4	31	31	
Act Effct Green (s)	44.3	44.3		48.2	46.3			12.8	12.8		12.8	
Actuated g/C Ratio	0.62	0.62		0.68	0.65			0.18	0.18		0.18	
v/c Ratio	0.37	0.48		0.03	0.59			0.47	0.04		0.73	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	12.8	11.4		5.3	10.5			30.7	0.1		31.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	12.8	11.4		5.3	10.5			30.7	0.1		31.8	
LOS	B	B		A	B			C	A		C	
Approach Delay		11.8			10.3			27.9			31.8	
Approach LOS		B			B			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 71.1			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 15.2		Intersection LOS: B	
Intersection Capacity Utilization 82.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W

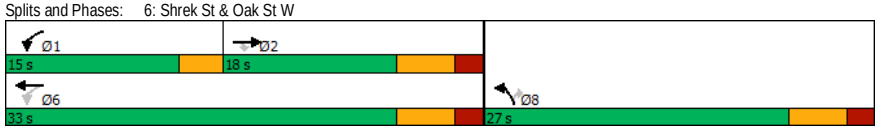


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	247	154	146	346	196	152
Future Volume (vph)	247	154	146	346	196	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1404	1570	1863	1530	1369
Flt Permitted			0.454		0.950	
Satd. Flow (perm)	1863	1404	750	1863	1530	1341
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		190				188
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)						10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	305	190	180	427	242	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	305	190	180	427	242	188
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0	12.0	7.0	27.0	9.0	9.0
Minimum Split (s)	18.0	18.0	10.0	33.0	27.0	27.0
Total Split (s)	18.0	18.0	15.0	33.0	27.0	27.0
Total Split (%)	30.0%	30.0%	25.0%	55.0%	45.0%	45.0%
Maximum Green (s)	12.0	12.0	12.0	27.0	21.0	21.0
Yellow Time (s)	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Min	None	None
Walk Time (s)	12.0	12.0		27.0	9.0	9.0
Flash Dont Walk (s)	0.0	0.0		0.0	12.0	12.0
Pedestrian Calls (#/hr)	0	0		26	10	10
Act Effct Green (s)	17.6	17.6	30.2	27.2	13.7	13.7
Actuated g/C Ratio	0.33	0.33	0.57	0.51	0.26	0.26
v/c Ratio	0.49	0.32	0.32	0.45	0.61	0.39

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Control Delay	23.1	5.6	8.4	11.1	24.0	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	5.6	8.4	11.1	24.0	5.3
LOS	C	A	A	B	C	A
Approach Delay	16.4			10.3	15.9	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 53			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 13.8		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W

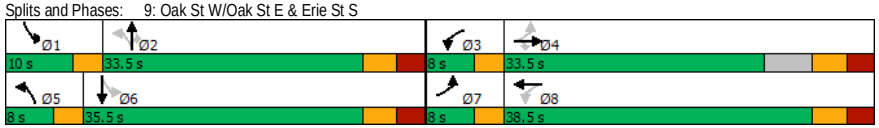


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	226	82	158	282	75	105	300	192	65	391	88
Future Volume (vph)	74	226	82	158	282	75	105	300	192	65	391	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		0.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	1.00	0.99		1.00		0.96	0.99	1.00	
Frt			0.850		0.969				0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3409	0	1583	1667	1417	1770	3243	0
Flt Permitted	0.533			0.499			0.471			0.490		
Satd. Flow (perm)	988	1863	1458	867	3409	0	781	1667	1355	901	3243	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		41				198		32	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			379.6			512.5			322.7	
Travel Time (s)		14.7			27.3			36.9			23.2	
Confl. Peds. (#/hr)	5		4	4		5	9		14	14		9
Confl. Bikes (#/hr)												5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	14%	14%	14%	2%	9%	2%
Adj. Flow (vph)	76	233	85	163	291	77	108	309	198	67	403	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	233	85	163	368	0	108	309	198	67	494	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	4	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	
Minimum Split (s)	8.0	32.5	32.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	
Total Split (s)	8.0	33.5	33.5	8.0	38.5		8.0	33.5	33.5	10.0	35.5	
Total Split (%)	8.9%	37.2%	37.2%	8.9%	42.8%		8.9%	37.2%	37.2%	11.1%	39.4%	
Maximum Green (s)	5.0	27.0	27.0	5.0	32.0		5.0	27.0	27.0	7.0	29.0	
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)		4	4		5			14	14		9	
Act Effct Green (s)	23.9	15.3	15.3	24.6	17.2		35.5	28.1	28.1	38.0	29.4	
Actuated g/C Ratio	0.33	0.21	0.21	0.34	0.24		0.49	0.39	0.39	0.53	0.41	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.59	0.21	0.46	0.43		0.25	0.48	0.31	0.12	0.37	
Control Delay	16.2	32.0	3.8	21.3	23.1		11.4	21.9	4.7	9.8	16.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	16.2	32.0	3.8	21.3	23.1		11.4	21.9	4.7	9.8	16.3	
LOS	B	C	A	C	C		B	C	A	A	B	
Approach Delay		22.9			22.5			14.5			15.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 72.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S



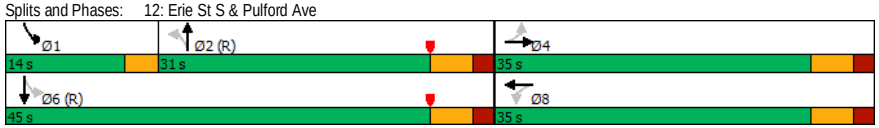
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	31	108	89	55	43	56	430	80	50	470	16
Future Volume (vph)	32	31	108	89	55	43	56	430	80	50	470	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99	1.00	
Frt		0.883			0.934			0.976			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	1625	0	1770	1637	0	1770	3100	0	1641	3262	0
Flt Permitted	0.689			0.663			0.461			0.412		
Satd. Flow (perm)	1135	1625	0	1232	1637	0	855	3100	0	706	3262	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			46			28			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			310.2			138.2			66.1	
Travel Time (s)		28.4			22.3			10.0			4.8	
Confl. Peds. (#/hr)	4		4	4		4	8		12	12		8
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	15%	2%	2%	2%	2%	15%	2%	15%	2%	10%	10%	10%
Adj. Flow (vph)	34	33	115	95	59	46	60	457	85	53	500	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	148	0	95	105	0	60	542	0	53	517	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		11.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		38.8%	38.8%		17.5%	56.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		11.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		3.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	4	4		4	4		12	12			8	
Act Effct Green (s)	15.2	15.2		15.2	15.2		44.4	44.4		55.8	52.8	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.56	0.56		0.70	0.66	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.16	0.37		0.41	0.30		0.13	0.31		0.09	0.24	
Control Delay	25.7	10.2		31.7	17.3		6.6	5.4		6.1	7.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.7	10.2		31.7	17.3		6.6	5.4		6.1	7.0	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		13.1			24.1			5.5			6.9	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 72 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 9.3 Intersection LOS: A
Intersection Capacity Utilization 81.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



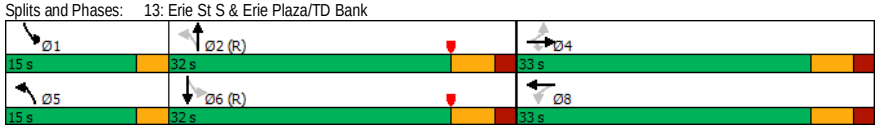
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	12	47	45	12	53	28	475	62	56	574	1
Future Volume (vph)	67	12	47	45	12	53	28	475	62	56	574	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00	0.98		0.99		1.00	1.00		0.99	1.00	
Frt			0.850		0.935			0.983				
Flt Protected		0.959			0.980		0.950			0.950		
Satd. Flow (prot)	0	1662	1583	0	1625	0	1770	3214	0	1656	3312	0
Flt Permitted		0.728			0.848		0.397			0.364		
Satd. Flow (perm)	0	1258	1559	0	1404	0	736	3214	0	630	3312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82		59			19				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.4			147.9			140.3			138.2	
Travel Time (s)		8.9			10.6			10.1			10.0	
Confl. Peds. (#/hr)	4		4	4		4	8		11	11		8
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	74	13	52	50	13	59	31	528	69	62	638	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	87	52	0	122	0	31	597	0	62	639	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%		18.8%	40.0%		18.8%	40.0%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	8	8	8	4	4			11			4	
Act Effct Green (s)		27.0	27.0		27.0		48.8	39.8		49.4	42.8	
Actuated g/C Ratio		0.34	0.34		0.34		0.61	0.50		0.62	0.54	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.21	0.09		0.24		0.05	0.37		0.11	0.36	
Control Delay		20.5	2.4		12.0		4.5	13.1		7.4	14.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		20.5	2.4		12.0		4.5	13.1		7.4	14.0	
LOS		C	A		B		A	B		A	B	
Approach Delay		13.8			12.0			12.7			13.4	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 65 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 13.1 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank



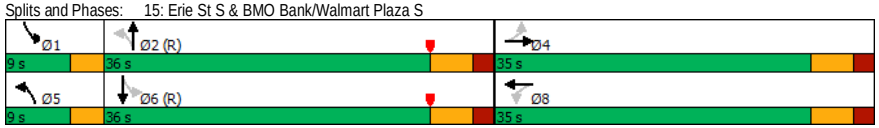
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	2	24	0	68	8	422	48	73	398	15
Future Volume (vph)	9	0	2	24	0	68	8	422	48	73	398	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Frt		0.850			0.850			0.985			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1594	0	1671	1265	0	1597	2811	0	1410	2869	0
Flt Permitted	0.706			0.757			0.478			0.421		
Satd. Flow (perm)	1340	1594	0	1330	1265	0	802	2811	0	623	2869	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		357			341			17			5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		87.5			160.6			85.9			79.3	
Travel Time (s)		6.3			11.6			6.2			5.7	
Confl. Peds. (#/hr)	1		1	1		1	4		4	4		4
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	8%	0%	26%	13%	27%	19%	28%	26%	0%
Adj. Flow (vph)	10	0	2	28	0	79	9	491	56	85	463	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	2	0	28	79	0	9	547	0	85	480	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		9.0	36.0		9.0	36.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		11.3%	45.0%		11.3%	45.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		6.0	30.0		6.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	4	4		1	1			4			1	
Act Effct Green (s)	12.8	12.8		12.8	12.8		57.9	51.2		61.4	57.8	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.72	0.64		0.77	0.72	
v/c Ratio	0.05	0.00		0.13	0.16		0.01	0.30		0.16	0.23	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	25.6	0.0		27.7	0.7		3.4	7.4		10.2	13.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.6	0.0		27.7	0.7		3.4	7.4		10.2	13.6	
LOS	C	A		C	A		A	A		B	B	
Approach Delay		21.3			7.8			7.4			13.1	
Approach LOS		C			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 46 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.30
Intersection Signal Delay: 10.2 Intersection LOS: B
Intersection Capacity Utilization 51.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S

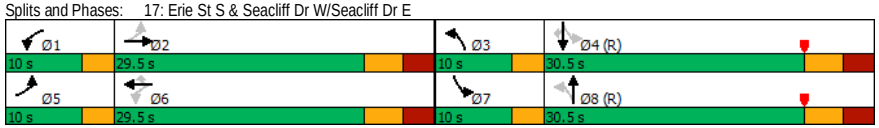


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	163	59	16	155	218	89	167	18	151	168	91
Future Volume (vph)	110	163	59	16	155	218	89	167	18	151	168	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	0.99	1.00		1.00		0.97
Frt		0.960				0.850		0.985				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	1318	0	1253	1387	1214	1271	1474	0	1367	1545	1392
Flt Permitted	0.580			0.601			0.636			0.550		
Satd. Flow (perm)	866	1318	0	786	1387	1196	847	1474	0	789	1545	1355
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23				251		7				130
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			214.3			128.8	
Travel Time (s)		28.1			45.4			15.4			9.3	
Confl. Peds. (#/hr)	3		8	8		3	4		3	3		4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	27%	34%	46%	44%	37%	33%	42%	26%	33%	32%	23%	16%
Adj. Flow (vph)	126	187	68	18	178	251	102	192	21	174	193	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	255	0	18	178	251	102	213	0	174	193	105
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		4
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (%)	12.5%	36.9%		12.5%	36.9%	36.9%	12.5%	38.1%		12.5%	38.1%	38.1%
Maximum Green (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		8			3	3		3			4	4
Act Effct Green (s)	35.9	31.0		34.1	25.0	25.0	34.5	24.0		35.1	26.0	26.0
Actuated g/C Ratio	0.45	0.39		0.43	0.31	0.31	0.43	0.30		0.44	0.32	0.32
v/c Ratio	0.29	0.49		0.05	0.41	0.46	0.25	0.48		0.44	0.38	0.20

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	15.2	21.8		12.5	26.4	6.3	14.3	26.4		22.2	31.7	14.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	15.2	21.8		12.5	26.4	6.3	14.3	26.4		22.2	31.7	14.4
LOS	B	C		B	C	A	B	C		C	C	B
Approach Delay		19.6			14.6			22.5			24.3	
Approach LOS		B			B			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 6 (8%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 20.2		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

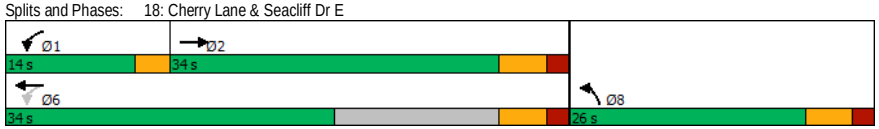


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	257	41	72	288	87	93
Future Volume (vph)	257	41	72	288	87	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	10.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00		0.99	
Frt	0.981				0.930	
Flt Protected			0.950		0.976	
Satd. Flow (prot)	1808	0	1787	1845	1694	0
Flt Permitted			0.505		0.976	
Satd. Flow (perm)	1808	0	946	1845	1693	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	13				71	
Link Speed (k/h)	50			50	50	
Link Distance (m)	630.4			50.9	225.2	
Travel Time (s)	45.4			3.7	16.2	
Confl. Peds. (#/hr)		5	5		1	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	1%	1%	3%	1%	1%
Adj. Flow (vph)	273	44	77	306	93	99
Shared Lane Traffic (%)						
Lane Group Flow (vph)	317	0	77	306	192	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	28.0		8.0	28.0	10.0	
Minimum Split (s)	34.0		11.0	34.0	16.0	
Total Split (s)	34.0		14.0	34.0	26.0	
Total Split (%)	45.9%		18.9%	45.9%	35.1%	
Maximum Green (s)	28.0		11.0	28.0	20.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Walk Time (s)	20.0				7.0	
Flash Dont Walk (s)	8.0				13.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	28.8		38.0	34.9	11.3	
Actuated g/C Ratio	0.49		0.65	0.60	0.19	
v/c Ratio	0.35		0.11	0.28	0.50	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Control Delay	11.8		4.3	6.6	19.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	11.8		4.3	6.6	19.2	
LOS	B		A	A	B	
Approach Delay	11.8			6.1	19.2	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 58.4			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 54.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 18: Cherry Lane & Seacliff Dr E

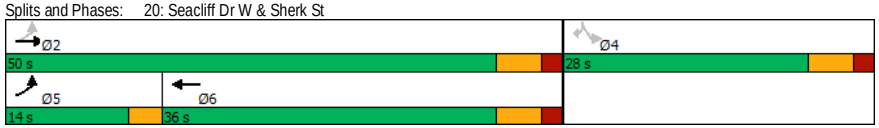


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	121	197	248	137	106	89
Future Volume (vph)	121	197	248	137	106	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			0.0	50.0	0.0
Storage Lanes	1			0	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.99			0.97
Frt			0.952			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1712	1353	0	1308	1380
Flt Permitted	0.422				0.950	
Satd. Flow (perm)	649	1712	1353	0	1308	1346
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			41			99
Link Speed (k/h)		50	50		50	
Link Distance (m)		389.6	390.5		129.4	
Travel Time (s)		28.1	28.1		9.3	
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	11%	32%	32%	38%	17%
Adj. Flow (vph)	134	219	276	152	118	99
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	219	428	0	118	99
Turn Type	pm+pt	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases	2				4	4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0		10.0	10.0
Minimum Split (s)	11.0	50.0	36.0		28.0	28.0
Total Split (s)	14.0	50.0	36.0		28.0	28.0
Total Split (%)	17.9%	64.1%	46.2%		35.9%	35.9%
Maximum Green (s)	11.0	44.0	30.0		22.0	22.0
Yellow Time (s)	3.0	4.0	4.0		4.0	4.0
All-Red Time (s)	0.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Max	Max		None	None
Walk Time (s)		15.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		6	7		3	3
Act Effct Green (s)	50.4	48.6	39.3		13.1	13.1
Actuated g/C Ratio	0.73	0.70	0.57		0.19	0.19

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
v/c Ratio	0.23	0.18	0.54		0.48	0.30
Control Delay	5.7	6.3	17.3		31.4	7.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	5.7	6.3	17.3		31.4	7.9
LOS	A	A	B		C	A
Approach Delay		6.1	17.3		20.7	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78			
Actuated Cycle Length: 69.1			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	138	126	232	175	92
Future Vol, veh/h	36	138	126	232	175	92
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	44	168	154	283	213	112
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.4	15.6	11.9
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	35%	100%	0%	0%
Vol Thru, %	65%	0%	0%	66%
Vol Right, %	0%	0%	100%	34%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	358	36	138	267
LT Vol	126	36	0	0
Through Vol	232	0	0	175
RT Vol	0	0	138	92
Lane Flow Rate	437	44	168	326
Geometry Grp	2	7	7	2
Degree of Util (X)	0.61	0.084	0.264	0.446
Departure Headway (Hd)	5.033	6.859	5.64	4.929
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	720	523	636	733
Service Time	3.043	4.595	3.375	2.941
HCM Lane V/C Ratio	0.607	0.084	0.264	0.445
HCM Control Delay	15.6	10.2	10.4	11.9
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	4.2	0.3	1.1	2.3

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	332	7	42	410	38	6	0	35	13	0	7
Future Vol, veh/h	26	332	7	42	410	38	6	0	35	13	0	7
Conflicting Peds, #/hr	3	0	73	73	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	8	0	0	10	0	0	0	0	0	0	0
Mvmt Flow	34	437	9	55	539	50	8	0	46	17	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	592	0	0	519	0	0	1263	1285	515	1210	1264	568
Stage 1	-	-	-	-	-	-	583	583	-	677	677	-
Stage 2	-	-	-	-	-	-	680	702	-	533	587	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	994	-	-	1057	-	-	148	166	564	161	171	526
Stage 1	-	-	-	-	-	-	502	502	-	446	455	-
Stage 2	-	-	-	-	-	-	444	443	-	534	500	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	991	-	-	992	-	-	127	142	529	137	146	524
Mov Cap-2 Maneuver	-	-	-	-	-	-	127	142	-	137	146	-
Stage 1	-	-	-	-	-	-	455	455	-	429	429	-
Stage 2	-	-	-	-	-	-	412	417	-	471	453	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.8	16.7	27.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	362	991	-	-	992	-	-	185
HCM Lane V/C Ratio	0.149	0.035	-	-	0.056	-	-	0.142
HCM Control Delay (s)	16.7	8.8	-	-	8.8	-	-	27.7
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.2	-	-	0.5

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	384	513	29	17	12
Future Vol, veh/h	23	384	513	29	17	12
Conflicting Peds, #/hr	30	0	0	30	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	68	68	68	68	68	68
Heavy Vehicles, %	0	8	10	0	0	0
Mvmt Flow	34	565	754	43	25	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	827	0	-	0	1157	806
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	813	-	-	-	205	385
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	690	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	792	-	-	-	183	375
Mov Cap-2 Maneuver	-	-	-	-	183	-
Stage 1	-	-	-	-	405	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	24
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	792	-	-	-	232
HCM Lane V/C Ratio	0.043	-	-	-	0.184
HCM Control Delay (s)	9.7	0.3	-	-	24
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	399	462	0	14	30
Future Vol, veh/h	0	399	462	0	14	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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	5	0	0	0
Mvmt Flow	0	434	502	0	15	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	719	251
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	368	755
Stage 1	0	-	-	0	579	-
Stage 2	0	-	-	0	804	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	368	755
Mov Cap-2 Maneuver	-	-	-	-	368	-
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	368	755
HCM Lane V/C Ratio	-	-	0.041	0.043
HCM Control Delay (s)	-	-	15.2	10
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑↑	↱		↑↑
Traffic Vol, veh/h	4	12	545	4	11	556
Future Vol, veh/h	4	12	545	4	11	556
Conflicting Peds, #/hr	0	0	0	7	7	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, %	0	0	2	0	0	2
Mvmt Flow	4	13	592	4	12	604

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	927	305	0	0	603	0
Stage 1	601	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	271	697	-	-	984	-
Stage 1	516	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	264	693	-	-	978	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	493	978	-
HCM Lane V/C Ratio	-	-	0.035	0.012	-
HCM Control Delay (s)	-	-	12.6	8.7	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	117	160	364	141	88	419
Future Vol, veh/h	117	160	364	141	88	419
Conflicting Peds, #/hr	0	2	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	27	26	23	31	15	20
Mvmt Flow	129	176	400	155	97	460

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	908	286	0	0	561	0
Stage 1	484	-	-	-	-	-
Stage 2	424	-	-	-	-	-
Critical Hdwy	7.34	7.42	-	-	4.4	-
Critical Hdwy Stg 1	6.34	-	-	-	-	-
Critical Hdwy Stg 2	6.34	-	-	-	-	-
Follow-up Hdwy	3.77	3.56	-	-	2.35	-
Pot Cap-1 Maneuver	232	644	-	-	922	-
Stage 1	519	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	206	640	-	-	917	-
Mov Cap-2 Maneuver	206	-	-	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.5	0	1.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	206	640	917	-
HCM Lane V/C Ratio	-	-	0.624	0.275	0.105	-
HCM Control Delay (s)	-	-	47.7	12.7	9.4	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	3.6	1.1	0.4	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	0	2	2	0	63	17	474	5	147	480	38
Future Vol, veh/h	28	0	2	2	0	63	17	474	5	147	480	38
Conflicting Peds, #/hr	0	0	1	1	0	0	3	0	4	4	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	25	0	0	50	0	11	24	27	20	9	25	7
Mvmt Flow	32	0	2	2	0	72	19	539	6	167	545	43

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1212	1491	298	1192	1509	277	591	0	0	549	0	0
Stage 1	904	904	-	584	584	-	-	-	-	-	-	-
Stage 2	308	587	-	608	925	-	-	-	-	-	-	-
Critical Hdwy	8	6.5	6.9	8.5	6.5	7.12	4.58	-	-	4.28	-	-
Critical Hdwy Stg 1	7	5.5	-	7.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	5.5	-	7.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4	3.3	4	4	3.41	2.44	-	-	2.29	-	-
Pot Cap-1 Maneuver	114	125	704	97	122	694	844	-	-	970	-	-
Stage 1	256	358	-	362	501	-	-	-	-	-	-	-
Stage 2	617	500	-	349	351	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	87	100	702	82	98	692	842	-	-	967	-	-
Mov Cap-2 Maneuver	87	100	-	82	98	-	-	-	-	-	-	-
Stage 1	250	295	-	353	488	-	-	-	-	-	-	-
Stage 2	541	487	-	288	290	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	65.5	12	0.3	2.1
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	842	-	-	92	82	692	967	-	-
HCM Lane V/C Ratio	0.023	-	-	0.371	0.028	0.103	0.173	-	-
HCM Control Delay (s)	9.4	-	-	65.5	50.2	10.8	9.5	-	-
HCM Lane LOS	A	-	-	F	F	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	0.1	0.3	0.6	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	3	1	473	422	2
Future Vol, veh/h	5	3	1	473	422	2
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	29	23	0
Mvmt Flow	5	3	1	514	459	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	723	235	465	0	-	0
Stage 1	464	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	365	773	1107	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	362	770	1103	-	-	-
Mov Cap-2 Maneuver	468	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	765	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1103	-	549	-	-
HCM Lane V/C Ratio	0.001	-	0.016	-	-
HCM Control Delay (s)	8.3	-	11.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	53	298	309	35	28	53
Future Vol, veh/h	53	298	309	35	28	53
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	60	339	351	40	32	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	392	0	-	0	831	372
Stage 1	-	-	-	-	372	-
Stage 2	-	-	-	-	459	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1172	-	-	-	342	678
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1171	-	-	-	324	677
Mov Cap-2 Maneuver	-	-	-	-	324	-
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1171	-	-	-	492
HCM Lane V/C Ratio	0.051	-	-	-	0.187
HCM Control Delay (s)	8.2	-	-	-	14
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	6	257	1	1	193
Future Vol, veh/h	2	6	257	1	1	193
Conflicting Peds, #/hr	0	0	0	14	14	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, %	0	0	28	0	0	28
Mvmt Flow	2	7	279	1	1	210

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	506	294	0	0	294	0
Stage 1	294	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	530	750	-	-	1279	-
Stage 1	761	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	523	741	-	-	1264	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	827	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	671	1264	-
HCM Lane V/C Ratio	-	-	0.013	0.001	-
HCM Control Delay (s)	-	-	10.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	86	269	25	129	182
Future Vol, veh/h	16	86	269	25	129	182
Conflicting Peds, #/hr	0	0	0	8	8	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	84	84	84	84	84	84
Heavy Vehicles, %	19	23	24	36	22	29
Mvmt Flow	19	102	320	30	154	217

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	868	343	0	0	358	0
Stage 1	343	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.59	6.43	-	-	4.32	-
Critical Hdwy Stg 1	5.59	-	-	-	-	-
Critical Hdwy Stg 2	5.59	-	-	-	-	-
Follow-up Hdwy	3.671	3.507	-	-	2.398	-
Pot Cap-1 Maneuver	302	654	-	-	1098	-
Stage 1	682	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	252	650	-	-	1091	-
Mov Cap-2 Maneuver	252	-	-	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	470	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14	0	3.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	521	1091	-
HCM Lane V/C Ratio	-	-	0.233	0.141	-
HCM Control Delay (s)	-	-	14	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0.5	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	5	353	2	3	310
Future Vol, veh/h	1	5	353	2	3	310
Conflicting Peds, #/hr	0	0	0	6	6	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, %	0	0	24	0	0	1
Mvmt Flow	1	5	384	2	3	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	734	391	0	0	392	0
Stage 1	391	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	390	662	-	-	1178	-
Stage 1	688	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	387	659	-	-	1172	-
Mov Cap-2 Maneuver	387	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	721	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	590	1172	-
HCM Lane V/C Ratio	-	-	0.011	0.003	-
HCM Control Delay (s)	-	-	11.2	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	4	1	8	2	299	1	1	280	15
Future Vol, veh/h	0	0	10	4	1	8	2	299	1	1	280	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	11	4	1	9	2	325	1	1	304	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	312	648	656	330	320	0	0	330	0	0
Stage 1	-	-	-	334	334	-	-	-	-	-	-	-
Stage 2	-	-	-	314	322	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	733	386	388	716	1251	-	-	1241	-	-
Stage 1	0	0	-	684	647	-	-	-	-	-	-	-
Stage 2	0	0	-	701	655	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	733	378	386	714	1251	-	-	1237	-	-
Mov Cap-2 Maneuver	-	-	-	378	386	-	-	-	-	-	-	-
Stage 1	-	-	-	681	644	-	-	-	-	-	-	-
Stage 2	-	-	-	690	654	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	11.9	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1251	-	-	733	533	1237	-	-
HCM Lane V/C Ratio	0.002	-	-	0.015	0.027	0.001	-	-
HCM Control Delay (s)	7.9	0	-	10	11.9	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	9	0	0	5	3	1	340	1	4	295	1
Future Vol, veh/h	3	9	0	0	5	3	1	340	1	4	295	1
Conflicting Peds, #/hr	0	0	6	6	0	0	0	0	4	4	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	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	33	100	0	0	100	100	100	23	100	75	19	0
Mvmt Flow	3	10	0	0	6	3	1	395	1	5	343	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	756	756	350	767	756	400	344	0	0	400	0	0
Stage 1	354	354	-	402	402	-	-	-	-	-	-	-
Stage 2	402	402	-	365	354	-	-	-	-	-	-	-
Critical Hdwy	7.43	7.5	6.2	7.1	7.5	7.2	5.1	-	-	4.85	-	-
Critical Hdwy Stg 1	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4.9	3.3	3.5	4.9	4.2	3.1	-	-	2.875	-	-
Pot Cap-1 Maneuver	289	244	698	322	244	482	824	-	-	853	-	-
Stage 1	604	489	-	629	462	-	-	-	-	-	-	-
Stage 2	567	462	-	658	489	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	280	241	694	307	241	480	824	-	-	850	-	-
Mov Cap-2 Maneuver	280	241	-	307	241	-	-	-	-	-	-	-
Stage 1	603	486	-	626	460	-	-	-	-	-	-	-
Stage 2	555	460	-	636	486	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.3	17.6	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	824	-	-	250	296	850	-	-
HCM Lane V/C Ratio	0.001	-	-	0.056	0.031	0.005	-	-
HCM Control Delay (s)	9.4	0	-	20.3	17.6	9.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	388	7	11	325	52	11	13	11	31	5	14
Future Volume (vph)	9	388	7	11	325	52	11	13	11	31	5	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00	0.97		0.98	
Frt		0.997			0.979				0.850		0.962	
Flt Protected	0.950			0.950				0.977			0.969	
Satd. Flow (prot)	1805	1756	0	1805	1721	0	0	1856	1615	0	1757	0
Flt Permitted	0.520			0.461				0.826			0.793	
Satd. Flow (perm)	986	1756	0	875	1721	0	0	1563	1563	0	1427	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			17				97		15	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	1		2	2		1	4		5	5		4
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	8%	0%	0%	9%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	426	8	12	357	57	12	14	12	34	5	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	434	0	12	414	0	0	26	12	0	54	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	2	2			1		5	5	5	4	4	
Act Effct Green (s)	54.2	54.2		55.7	56.3			8.8	8.8		8.8	
Actuated g/C Ratio	0.78	0.78		0.81	0.81			0.13	0.13		0.13	
v/c Ratio	0.01	0.31		0.01	0.29			0.13	0.04		0.28	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	7.1	6.8		3.5	4.3			27.2	0.3		24.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	7.1	6.8		3.5	4.3			27.2	0.3		24.4	
LOS	A	A		A	A			C	A		C	
Approach Delay		6.8			4.3			18.7			24.4	
Approach LOS		A			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 69.1			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 7.1		Intersection LOS: A	
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W

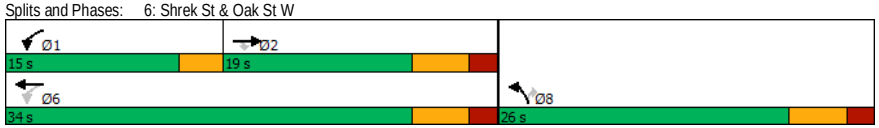


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	300	244	165	270	163	156
Future Volume (vph)	300	244	165	270	163	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98	1.00			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1404	1570	1863	1530	1369
Flt Permitted			0.328		0.950	
Satd. Flow (perm)	1863	1370	541	1863	1530	1341
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		280				179
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)		2	2			7
Confl. Bikes (#/hr)						3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	345	280	190	310	187	179
Shared Lane Traffic (%)						
Lane Group Flow (vph)	345	280	190	310	187	179
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	13.0	13.0	7.0	28.0	20.0	20.0
Minimum Split (s)	19.0	19.0	10.0	34.0	26.0	26.0
Total Split (s)	19.0	19.0	15.0	34.0	26.0	26.0
Total Split (%)	31.7%	31.7%	25.0%	56.7%	43.3%	43.3%
Maximum Green (s)	13.0	13.0	12.0	28.0	20.0	20.0
Yellow Time (s)	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Min	None	None
Walk Time (s)	13.0	13.0		28.0	8.0	8.0
Flash Dont Walk (s)	0.0	0.0		0.0	12.0	12.0
Pedestrian Calls (#/hr)	2	2		1	7	7
Act Effct Green (s)	15.5	15.5	31.0	28.0	20.0	20.0
Actuated g/C Ratio	0.26	0.26	0.52	0.47	0.33	0.33

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.72	0.50	0.43	0.36	0.37	0.32
Control Delay	32.6	6.6	11.3	11.7	17.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	6.6	11.3	11.7	17.8	4.5
LOS	C	A	B	B	B	A
Approach Delay	21.0			11.6	11.3	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 54.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W

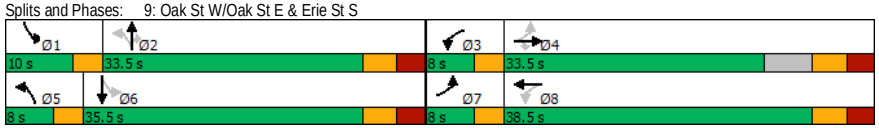


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	249	85	188	218	112	93	381	256	137	469	94
Future Volume (vph)	93	249	85	188	218	112	93	381	256	137	469	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		0.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99		0.99	1.00	0.99		1.00		0.93	0.98	1.00	
Frt			0.850		0.949				0.850		0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3322	0	1597	1681	1429	1770	3250	0
Flt Permitted	0.541			0.440			0.425			0.347		
Satd. Flow (perm)	1001	1863	1462	766	3322	0	712	1681	1328	632	3250	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		112				272		27	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			379.6			512.5			322.7	
Travel Time (s)		14.7			27.3			36.9			23.2	
Confl. Peds. (#/hr)	6		1	1		6	9		30	30		9
Confl. Bikes (#/hr)						2						6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	13%	13%	13%	2%	9%	2%
Adj. Flow (vph)	99	265	90	200	232	119	99	405	272	146	499	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	265	90	200	351	0	99	405	272	146	599	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	4	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	
Minimum Split (s)	8.0	32.5	32.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	
Total Split (s)	8.0	33.5	33.5	8.0	38.5		8.0	33.5	33.5	10.0	35.5	
Total Split (%)	8.9%	37.2%	37.2%	8.9%	42.8%		8.9%	37.2%	37.2%	11.1%	39.4%	
Maximum Green (s)	5.0	27.0	27.0	5.0	32.0		5.0	27.0	27.0	7.0	29.0	
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)		1	1		6			20	20		9	
Act Effct Green (s)	24.8	16.2	16.2	25.5	18.0		35.7	27.2	27.2	39.8	30.8	
Actuated g/C Ratio	0.33	0.22	0.22	0.34	0.24		0.48	0.37	0.37	0.53	0.41	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.26	0.65	0.22	0.62	0.39		0.25	0.66	0.41	0.33	0.44	
Control Delay	16.8	34.2	4.3	27.0	17.4		11.7	27.7	5.0	11.8	17.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	16.8	34.2	4.3	27.0	17.4		11.7	27.7	5.0	11.8	17.8	
LOS	B	C	A	C	B		B	C	A	B	B	
Approach Delay		24.5			20.9			17.7			16.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74.4			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S



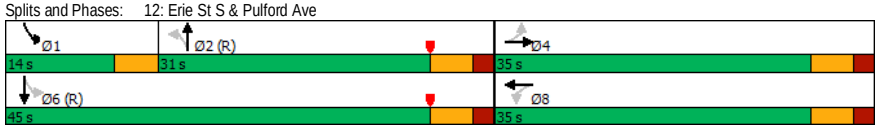
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	44	136	106	58	54	85	590	78	61	536	22
Future Volume (vph)	45	44	136	106	58	54	85	590	78	61	536	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99	1.00	
Frt		0.887			0.928			0.983			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1612	1635	0	1770	1638	0	1770	3181	0	1656	3288	0
Flt Permitted	0.681			0.578			0.431			0.312		
Satd. Flow (perm)	1152	1635	0	1075	1638	0	800	3181	0	538	3288	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		143			57			19			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			310.2			138.2			66.1	
Travel Time (s)		28.4			22.3			10.0			4.8	
Confl. Peds. (#/hr)	4		2	2		4	7		23	23		7
Confl. Bikes (#/hr)						1						4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	12%	2%	2%	2%	2%	12%	2%	12%	2%	9%	9%	9%
Adj. Flow (vph)	47	46	143	112	61	57	89	621	82	64	564	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	189	0	112	118	0	89	703	0	64	587	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		10.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		38.8%	38.8%		17.5%	56.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		10.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	2	2		4	4		16	16			7	
Act Effct Green (s)	15.9	15.9		15.9	15.9		40.9	40.9		54.1	52.1	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.51	0.51		0.68	0.65	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.21	0.43		0.53	0.32		0.22	0.43		0.13	0.27	
Control Delay	26.1	10.4		36.1	15.8		15.6	12.8		6.9	7.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.1	10.4		36.1	15.8		15.6	12.8		6.9	7.4	
LOS	C	B		D	B		B	B		A	A	
Approach Delay		13.5			25.7			13.1			7.4	
Approach LOS		B			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 2 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



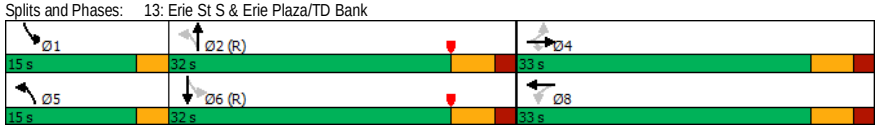
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	14	40	48	9	45	45	616	60	54	687	1
Future Volume (vph)	79	14	40	48	9	45	45	616	60	54	687	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00	0.99		0.99		1.00	1.00		0.99	1.00	
Frt			0.850		0.940			0.987				
Flt Protected		0.959			0.977		0.950			0.950		
Satd. Flow (prot)	0	1661	1583	0	1635	0	1770	3219	0	1656	3312	0
Flt Permitted		0.729			0.828		0.325			0.331		
Satd. Flow (perm)	0	1260	1562	0	1385	0	604	3219	0	572	3312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82		46			14				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.4			147.9			140.3			138.2	
Travel Time (s)		8.9			10.6			10.1			10.0	
Confl. Peds. (#/hr)	3		2	2		3	6		19	19		6
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	81	14	41	49	9	46	46	635	62	56	708	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	41	0	104	0	46	697	0	56	709	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%		18.8%	40.0%		18.8%	40.0%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	2	2	2	3	3			15			6	
Act Effct Green (s)		27.0	27.0		27.0		48.8	39.8		48.8	39.8	
Actuated g/C Ratio		0.34	0.34		0.34		0.61	0.50		0.61	0.50	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.22	0.07		0.21		0.08	0.43		0.11	0.43	
Control Delay		20.8	1.4		12.7		10.8	19.7		7.6	18.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		20.8	1.4		12.7		10.8	19.7		7.6	18.4	
LOS		C	A		B		B	B		A	B	
Approach Delay		14.9			12.7			19.2			17.6	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 4 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 17.7 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank



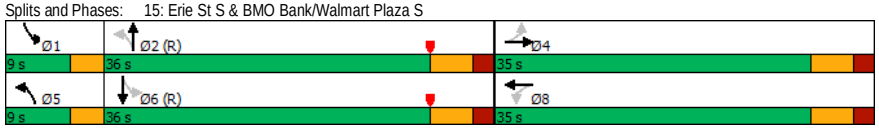
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	2	14	111	1	146	5	441	95	52	532	10
Future Volume (vph)	10	2	14	111	1	146	5	441	95	52	532	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.98		0.99	0.99		0.99	1.00	
Frt		0.868			0.851			0.973			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1533	0	1556	1398	0	1805	2981	0	1626	3025	0
Flt Permitted	0.656			0.746			0.440			0.411		
Satd. Flow (perm)	1240	1533	0	1218	1398	0	831	2981	0	698	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			152			37			3	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		87.5			160.6			85.9			79.3	
Travel Time (s)		6.3			11.6			6.2			5.7	
Confl. Peds. (#/hr)	6		3	3		6	10		12	12		10
Confl. Bikes (#/hr)									3			2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	7%	16%	100%	13%	0%	17%	17%	11%	19%	14%
Adj. Flow (vph)	10	2	15	116	1	152	5	459	99	54	554	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	17	0	116	153	0	5	558	0	54	564	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		9.0	36.0		9.0	36.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		11.3%	45.0%		11.3%	45.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		6.0	30.0		6.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	3	3		6	6			12			10	
Act Effct Green (s)	14.6	14.6		14.6	14.6		54.0	47.4		56.2	51.6	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.68	0.59		0.70	0.64	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.06		0.52	0.40		0.01	0.31		0.10	0.29	
Control Delay	23.7	12.5		36.8	7.8		7.4	11.2		2.0	3.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.7	12.5		36.8	7.8		7.4	11.2		2.0	3.8	
LOS	C	B		D	A		A	B		A	A	
Approach Delay		16.6			20.3			11.1			3.6	
Approach LOS		B			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 14 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 9.8 Intersection LOS: A
Intersection Capacity Utilization 56.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S



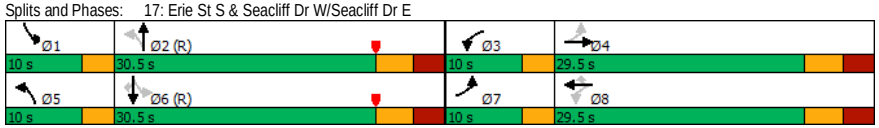
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	247	80	27	247	258	100	151	38	263	180	211
Future Volume (vph)	136	247	80	27	247	258	100	151	38	263	180	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		1.00		0.98	0.99	0.99		0.99		0.96
Frt		0.963				0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1412	0	1357	1508	1417	1456	1550	0	1467	1667	1346
Flt Permitted	0.477			0.530			0.639			0.580		
Satd. Flow (perm)	792	1412	0	754	1508	1390	967	1550	0	886	1667	1295
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				269		16				220
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			214.3			128.8	
Travel Time (s)		28.1			45.4			15.4			9.3	
Confl. Peds. (#/hr)	6		4	4		6	10		9	9		10
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	14%	30%	25%	33%	26%	14%	24%	16%	26%	23%	14%	20%
Adj. Flow (vph)	142	257	83	28	257	269	104	157	40	274	188	220
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	340	0	28	257	269	104	197	0	274	188	220
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (%)	12.5%	36.9%		12.5%	36.9%	36.9%	12.5%	38.1%		12.5%	38.1%	38.1%
Maximum Green (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		4			6	6		9			10	10
Act Effct Green (s)	35.3	29.0		33.5	23.0	23.0	34.5	24.0		35.1	26.0	26.0
Actuated g/C Ratio	0.44	0.36		0.42	0.29	0.29	0.43	0.30		0.44	0.32	0.32

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.34	0.65		0.08	0.59	0.46	0.23	0.41		0.62	0.35	0.39
Control Delay	15.7	29.3		12.8	31.2	5.9	13.7	23.7		31.0	31.5	15.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	15.7	29.3		12.8	31.2	5.9	13.7	23.7		31.0	31.5	15.9
LOS	B	C		B	C	A	B	C		C	C	B
Approach Delay		25.3			18.0			20.2			26.3	
Approach LOS		C			B			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 22.9 Intersection LOS: C
Intersection Capacity Utilization 78.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

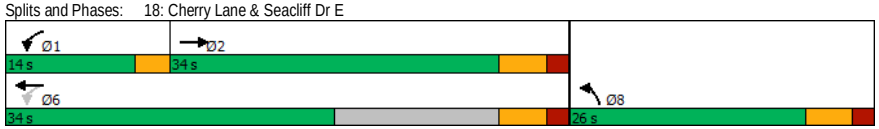


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	385	99	141	337	101	116
Future Volume (vph)	385	99	141	337	101	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	10.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00		0.99	
Frt	0.972				0.928	
Flt Protected			0.950		0.977	
Satd. Flow (prot)	1792	0	1787	1845	1692	0
Flt Permitted			0.314		0.977	
Satd. Flow (perm)	1792	0	590	1845	1689	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	20				77	
Link Speed (k/h)	50			50	50	
Link Distance (m)	630.4			50.9	225.2	
Travel Time (s)	45.4			3.7	16.2	
Confl. Peds. (#/hr)		1	1		2	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	1%	1%	3%	1%	1%
Adj. Flow (vph)	410	105	150	359	107	123
Shared Lane Traffic (%)						
Lane Group Flow (vph)	515	0	150	359	230	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	28.0		8.0	28.0	10.0	
Minimum Split (s)	34.0		11.0	34.0	16.0	
Total Split (s)	34.0		14.0	34.0	26.0	
Total Split (%)	45.9%		18.9%	45.9%	35.1%	
Maximum Green (s)	28.0		11.0	28.0	20.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Walk Time (s)	20.0				7.0	
Flash Dont Walk (s)	8.0				13.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	28.4		40.2	37.2	12.4	
Actuated g/C Ratio	0.46		0.65	0.60	0.20	
v/c Ratio	0.62		0.27	0.32	0.57	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Control Delay	17.8		5.8	7.3	21.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	17.8		5.8	7.3	21.6	
LOS	B		A	A	C	
Approach Delay	17.8			6.9	21.6	
Approach LOS	B			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 61.7			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 60.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 18: Cherry Lane & Seacliff Dr E

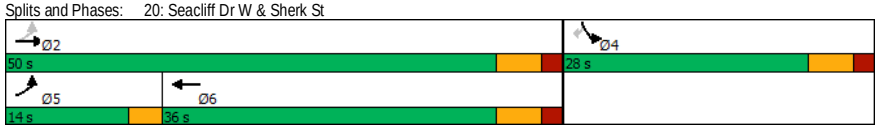


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	138	321	459	148	162	123
Future Volume (vph)	138	321	459	148	162	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			0.0	50.0	0.0
Storage Lanes	1			0	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99		0.99	0.96
Frt			0.967			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1792	1471	0	1517	1392
Flt Permitted	0.179				0.950	
Satd. Flow (perm)	277	1792	1471	0	1501	1340
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			24			137
Link Speed (k/h)		50	50		50	
Link Distance (m)		389.6	390.5		129.4	
Travel Time (s)		28.1	28.1		9.3	
Confl. Peds. (#/hr)					6	8
Confl. Bikes (#/hr)				1		3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	6%	24%	25%	19%	16%
Adj. Flow (vph)	153	357	510	164	180	137
Shared Lane Traffic (%)						
Lane Group Flow (vph)	153	357	674	0	180	137
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2					4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0		10.0	10.0
Minimum Split (s)	14.0	50.0	36.0		28.0	28.0
Total Split (s)	14.0	50.0	36.0		28.0	28.0
Total Split (%)	17.9%	64.1%	46.2%		35.9%	35.9%
Maximum Green (s)	11.0	44.0	30.0		22.0	22.0
Yellow Time (s)	3.0	4.0	4.0		4.0	4.0
All-Red Time (s)	0.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		None	None
Walk Time (s)		7.0	15.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		9	0		8	8
Act Effct Green (s)	43.4	40.3	30.6		14.1	14.1
Actuated g/C Ratio	0.65	0.61	0.46		0.21	0.21

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
v/c Ratio	0.44	0.33	0.98		0.56	0.35
Control Delay	9.3	8.1	52.9		31.7	7.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	9.3	8.1	52.9		31.7	7.4
LOS	A	A	D		C	A
Approach Delay		8.4	52.9		21.2	
Approach LOS		A	D		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78			
Actuated Cycle Length: 66.6			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 31.1		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	138	109	274	300	41
Future Vol, veh/h	50	138	109	274	300	41
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	53	145	115	288	316	43
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	10.1	14	12.8
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	28%	100%	0%	0%
Vol Thru, %	72%	0%	0%	88%
Vol Right, %	0%	0%	100%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	383	50	138	341
LT Vol	109	50	0	0
Through Vol	274	0	0	300
RT Vol	0	0	138	41
Lane Flow Rate	403	53	145	359
Geometry Grp	2	7	7	2
Degree of Util (X)	0.551	0.1	0.228	0.496
Departure Headway (Hd)	5.033	6.86	5.641	4.974
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	722	524	639	729
Service Time	3.033	4.576	3.356	2.974
HCM Lane V/C Ratio	0.558	0.101	0.227	0.492
HCM Control Delay	14	10.3	10	12.8
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	3.4	0.3	0.9	2.8

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	422	2	4	365	6	12	0	13	14	0	11
Future Vol, veh/h	5	422	2	4	365	6	12	0	13	14	0	11
Conflicting Peds, #/hr	7	0	8	8	0	7	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	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	8	0	0	9	0	0	0	0	0	0	0
Mvmt Flow	5	444	2	4	384	6	13	0	14	15	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	454	0	0	864	868	453	864	866	394
Stage 1	-	-	-	-	-	-	463	463	-	402	402	-
Stage 2	-	-	-	-	-	-	401	405	-	462	464	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1173	-	-	1117	-	-	277	293	611	277	293	659
Stage 1	-	-	-	-	-	-	583	568	-	629	604	-
Stage 2	-	-	-	-	-	-	630	602	-	584	567	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	1109	-	-	269	287	607	268	287	655
Mov Cap-2 Maneuver	-	-	-	-	-	-	269	287	-	268	287	-
Stage 1	-	-	-	-	-	-	577	562	-	623	598	-
Stage 2	-	-	-	-	-	-	617	596	-	568	561	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	15.2	15.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	379	1166	-	-	1109	-	-	362
HCM Lane V/C Ratio	0.069	0.005	-	-	0.004	-	-	0.073
HCM Control Delay (s)	15.2	8.1	-	-	8.3	-	-	15.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	522	388	45	22	9
Future Vol, veh/h	7	522	388	45	22	9
Conflicting Peds, #/hr	4	0	0	4	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	89	89	89	89	89	89
Heavy Vehicles, %	0	8	9	0	0	0
Mvmt Flow	8	587	436	51	25	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	491	0	-	0	776	466
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	310	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1083	-	-	-	353	601
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	723	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1079	-	-	-	347	599
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	721	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1079	-	-	-	395
HCM Lane V/C Ratio	0.007	-	-	-	0.088
HCM Control Delay (s)	8.4	0	-	-	15
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	456	384	0	27	51
Future Vol, veh/h	0	456	384	0	27	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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	15	0	0	0
Mvmt Flow	0	496	417	0	29	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	665	209
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	248	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	398	803
Stage 1	0	-	-	0	639	-
Stage 2	0	-	-	0	776	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	398	803
Mov Cap-2 Maneuver	-	-	-	-	398	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	776	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	398	803
HCM Lane V/C Ratio	-	-	0.074	0.069
HCM Control Delay (s)	-	-	14.8	9.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑↑	↱		↑↑
Traffic Vol, veh/h	11	8	735	17	13	675
Future Vol, veh/h	11	8	735	17	13	675
Conflicting Peds, #/hr	1	3	0	29	29	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, %	0	0	16	0	0	11
Mvmt Flow	12	9	799	18	14	734

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1233	441	0	0	846	0
Stage 1	837	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	172	570	-	-	800	-
Stage 1	390	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	163	555	-	-	780	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	380	-	-	-	-	-
Stage 2	635	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	232	780	-
HCM Lane V/C Ratio	-	-	0.089	0.018	-
HCM Control Delay (s)	-	-	22	9.7	0.1
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	155	593	94	96	574
Future Vol, veh/h	43	155	593	94	96	574
Conflicting Peds, #/hr	0	3	0	16	16	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	17	16	13	9	11
Mvmt Flow	47	170	652	103	105	631

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1246	397	0	0	771	0
Stage 1	720	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Critical Hdwy	7.04	7.24	-	-	4.28	-
Critical Hdwy Stg 1	6.04	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.62	3.47	-	-	2.29	-
Pot Cap-1 Maneuver	153	562	-	-	795	-
Stage 1	418	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	131	553	-	-	784	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	412	-	-	-	-	-
Stage 2	459	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	131	553	784	-
HCM Lane V/C Ratio	-	-	0.361	0.308	0.135	-
HCM Control Delay (s)	-	-	47.2	14.4	10.3	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	1.5	1.3	0.5	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	7	4	1	144	18	568	11	180	581	14
Future Vol, veh/h	9	0	7	4	1	144	18	568	11	180	581	14
Conflicting Peds, #/hr	3	0	0	0	0	3	8	0	12	12	0	8
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	14	25	0	14	11	15	18	12	18	0
Mvmt Flow	9	0	7	4	1	152	19	598	12	189	612	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1347	1666	322	1338	1667	320	635	0	0	622	0	0
Stage 1	1006	1006	-	654	654	-	-	-	-	-	-	-
Stage 2	341	660	-	684	1013	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7.18	8	6.5	7.18	4.32	-	-	4.34	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.44	3.75	4	3.44	2.31	-	-	2.32	-	-
Pot Cap-1 Maneuver	111	98	640	91	97	642	886	-	-	890	-	-
Stage 1	262	321	-	371	466	-	-	-	-	-	-	-
Stage 2	653	463	-	355	319	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	68	74	636	73	73	634	880	-	-	881	-	-
Mov Cap-2 Maneuver	68	74	-	73	73	-	-	-	-	-	-	-
Stage 1	255	250	-	359	451	-	-	-	-	-	-	-
Stage 2	484	448	-	276	249	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42.8	14	0.3	2.4
HCM LOS	E	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	880	-	-	112	73	634	881	-	-
HCM Lane V/C Ratio	0.022	-	-	0.15	0.072	0.239	0.215	-	-
HCM Control Delay (s)	9.2	-	-	42.8	58.1	12.5	10.2	-	-
HCM Lane LOS	A	-	-	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.2	0.9	0.8	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	1	539	654	3
Future Vol, veh/h	2	3	1	539	654	3
Conflicting Peds, #/hr	0	0	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	17	19	0
Mvmt Flow	2	3	1	586	711	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1018	367	724	0	-	0
Stage 1	723	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	237	636	888	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	233	631	880	-	-	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	443	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	880	-	475	-	-
HCM Lane V/C Ratio	0.001	-	0.011	-	-
HCM Control Delay (s)	9.1	-	12.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	85	416	393	35	24	85
Future Vol, veh/h	85	416	393	35	24	85
Conflicting Peds, #/hr	0	0	0	0	2	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	97	473	447	40	27	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	487	0	-	0	1136	468
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	669	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1081	-	-	-	225	599
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	513	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1081	-	-	-	205	598
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	513	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1081	-	-	-	421
HCM Lane V/C Ratio	0.089	-	-	-	0.294
HCM Control Delay (s)	8.7	-	-	-	17.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.2

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	284	2	7	283
Future Vol, veh/h	2	4	284	2	7	283
Conflicting Peds, #/hr	0	0	0	6	6	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, %	0	0	24	0	0	23
Mvmt Flow	2	4	309	2	8	308

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	640	316	0	0	317	0
Stage 1	316	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	443	729	-	-	1255	-
Stage 1	744	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	437	725	-	-	1249	-
Mov Cap-2 Maneuver	437	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	594	1249	-
HCM Lane V/C Ratio	-	-	0.011	0.006	-
HCM Control Delay (s)	-	-	11.1	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	120	264	23	137	301
Future Vol, veh/h	42	120	264	23	137	301
Conflicting Peds, #/hr	0	0	0	1	1	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	94	94	94	94	94	94
Heavy Vehicles, %	17	19	19	22	21	24
Mvmt Flow	45	128	281	24	146	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	906	294	0	0	306	0
Stage 1	294	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Critical Hdwy	6.57	6.39	-	-	4.31	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.471	-	-	2.389	-
Pot Cap-1 Maneuver	288	707	-	-	1154	-
Stage 1	723	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	243	706	-	-	1153	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	2.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	473	1153	-
HCM Lane V/C Ratio	-	-	0.364	0.126	-
HCM Control Delay (s)	-	-	16.9	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.6	0.4	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	381	3	2	436
Future Vol, veh/h	2	2	381	3	2	436
Conflicting Peds, #/hr	0	0	0	1	1	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, %	0	0	19	0	0	21
Mvmt Flow	2	2	414	3	2	474

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	895	417	0	0	418	0
Stage 1	417	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	314	640	-	-	1152	-
Stage 1	669	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	313	639	-	-	1151	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	420	1151	-
HCM Lane V/C Ratio	-	-	0.01	0.002	-
HCM Control Delay (s)	-	-	13.7	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	37	2	2	2	3	337	4	6	336	30
Future Vol, veh/h	0	0	37	2	2	2	3	337	4	6	336	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	40	2	2	2	3	366	4	7	365	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	382	772	788	370	398	0	0	372	0	0
Stage 1	-	-	-	376	376	-	-	-	-	-	-	-
Stage 2	-	-	-	396	412	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	670	319	326	680	1172	-	-	1198	-	-
Stage 1	0	0	-	649	620	-	-	-	-	-	-	-
Stage 2	0	0	-	633	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	670	297	322	679	1172	-	-	1196	-	-
Mov Cap-2 Maneuver	-	-	-	297	322	-	-	-	-	-	-	-
Stage 1	-	-	-	646	617	-	-	-	-	-	-	-
Stage 2	-	-	-	590	593	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	14.7	0.1	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1172	-	-	670	378	1196	-	-
HCM Lane V/C Ratio	0.003	-	-	0.06	0.017	0.005	-	-
HCM Control Delay (s)	8.1	0	-	10.7	14.7	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	8	1	2	2	11	5	307	0	1	401	6
Future Vol, veh/h	1	8	1	2	2	11	5	307	0	1	401	6
Conflicting Peds, #/hr	0	0	14	14	0	0	1	0	2	2	0	1
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	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	100	100	100	100	100	89	60	19	0	0	19	60
Mvmt Flow	1	9	1	2	2	12	5	330	0	1	431	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	784	779	449	797	782	332	438	0	0	332	0	0
Stage 1	437	437	-	342	342	-	-	-	-	-	-	-
Stage 2	347	342	-	455	440	-	-	-	-	-	-	-
Critical Hdwy	8.1	7.5	7.2	8.1	7.5	7.09	4.7	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4.9	4.2	4.4	4.9	4.101	2.74	-	-	2.2	-	-
Pot Cap-1 Maneuver	218	235	449	213	234	548	872	-	-	1239	-	-
Stage 1	446	443	-	510	496	-	-	-	-	-	-	-
Stage 2	506	496	-	435	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	210	232	443	202	231	547	871	-	-	1237	-	-
Mov Cap-2 Maneuver	210	232	-	202	231	-	-	-	-	-	-	-
Stage 1	442	442	-	505	492	-	-	-	-	-	-	-
Stage 2	489	492	-	420	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.6	14.7	0.1	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	871	-	-	241	388	1237	-	-
HCM Lane V/C Ratio	0.006	-	-	0.045	0.042	0.001	-	-
HCM Control Delay (s)	9.2	0	-	20.6	14.7	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

FUTURE CONDITIONS – DO NOTHING

McINTOSH PERRY

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	422	28	15	438	120	23	77	10	56	30	98
Future Volume (vph)	130	422	28	15	438	120	23	77	10	56	30	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00			0.96			0.99	0.97		0.94	
Frt		0.991			0.968				0.850		0.928	
Flt Protected	0.950			0.950				0.989			0.985	
Satd. Flow (prot)	1805	1745	0	1805	1633	0	0	1879	1615	0	1628	0
Flt Permitted	0.231			0.223				0.808			0.840	
Satd. Flow (perm)	431	1745	0	424	1633	0	0	1518	1567	0	1385	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			30				97		72	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	35		14	14		65	41		4	4		41
Confl. Bikes (#/hr)			2			2						
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Heavy Vehicles (%)	0%	8%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	203	659	44	23	684	188	36	120	16	88	47	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	703	0	23	872	0	0	156	16	0	288	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	12	12			28		4	4	4	34	34	
Act Effct Green (s)	41.1	41.1		47.2	45.2			15.4	15.4		15.4	
Actuated g/C Ratio	0.57	0.57		0.65	0.62			0.21	0.21		0.21	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.83	0.71		0.06	0.85			0.48	0.04		0.82	
Control Delay	50.8	20.7		6.2	22.5			29.9	0.2		39.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	50.8	20.7		6.2	22.5			29.9	0.2		39.7	
LOS	D	C		A	C			C	A		D	
Approach Delay		27.4			22.0			27.2			39.7	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 72.6			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 26.9		Intersection LOS: C	
Intersection Capacity Utilization 90.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W

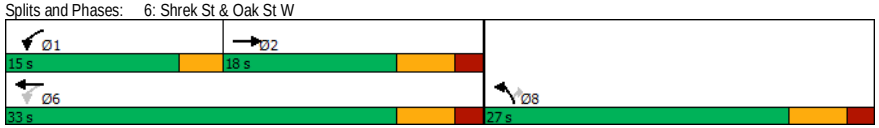


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	314	198	216	442	269	240
Future Volume (vph)	314	198	216	442	269	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00		1.00	0.98
Frt	0.942					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3134	0	1570	1863	1530	1369
Flt Permitted			0.260		0.950	
Satd. Flow (perm)	3134	0	429	1863	1525	1337
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	206					296
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)		5	2		2	12
Confl. Bikes (#/hr)		2				2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	388	244	267	546	332	296
Shared Lane Traffic (%)						
Lane Group Flow (vph)	632	0	267	546	332	296
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		7.0	27.0	9.0	9.0
Minimum Split (s)	18.0		10.0	33.0	27.0	27.0
Total Split (s)	18.0		15.0	33.0	27.0	27.0
Total Split (%)	30.0%		25.0%	55.0%	45.0%	45.0%
Maximum Green (s)	12.0		12.0	27.0	21.0	21.0
Yellow Time (s)	4.0		3.0	4.0	4.0	4.0
All-Red Time (s)	2.0		0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		3.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		None	Min	None	None
Walk Time (s)	12.0			27.0	9.0	9.0
Flash Dont Walk (s)	0.0			0.0	12.0	12.0
Pedestrian Calls (#/hr)	5			35	12	12
Act Effct Green (s)	14.1		30.2	27.2	16.2	16.2
Actuated g/C Ratio	0.25		0.54	0.49	0.29	0.29

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.67		0.61	0.60	0.74	0.49
Control Delay	18.5		14.4	14.7	28.4	5.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	18.5		14.4	14.7	28.4	5.3
LOS	B		B	B	C	A
Approach Delay	18.5			14.6	17.5	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W

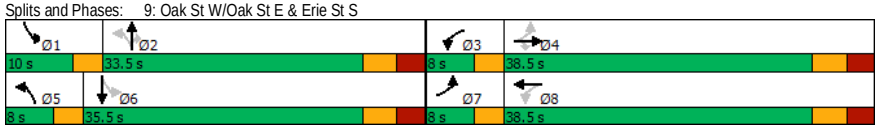


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	311	104	193	385	91	128	394	234	79	487	124
Future Volume (vph)	118	311	104	193	385	91	128	394	234	79	487	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		0.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99	0.99		1.00		0.95	0.99	0.99	
Frt			0.850		0.971				0.850		0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3412	0	1583	1667	1417	1770	3236	0
Flt Permitted	0.421			0.358			0.358			0.384		
Satd. Flow (perm)	778	1863	1448	621	3412	0	594	1667	1344	707	3236	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		36				241		37	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			379.6			512.5			322.7	
Travel Time (s)		14.7			27.3			36.9			23.2	
Confl. Peds. (#/hr)	9		9	9		9	12		17	17		12
Confl. Bikes (#/hr)			2			2			2			7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	14%	14%	14%	2%	9%	2%
Adj. Flow (vph)	122	321	107	199	397	94	132	406	241	81	502	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	321	107	199	491	0	132	406	241	81	630	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	4	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	
Minimum Split (s)	8.0	37.5	37.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	
Total Split (s)	8.0	38.5	38.5	8.0	38.5		8.0	33.5	33.5	10.0	35.5	
Total Split (%)	8.9%	42.8%	42.8%	8.9%	42.8%		8.9%	37.2%	37.2%	11.1%	39.4%	
Maximum Green (s)	5.0	32.0	32.0	5.0	32.0		5.0	27.0	27.0	7.0	29.0	
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)		9	9		9			16	16		12	
Act Effct Green (s)	26.7	18.2	18.2	27.4	20.0		36.8	29.4	29.4	39.2	29.1	
Actuated g/C Ratio	0.35	0.24	0.24	0.36	0.26		0.48	0.38	0.38	0.51	0.38	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.36	0.72	0.25	0.69	0.54		0.38	0.63	0.36	0.18	0.50	
Control Delay	18.3	36.6	5.8	31.0	25.0		14.5	27.3	4.8	11.2	19.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	18.3	36.6	5.8	31.0	25.0		14.5	27.3	4.8	11.2	19.5	
LOS	B	D	A	C	C		B	C	A	B	B	
Approach Delay		26.5			26.7			18.2			18.5	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 76.4			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 22.1		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S



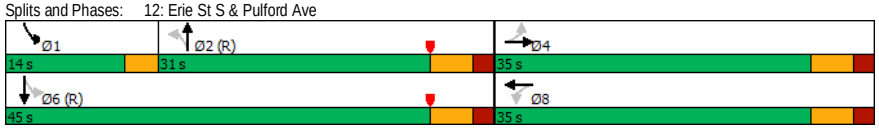
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Future Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99	1.00	
Frt		0.885			0.936			0.977			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	1629	0	1770	1642	0	1770	3099	0	1641	3254	0
Flt Permitted	0.675			0.591			0.406			0.333		
Satd. Flow (perm)	1112	1629	0	1098	1642	0	753	3099	0	571	3254	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		140			53			27			8	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			310.2			138.2			66.1	
Travel Time (s)		28.4			22.3			10.0			4.8	
Confl. Peds. (#/hr)	4		4	4		4	11		15	15		11
Confl. Bikes (#/hr)									2			6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	15%	2%	2%	2%	2%	15%	2%	15%	2%	10%	10%	10%
Adj. Flow (vph)	57	43	140	115	73	55	72	571	104	65	618	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	183	0	115	128	0	72	675	0	65	646	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		11.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		38.8%	38.8%		17.5%	56.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		11.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		3.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	4	4		4	4		14	14			11	
Act Effct Green (s)	15.9	15.9		15.9	15.9		40.9	40.9		55.1	52.1	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.51	0.51		0.69	0.65	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.26	0.42		0.53	0.35		0.19	0.42		0.12	0.30	
Control Delay	27.3	10.2		35.8	17.6		7.9	6.7		6.5	7.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.3	10.2		35.8	17.6		7.9	6.7		6.5	7.7	
LOS	C	B		D	B		A	A		A	A	
Approach Delay		14.3			26.2			6.8			7.6	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 72 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 10.4 Intersection LOS: B
Intersection Capacity Utilization 82.3% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



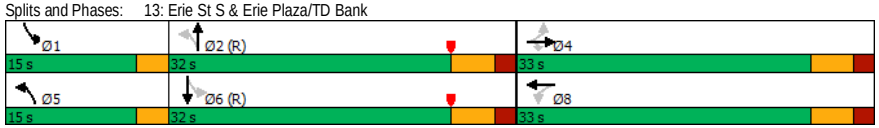
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	15	57	55	15	65	34	592	76	68	708	1
Future Volume (vph)	82	15	57	55	15	65	34	592	76	68	708	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00	0.98		0.99		1.00	1.00		0.99	1.00	
Frt			0.850		0.935			0.983				
Flt Protected		0.960			0.980		0.950			0.950		
Satd. Flow (prot)	0	1664	1583	0	1625	0	1770	3211	0	1656	3312	0
Flt Permitted		0.679			0.833		0.304			0.276		
Satd. Flow (perm)	0	1175	1559	0	1380	0	564	3211	0	478	3312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82		63			18				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.4			147.9			140.3			138.2	
Travel Time (s)		8.9			10.6			10.1			10.0	
Confl. Peds. (#/hr)	4		4	4		4	11		14	14		11
Confl. Bikes (#/hr)									2			6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	91	17	63	61	17	72	38	658	84	76	787	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	63	0	150	0	38	742	0	76	788	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%		18.8%	40.0%		18.8%	40.0%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	4	4	4	4	4			13			11	
Act Effct Green (s)		27.0	27.0		27.0		48.2	36.8		48.8	39.8	
Actuated g/C Ratio		0.34	0.34		0.34		0.60	0.46		0.61	0.50	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.27	0.11		0.30		0.07	0.50		0.16	0.48	
Control Delay		21.7	3.6		13.4		4.3	16.0		7.6	17.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		21.7	3.6		13.4		4.3	16.0		7.6	17.2	
LOS		C	A		B		A	B		A	B	
Approach Delay		15.1			13.4			15.4			16.4	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 65 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank



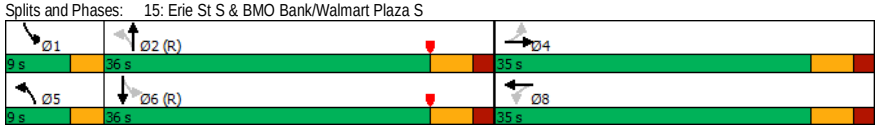
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	2	29	0	83	10	527	59	89	493	18
Future Volume (vph)	11	0	2	29	0	83	10	527	59	89	493	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Frt		0.850			0.850			0.985			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1594	0	1671	1261	0	1597	2809	0	1410	2869	0
Flt Permitted	0.694			0.757			0.428			0.354		
Satd. Flow (perm)	1314	1594	0	1330	1261	0	717	2809	0	524	2869	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		297			281			17			5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		87.5			160.6			85.9			79.3	
Travel Time (s)		6.3			11.6			6.2			5.7	
Confl. Peds. (#/hr)	4		1	1		4	7		7	7		7
Confl. Bikes (#/hr)									2			2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	8%	0%	26%	13%	27%	19%	28%	26%	0%
Adj. Flow (vph)	13	0	2	34	0	97	12	613	69	103	573	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	2	0	34	97	0	12	682	0	103	594	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		9.0	36.0		9.0	36.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		11.3%	45.0%		11.3%	45.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		6.0	30.0		6.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	1	1		4	4			7			7	
Act Effct Green (s)	12.8	12.8		12.8	12.8		57.6	50.9		61.4	57.7	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.72	0.64		0.77	0.72	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.00		0.16	0.22		0.02	0.38		0.21	0.29	
Control Delay	25.9	0.0		28.4	1.2		3.4	8.6		10.3	14.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.9	0.0		28.4	1.2		3.4	8.6		10.3	14.3	
LOS	C	A		C	A		A	A		B	B	
Approach Delay		22.5			8.2			8.5			13.7	
Approach LOS		C			A			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 46 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 52.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S

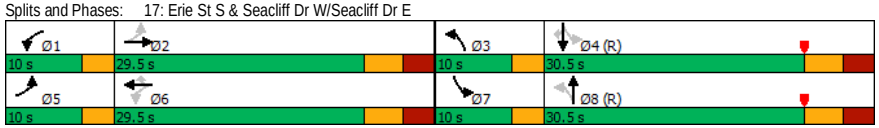


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	233	77	20	209	266	114	204	22	185	208	115
Future Volume (vph)	147	233	77	20	209	266	114	204	22	185	208	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	0.99	1.00		0.99		0.97
Frt		0.963				0.850		0.986				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	1321	0	1253	1387	1214	1271	1474	0	1367	1545	1392
Flt Permitted	0.500			0.505			0.590			0.482		
Satd. Flow (perm)	744	1321	0	659	1387	1189	783	1474	0	689	1545	1345
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21				306		7				132
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			214.3			128.8	
Travel Time (s)		28.1			45.4			15.4			9.3	
Confl. Peds. (#/hr)	7		12	12		7	7		6	6		7
Confl. Bikes (#/hr)			2			2			2			2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	27%	34%	46%	44%	37%	33%	42%	26%	33%	32%	23%	16%
Adj. Flow (vph)	169	268	89	23	240	306	131	234	25	213	239	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	357	0	23	240	306	131	259	0	213	239	132
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		4
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (%)	12.5%	36.9%		12.5%	36.9%	36.9%	12.5%	38.1%		12.5%	38.1%	38.1%
Maximum Green (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		12			7	7		6			7	7
Act Effct Green (s)	35.3	29.0		33.5	23.0	23.0	34.5	24.0		35.1	26.0	26.0
Actuated g/C Ratio	0.44	0.36		0.42	0.29	0.29	0.43	0.30		0.44	0.32	0.32

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.44	0.73		0.07	0.60	0.55	0.34	0.58		0.59	0.48	0.25
Control Delay	18.0	33.8		12.8	32.1	7.1	15.8	29.2		31.6	36.9	18.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	18.0	33.8		12.8	32.1	7.1	15.8	29.2		31.6	36.9	18.2
LOS	B	C		B	C	A	B	C		C	D	B
Approach Delay		28.7			17.9			24.7			30.7	
Approach LOS		C			B			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 6 (8%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 25.6		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

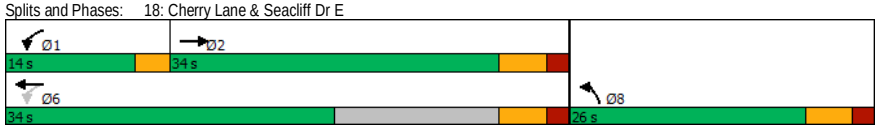


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	348	50	88	370	108	113
Future Volume (vph)	348	50	88	370	108	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	10.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.99		0.99	
Frt	0.983				0.931	
Flt Protected			0.950		0.976	
Satd. Flow (prot)	1810	0	1787	1845	1696	0
Flt Permitted			0.398		0.976	
Satd. Flow (perm)	1810	0	745	1845	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11				70	
Link Speed (k/h)	50			50	50	
Link Distance (m)	630.4			50.9	225.2	
Travel Time (s)	45.4			3.7	16.2	
Confl. Peds. (#/hr)		9	9		1	3
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	1%	1%	3%	1%	1%
Adj. Flow (vph)	370	53	94	394	115	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	423	0	94	394	235	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	28.0		6.5	28.0	10.0	
Minimum Split (s)	34.0		11.0	34.0	16.0	
Total Split (s)	34.0		14.0	34.0	26.0	
Total Split (%)	45.9%		18.9%	45.9%	35.1%	
Maximum Green (s)	28.0		11.0	28.0	20.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Walk Time (s)	20.0				7.0	
Flash Dont Walk (s)	8.0				13.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	28.3		39.2	36.2	12.5	
Actuated g/C Ratio	0.47		0.64	0.60	0.21	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.50		0.16	0.36	0.58	
Control Delay	15.2		5.2	7.8	22.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	15.2		5.2	7.8	22.0	
LOS	B		A	A	C	
Approach Delay	15.2			7.3	22.0	
Approach LOS	B			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 60.8			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 13.2		Intersection LOS: B	
Intersection Capacity Utilization 55.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 18: Cherry Lane & Seacliff Dr E

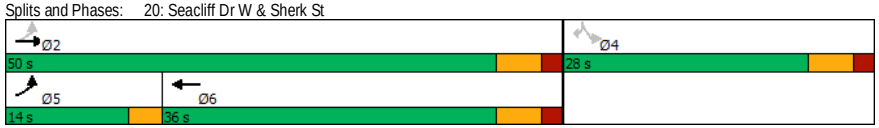


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	157	279	321	179	144	120
Future Volume (vph)	157	279	321	179	144	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			0.0	50.0	0.0
Storage Lanes	1			0	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.98		1.00	0.97
Frt			0.952			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1712	1349	0	1308	1380
Flt Permitted	0.271				0.950	
Satd. Flow (perm)	416	1712	1349	0	1303	1337
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			42			133
Link Speed (k/h)		50	50		50	
Link Distance (m)		389.6	390.5		129.4	
Travel Time (s)		28.1	28.1		9.3	
Confl. Peds. (#/hr)	11			11	2	5
Confl. Bikes (#/hr)				5		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	11%	32%	32%	38%	17%
Adj. Flow (vph)	174	310	357	199	160	133
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	310	556	0	160	133
Turn Type	pm+pt	NA	NA		Perm	Perm
Protected Phases	5	2	6			
Permitted Phases	2				4	4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0		10.0	10.0
Minimum Split (s)	11.0	50.0	36.0		28.0	28.0
Total Split (s)	14.0	50.0	36.0		28.0	28.0
Total Split (%)	17.9%	64.1%	46.2%		35.9%	35.9%
Maximum Green (s)	11.0	44.0	30.0		22.0	22.0
Yellow Time (s)	3.0	4.0	4.0		4.0	4.0
All-Red Time (s)	0.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Max	Max		None	None
Walk Time (s)		15.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		10	11		5	5
Act Effct Green (s)	47.2	44.1	32.1		14.4	14.4
Actuated g/C Ratio	0.67	0.62	0.45		0.20	0.20

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
v/c Ratio	0.42	0.29	0.88		0.60	0.35
Control Delay	8.6	7.8	35.9		35.2	7.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	8.6	7.8	35.9		35.2	7.4
LOS	A	A	D		D	A
Approach Delay		8.1	35.9		22.6	
Approach LOS		A	D		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78			
Actuated Cycle Length: 70.6			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 60.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	30
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	86	168	154	338	238	128
Future Vol, veh/h	86	168	154	338	238	128
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	105	205	188	412	290	156
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	12.9	45.7	20.7
HCM LOS	B	E	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	31%	100%	0%	0%
Vol Thru, %	69%	0%	0%	65%
Vol Right, %	0%	0%	100%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	492	86	168	366
LT Vol	154	86	0	0
Through Vol	338	0	0	238
RT Vol	0	0	168	128
Lane Flow Rate	600	105	205	446
Geometry Grp	2	7	7	2
Degree of Util (X)	0.938	0.224	0.368	0.697
Departure Headway (Hd)	5.629	7.69	6.461	5.618
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	465	553	638
Service Time	3.698	5.474	4.244	3.694
HCM Lane V/C Ratio	0.935	0.226	0.371	0.699
HCM Control Delay	45.7	12.7	13	20.7
HCM Lane LOS	E	B	B	C
HCM 95th-tile Q	12.7	0.8	1.7	5.6

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	449	9	51	555	46	7	0	43	16	0	9
Future Vol, veh/h	32	449	9	51	555	46	7	0	43	16	0	9
Conflicting Peds, #/hr	3	0	79	79	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	8	0	0	10	0	0	0	0	0	0	0
Mvmt Flow	42	591	12	67	730	61	9	0	57	21	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	794	0	0	682	0	0	1662	1688	676	1608	1664	765
Stage 1	-	-	-	-	-	-	760	760	-	898	898	-
Stage 2	-	-	-	-	-	-	902	928	-	710	766	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	836	-	-	920	-	-	78	95	457	85	98	406
Stage 1	-	-	-	-	-	-	401	417	-	337	361	-
Stage 2	-	-	-	-	-	-	335	349	-	428	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	834	-	-	858	-	-	64	77	426	66	80	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	77	-	66	80	-
Stage 1	-	-	-	-	-	-	355	369	-	319	332	-
Stage 2	-	-	-	-	-	-	300	321	-	352	368	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.7	25.8	62.6
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	238	834	-	-	858	-	-	94
HCM Lane V/C Ratio	0.276	0.05	-	-	0.078	-	-	0.35
HCM Control Delay (s)	25.8	9.5	-	-	9.6	-	-	62.6
HCM Lane LOS	D	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0.3	-	-	1.4

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	491	675	35	21	15
Future Vol, veh/h	28	491	675	35	21	15
Conflicting Peds, #/hr	34	0	0	34	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	68	68	68	68	68	68
Heavy Vehicles, %	0	8	10	0	0	0
Mvmt Flow	41	722	993	51	31	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1078	0	-	0	1496	1053
Stage 1	-	-	-	-	1053	-
Stage 2	-	-	-	-	443	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	655	-	-	-	126	277
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	636	-	-	-	106	269
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	44.7
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	636	-	-	-	142
HCM Lane V/C Ratio	0.065	-	-	-	0.373
HCM Control Delay (s)	11.1	0.5	-	-	44.7
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	1.6

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	554	621	0	17	37
Future Vol, veh/h	0	554	621	0	17	37
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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	5	0	0	0
Mvmt Flow	0	602	675	0	18	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	976	338
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	301	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	252	664
Stage 1	0	-	-	0	473	-
Stage 2	0	-	-	0	731	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	252	664
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	731	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	252	664
HCM Lane V/C Ratio	-	-	0.073	0.061
HCM Control Delay (s)	-	-	20.4	10.8
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑↑	↱		↑↑
Traffic Vol, veh/h	5	15	692	5	13	692
Future Vol, veh/h	5	15	692	5	13	692
Conflicting Peds, #/hr	6	6	0	10	7	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, %	0	0	2	0	0	2
Mvmt Flow	5	16	752	5	14	752

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1175	395	0	0	767	0
Stage 1	765	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	188	610	-	-	856	-
Stage 1	425	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	602	-	-	849	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	422	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	380	849	-
HCM Lane V/C Ratio	-	-	0.057	0.017	-
HCM Control Delay (s)	-	-	15	9.3	0.1
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	20.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	143	195	472	172	107	525
Future Vol, veh/h	143	195	472	172	107	525
Conflicting Peds, #/hr	0	2	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	27	26	23	31	15	20
Mvmt Flow	157	214	519	189	118	577

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1148	365	0	0	717	0
Stage 1	623	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	7.34	7.42	-	-	4.4	-
Critical Hdwy Stg 1	6.34	-	-	-	-	-
Critical Hdwy Stg 2	6.34	-	-	-	-	-
Follow-up Hdwy	3.77	3.56	-	-	2.35	-
Pot Cap-1 Maneuver	158	568	-	-	799	-
Stage 1	434	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 133	563	-	-	793	-
Mov Cap-2 Maneuver	~ 133	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	419	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	93.3	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	133	563	793	-
HCM Lane V/C Ratio	-	-	1.182	0.381	0.148	-
HCM Control Delay (s)	-	-	199.6	15.3	10.3	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	9.3	1.8	0.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	2	2	0	77	21	591	6	179	593	46
Future Vol, veh/h	34	0	2	2	0	77	21	591	6	179	593	46
Conflicting Peds, #/hr	3	0	1	1	0	3	6	0	7	7	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	25	0	0	50	0	11	24	27	20	9	25	7
Mvmt Flow	39	0	2	2	0	88	24	672	7	203	674	52

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1499	1846	370	1475	1869	350	732	0	0	686	0	0
Stage 1	1112	1112	-	731	731	-	-	-	-	-	-	-
Stage 2	387	734	-	744	1138	-	-	-	-	-	-	-
Critical Hdwy	8	6.5	6.9	8.5	6.5	7.12	4.58	-	-	4.28	-	-
Critical Hdwy Stg 1	7	5.5	-	7.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	5.5	-	7.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4	3.3	4	4	3.41	2.44	-	-	2.29	-	-
Pot Cap-1 Maneuver	68	76	633	56	73	621	737	-	-	858	-	-
Stage 1	187	287	-	287	430	-	-	-	-	-	-	-
Stage 2	550	429	-	281	279	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	46	55	629	44	53	616	733	-	-	853	-	-
Mov Cap-2 Maneuver	46	55	-	44	53	-	-	-	-	-	-	-
Stage 1	180	218	-	276	413	-	-	-	-	-	-	-
Stage 2	455	412	-	213	211	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	219.6	13.8	0.3	2.3
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	733	-	-	48	44	616	853	-	-
HCM Lane V/C Ratio	0.033	-	-	0.852	0.052	0.142	0.238	-	-
HCM Control Delay (s)	10.1	-	-	219.6	91.2	11.8	10.5	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.5	0.2	0.5	0.9	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	4	1	590	522	2
Future Vol, veh/h	6	4	1	590	522	2
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	29	23	0
Mvmt Flow	7	4	1	641	567	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	898	292	576	0	-	0
Stage 1	575	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	283	710	1007	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	279	706	1001	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1001	-	482	-	-
HCM Lane V/C Ratio	0.001	-	0.023	-	-
HCM Control Delay (s)	8.6	-	12.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	397	393	43	34	65
Future Vol, veh/h	65	397	393	43	34	65
Conflicting Peds, #/hr	5	0	0	5	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	74	451	447	49	39	74

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	501	0	-	0	1077	477
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1068	-	-	-	245	592
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	552	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1063	-	-	-	226	589
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	18.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1063	-	-	-	380
HCM Lane V/C Ratio	0.069	-	-	-	0.296
HCM Control Delay (s)	8.6	-	-	-	18.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	7	335	1	1	262
Future Vol, veh/h	2	7	335	1	1	262
Conflicting Peds, #/hr	0	0	0	16	16	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, %	0	0	28	0	0	28
Mvmt Flow	2	8	364	1	1	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	668	381	0	0	381	0
Stage 1	381	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	426	671	-	-	1189	-
Stage 1	695	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	420	662	-	-	1173	-
Mov Cap-2 Maneuver	420	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	765	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	587	1173	-
HCM Lane V/C Ratio	-	-	0.017	0.001	-
HCM Control Delay (s)	-	-	11.2	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	109	379	45	160	244
Future Vol, veh/h	26	109	379	45	160	244
Conflicting Peds, #/hr	0	0	0	10	10	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	84	84	84	84	84	84
Heavy Vehicles, %	19	23	24	36	22	29
Mvmt Flow	31	130	451	54	190	290

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1158	488	0	0	515	0
Stage 1	488	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Critical Hdwy	6.59	6.43	-	-	4.32	-
Critical Hdwy Stg 1	5.59	-	-	-	-	-
Critical Hdwy Stg 2	5.59	-	-	-	-	-
Follow-up Hdwy	3.671	3.507	-	-	2.398	-
Pot Cap-1 Maneuver	201	539	-	-	956	-
Stage 1	583	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	534	-	-	948	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	364	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	3.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	360	948	-
HCM Lane V/C Ratio	-	-	0.446	0.201	-
HCM Control Delay (s)	-	-	22.8	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.7	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	6	485	2	4	403
Future Vol, veh/h	1	6	485	2	4	403
Conflicting Peds, #/hr	0	0	0	8	8	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, %	0	0	24	0	0	1
Mvmt Flow	1	7	527	2	4	438

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	982	536	0	0	537	0
Stage 1	536	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	279	549	-	-	1041	-
Stage 1	591	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	276	545	-	-	1034	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	646	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	478	1034	-
HCM Lane V/C Ratio	-	-	0.016	0.004	-
HCM Control Delay (s)	-	-	12.7	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	12	5	1	10	2	461	1	1	382	18
Future Vol, veh/h	0	0	12	5	1	10	2	461	1	1	382	18
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	13	5	1	11	2	501	1	1	415	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	427	939	951	508	437	0	0	508	0	0
Stage 1	-	-	-	512	512	-	-	-	-	-	-	-
Stage 2	-	-	-	427	439	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	632	246	262	569	1134	-	-	1067	-	-
Stage 1	0	0	-	548	540	-	-	-	-	-	-	-
Stage 2	0	0	-	610	582	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	631	239	259	566	1132	-	-	1062	-	-
Mov Cap-2 Maneuver	-	-	-	239	259	-	-	-	-	-	-	-
Stage 1	-	-	-	544	536	-	-	-	-	-	-	-
Stage 2	-	-	-	597	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	15	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1132	-	-	631	377	1062	-	-
HCM Lane V/C Ratio	0.002	-	-	0.021	0.046	0.001	-	-
HCM Control Delay (s)	8.2	0	-	10.8	15	8.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	11	0	0	4	6	1	511	1	5	401	1
Future Vol, veh/h	4	11	0	0	4	6	1	511	1	5	401	1
Conflicting Peds, #/hr	0	0	6	6	0	0	2	0	6	6	0	2
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	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	33	100	0	0	100	100	100	23	100	75	19	0
Mvmt Flow	5	13	0	0	5	7	1	594	1	6	466	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1084	1084	475	1094	1084	601	469	0	0	601	0	0
Stage 1	481	481	-	603	603	-	-	-	-	-	-	-
Stage 2	603	603	-	491	481	-	-	-	-	-	-	-
Critical Hdwy	7.43	7.5	6.2	7.1	7.5	7.2	5.1	-	-	4.85	-	-
Critical Hdwy Stg 1	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4.9	3.3	3.5	4.9	4.2	3.1	-	-	2.875	-	-
Pot Cap-1 Maneuver	170	147	594	193	147	358	726	-	-	702	-	-
Stage 1	512	420	-	489	363	-	-	-	-	-	-	-
Stage 2	436	363	-	563	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	160	144	590	176	144	356	725	-	-	698	-	-
Mov Cap-2 Maneuver	160	144	-	176	144	-	-	-	-	-	-	-
Stage 1	510	414	-	486	360	-	-	-	-	-	-	-
Stage 2	421	360	-	536	414	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.5	22	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	725	-	-	148	224	698	-	-
HCM Lane V/C Ratio	0.002	-	-	0.118	0.052	0.008	-	-
HCM Control Delay (s)	10	0	-	32.5	22	10.2	0	-
HCM Lane LOS	A	A	-	D	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	595	9	13	492	73	13	16	13	47	6	17
Future Volume (vph)	11	595	9	13	492	73	13	16	13	47	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00			1.00			0.99	0.95		0.98	
Frt		0.998			0.981				0.850		0.967	
Flt Protected	0.950			0.950				0.979			0.968	
Satd. Flow (prot)	1805	1757	0	1805	1720	0	0	1860	1615	0	1764	0
Flt Permitted	0.429			0.316				0.854			0.780	
Satd. Flow (perm)	809	1757	0	600	1720	0	0	1613	1540	0	1399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			16				97		19	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	6		7	7		6	6		10	10		6
Confl. Bikes (#/hr)						2			2			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	8%	0%	0%	9%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	12	654	10	14	541	80	14	18	14	52	7	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	664	0	14	621	0	0	32	14	0	78	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	2	2			1		5	5	5	4	4	
Act Effct Green (s)	51.2	51.2		54.0	53.4			9.1	9.1		9.1	
Actuated g/C Ratio	0.73	0.73		0.77	0.76			0.13	0.13		0.13	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.02	0.52		0.02	0.48			0.15	0.05		0.40	
Control Delay	7.4	10.4		3.8	6.6			27.1	0.3		27.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	7.4	10.4		3.8	6.6			27.1	0.3		27.5	
LOS	A	B		A	A			C	A		C	
Approach Delay		10.4			6.5			18.9			27.5	
Approach LOS		B			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 70.4			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W

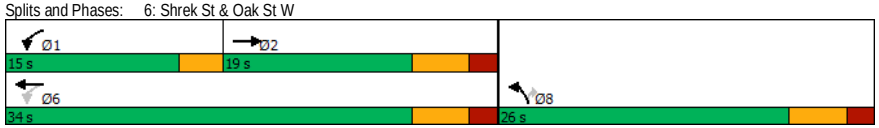


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	420	334	279	360	230	238
Future Volume (vph)	420	334	279	360	230	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98		1.00		1.00	0.98
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3079	0	1570	1863	1530	1369
Flt Permitted			0.240		0.950	
Satd. Flow (perm)	3079	0	396	1863	1525	1335
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	306					274
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)		5	5		2	9
Confl. Bikes (#/hr)		3				7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	483	384	321	414	264	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	867	0	321	414	264	274
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	13.0		7.0	28.0	20.0	20.0
Minimum Split (s)	19.0		10.0	34.0	26.0	26.0
Total Split (s)	19.0		15.0	34.0	26.0	26.0
Total Split (%)	31.7%		25.0%	56.7%	43.3%	43.3%
Maximum Green (s)	13.0		12.0	28.0	20.0	20.0
Yellow Time (s)	4.0		3.0	4.0	4.0	4.0
All-Red Time (s)	2.0		0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		3.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		None	Min	None	None
Walk Time (s)	13.0			28.0	8.0	8.0
Flash Dont Walk (s)	0.0			0.0	12.0	12.0
Pedestrian Calls (#/hr)	2			1	7	7
Act Effct Green (s)	13.7		31.0	28.0	20.0	20.0
Actuated g/C Ratio	0.23		0.52	0.47	0.33	0.33

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.92		0.76	0.48	0.52	0.44
Control Delay	33.2		23.2	13.3	20.5	4.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	33.2		23.2	13.3	20.5	4.8
LOS	C		C	B	C	A
Approach Delay	33.2			17.6	12.5	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 22.6		Intersection LOS: C	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W

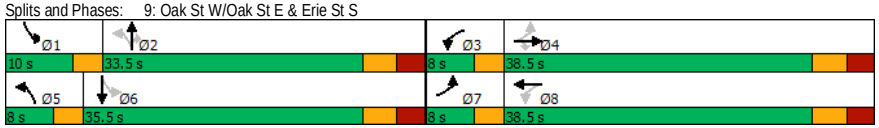


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	364	118	231	343	137	113	485	314	167	602	147
Future Volume (vph)	141	364	118	231	343	137	113	485	314	167	602	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		0.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	1.00	0.99		1.00		0.92	0.98	0.99	
Frt			0.850		0.957				0.850		0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3348	0	1597	1681	1429	1770	3237	0
Flt Permitted	0.381			0.296			0.282			0.202		
Satd. Flow (perm)	705	1863	1455	515	3348	0	473	1681	1312	370	3237	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126		74				334		35	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			379.6			512.5			322.7	
Travel Time (s)		14.7			27.3			36.9			23.2	
Confl. Peds. (#/hr)	9		4	4		9	12		33	33		12
Confl. Bikes (#/hr)			3			5			5			11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	13%	13%	13%	2%	9%	2%
Adj. Flow (vph)	150	387	126	246	365	146	120	516	334	178	640	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	387	126	246	511	0	120	516	334	178	796	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	4	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	
Minimum Split (s)	8.0	37.5	37.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	
Total Split (s)	8.0	38.5	38.5	8.0	38.5		8.0	33.5	33.5	10.0	35.5	
Total Split (%)	8.9%	42.8%	42.8%	8.9%	42.8%		8.9%	37.2%	37.2%	11.1%	39.4%	
Maximum Green (s)	5.0	32.0	32.0	5.0	32.0		5.0	27.0	27.0	7.0	29.0	
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)		1	1		6			20	20		9	
Act Effct Green (s)	30.1	21.6	21.6	30.1	21.6		35.7	27.1	27.1	39.9	30.9	
Actuated g/C Ratio	0.38	0.27	0.27	0.38	0.27		0.45	0.34	0.34	0.50	0.39	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.45	0.77	0.26	0.92	0.53		0.43	0.90	0.50	0.58	0.62	
Control Delay	19.6	37.5	5.6	61.4	22.7		18.0	48.8	5.8	21.4	23.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	19.6	37.5	5.6	61.4	22.7		18.0	48.8	5.8	21.4	23.3	
LOS	B	D	A	E	C		B	D	A	C	C	
Approach Delay		27.4			35.3			30.2			23.0	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 79.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S



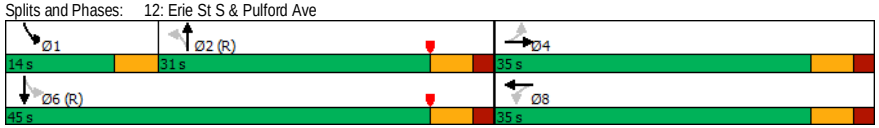
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	61	166	129	75	66	104	730	95	74	678	48
Future Volume (vph)	67	61	166	129	75	66	104	730	95	74	678	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99	1.00	
Frt		0.890			0.930			0.983			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1612	1641	0	1770	1644	0	1770	3177	0	1656	3271	0
Flt Permitted	0.663			0.484			0.362			0.234		
Satd. Flow (perm)	1122	1641	0	901	1644	0	672	3177	0	405	3271	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		150			62			18			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			310.2			138.2			66.1	
Travel Time (s)		28.4			22.3			10.0			4.8	
Confl. Peds. (#/hr)	4		2	2		4	10		26	26		10
Confl. Bikes (#/hr)						1			5			9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	12%	2%	2%	2%	2%	12%	2%	12%	2%	9%	9%	9%
Adj. Flow (vph)	71	64	175	136	79	69	109	768	100	78	714	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	239	0	136	148	0	109	868	0	78	765	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		10.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		38.8%	38.8%		17.5%	56.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		10.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	2	2		4	4		16	16			7	
Act Effct Green (s)	17.4	17.4		17.4	17.4		39.4	39.4		52.6	50.6	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.49	0.49		0.66	0.63	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.51		0.70	0.37		0.33	0.55		0.18	0.37	
Control Delay	26.7	13.4		46.2	16.7		21.7	19.0		7.9	8.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.7	13.4		46.2	16.7		21.7	19.0		7.9	8.7	
LOS	C	B		D	B		C	B		A	A	
Approach Delay		16.4			30.8			19.3			8.6	
Approach LOS		B			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 2 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 84.3% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave

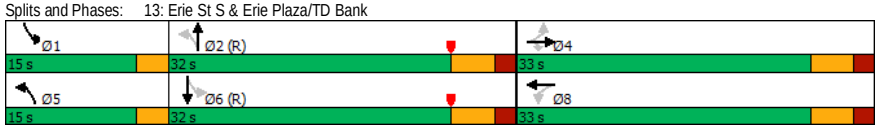


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	17	49	59	11	55	55	762	73	66	862	1
Future Volume (vph)	96	17	49	59	11	55	55	762	73	66	862	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00	0.99		0.99		1.00	0.99		0.99	1.00	
Frt			0.850		0.940			0.987				
Flt Protected		0.959			0.977		0.950			0.950		
Satd. Flow (prot)	0	1662	1583	0	1635	0	1770	3216	0	1656	3312	0
Flt Permitted		0.704			0.807		0.253			0.220		
Satd. Flow (perm)	0	1218	1562	0	1350	0	470	3216	0	380	3312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82		54			13				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.4			147.9			140.3			138.2	
Travel Time (s)		8.9			10.6			10.1			10.0	
Confl. Peds. (#/hr)	3		2	2		3	9		22	22		9
Confl. Bikes (#/hr)						1			5			8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	99	18	51	61	11	57	57	786	75	68	889	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	51	0	129	0	57	861	0	68	890	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%		18.8%	40.0%		18.8%	40.0%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	2	2	2	3	3			15			6	
Act Effct Green (s)		27.0	27.0		27.0		48.2	36.8		48.8	39.8	
Actuated g/C Ratio		0.34	0.34		0.34		0.60	0.46		0.61	0.50	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.28	0.09		0.26		0.12	0.58		0.16	0.54	
Control Delay		21.8	2.3		13.3		11.7	23.7		7.6	19.7	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		21.8	2.3		13.3		11.7	23.7		7.6	19.7	
LOS		C	A		B		B	C		A	B	
Approach Delay		15.9			13.3			22.9			18.9	
Approach LOS		B			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 4 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 20.0		Intersection LOS: C	
Intersection Capacity Utilization 83.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank

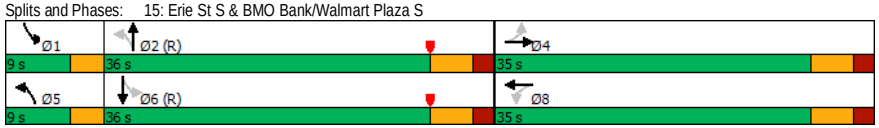


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	17	135	1	178	6	549	116	63	674	12
Future Volume (vph)	12	2	17	135	1	178	6	549	116	63	674	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.98		0.99	0.99		0.99	1.00	
Frt		0.865			0.851			0.974			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1525	0	1556	1400	0	1805	2980	0	1626	3024	0
Flt Permitted	0.582			0.744			0.380			0.337		
Satd. Flow (perm)	1101	1525	0	1215	1400	0	718	2980	0	573	3024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			185			36			3	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		87.5			160.6			85.9			79.3	
Travel Time (s)		6.3			11.6			6.2			5.7	
Confl. Peds. (#/hr)	6		3	3		6	13		15	15		13
Confl. Bikes (#/hr)									8			7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	7%	16%	100%	13%	0%	17%	17%	11%	19%	14%
Adj. Flow (vph)	13	2	18	141	1	185	6	572	121	66	702	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	20	0	141	186	0	6	693	0	66	715	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		9.0	36.0		9.0	36.0	
Total Split (%)	43.8%	43.8%		43.8%	43.8%		11.3%	45.0%		11.3%	45.0%	
Maximum Green (s)	29.0	29.0		29.0	29.0		6.0	30.0		6.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	3	3		6	6			12			10	
Act Effct Green (s)	15.6	15.6		15.6	15.6		52.2	44.4		55.3	50.6	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.65	0.56		0.69	0.63	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.06		0.60	0.44		0.01	0.41		0.14	0.37	
Control Delay	23.4	11.5		38.8	7.5		7.0	13.2		3.3	5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.4	11.5		38.8	7.5		7.0	13.2		3.3	5.9	
LOS	C	B		D	A		A	B		A	A	
Approach Delay		16.2			21.0			13.1			5.7	
Approach LOS		B			C			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 14 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 57.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S

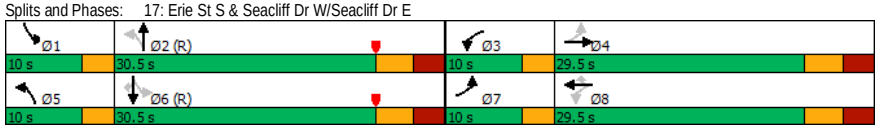


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	333	107	33	365	315	135	184	46	324	230	268
Future Volume (vph)	177	333	107	33	365	315	135	184	46	324	230	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		1.00		0.98	0.99	0.99		0.99		0.95
Frt		0.964				0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1410	0	1357	1508	1417	1456	1547	0	1467	1667	1346
Flt Permitted	0.313			0.318			0.548			0.548		
Satd. Flow (perm)	519	1410	0	452	1508	1382	827	1547	0	835	1667	1281
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				328		16				279
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			214.3			128.8	
Travel Time (s)		28.1			45.4			15.4			9.3	
Confl. Peds. (#/hr)	9		7	7		9	13		12	12		13
Confl. Bikes (#/hr)			3			4			6			6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	14%	30%	25%	33%	26%	14%	24%	16%	26%	23%	14%	20%
Adj. Flow (vph)	184	347	111	34	380	328	141	192	48	338	240	279
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	458	0	34	380	328	141	240	0	338	240	279
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (%)	12.5%	36.9%		12.5%	36.9%	36.9%	12.5%	38.1%		12.5%	38.1%	38.1%
Maximum Green (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		4			6	6		9			10	10
Act Effct Green (s)	34.7	27.0		33.5	23.0	23.0	34.5	24.0		34.5	24.0	24.0
Actuated g/C Ratio	0.43	0.34		0.42	0.29	0.29	0.43	0.30		0.43	0.30	0.30

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.58	0.94		0.13	0.88	0.52	0.34	0.51		0.81	0.48	0.48
Control Delay	22.2	57.3		13.4	50.8	6.2	15.4	25.9		41.7	33.4	14.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	22.2	57.3		13.4	50.8	6.2	15.4	25.9		41.7	33.4	14.4
LOS	C	E		B	D	A	B	C		D	C	B
Approach Delay		47.3			29.4			22.0			30.5	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 33.1		Intersection LOS: C	
Intersection Capacity Utilization 85.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

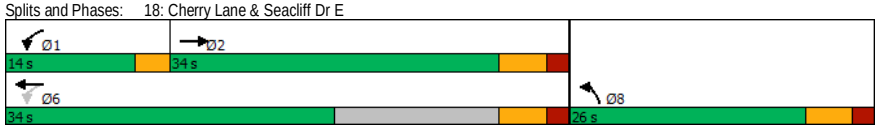


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	504	121	172	472	126	141
Future Volume (vph)	504	121	172	472	126	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	10.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00		0.99	
Frt	0.974				0.929	
Flt Protected			0.950		0.977	
Satd. Flow (prot)	1792	0	1787	1845	1694	0
Flt Permitted			0.163		0.977	
Satd. Flow (perm)	1792	0	306	1845	1691	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	19				75	
Link Speed (k/h)	50			50	50	
Link Distance (m)	630.4			50.9	225.2	
Travel Time (s)	45.4			3.7	16.2	
Confl. Peds. (#/hr)		7	7		2	3
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	1%	1%	3%	1%	1%
Adj. Flow (vph)	536	129	183	502	134	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	665	0	183	502	284	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	28.0		6.5	28.0	10.0	
Minimum Split (s)	34.0		11.0	34.0	16.0	
Total Split (s)	34.0		14.0	34.0	26.0	
Total Split (%)	45.9%		18.9%	45.9%	35.1%	
Maximum Green (s)	28.0		11.0	28.0	20.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Walk Time (s)	20.0				7.0	
Flash Dont Walk (s)	8.0				13.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	28.2		42.6	39.5	14.0	
Actuated g/C Ratio	0.43		0.65	0.60	0.21	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.85		0.47	0.45	0.68	
Control Delay	31.3		9.4	9.4	26.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	31.3		9.4	9.4	26.0	
LOS	C		A	A	C	
Approach Delay	31.3			9.4	26.0	
Approach LOS	C			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 65.6			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 72.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 18: Cherry Lane & Seacliff Dr E

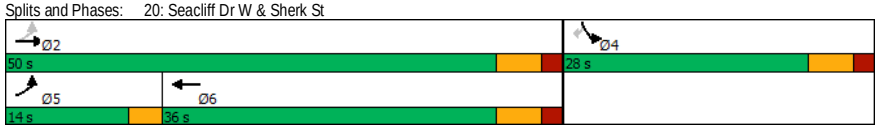


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	431	619	211	222	169
Future Volume (vph)	194	431	619	211	222	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			0.0	50.0	0.0
Storage Lanes	1			0	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99		0.99	0.95
Frt			0.966			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1792	1467	0	1517	1392
Flt Permitted	0.120				0.950	
Satd. Flow (perm)	185	1792	1467	0	1495	1328
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			26			188
Link Speed (k/h)		50	50		50	
Link Distance (m)		389.6	390.5		129.4	
Travel Time (s)		28.1	28.1		9.3	
Confl. Peds. (#/hr)	3			3	8	10
Confl. Bikes (#/hr)				4		7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	6%	24%	25%	19%	16%
Adj. Flow (vph)	216	479	688	234	247	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	216	479	922	0	247	188
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2					4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0		10.0	10.0
Minimum Split (s)	14.0	50.0	36.0		28.0	28.0
Total Split (s)	14.0	50.0	36.0		28.0	28.0
Total Split (%)	17.9%	64.1%	46.2%		35.9%	35.9%
Maximum Green (s)	11.0	44.0	30.0		22.0	22.0
Yellow Time (s)	3.0	4.0	4.0		4.0	4.0
All-Red Time (s)	0.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		None	None
Walk Time (s)		7.0	15.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0
Pedestrian Calls (#/hr)		9	0		8	8
Act Effct Green (s)	46.6	43.5	30.2		16.3	16.3
Actuated g/C Ratio	0.65	0.61	0.42		0.23	0.23

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
v/c Ratio	0.71	0.44	1.46		0.72	0.42
Control Delay	27.4	10.1	239.3		38.2	7.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	27.4	10.1	239.3		38.2	7.0
LOS	C	B	F		D	A
Approach Delay		15.4	239.3		24.7	
Approach LOS		B	F		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78			
Actuated Cycle Length: 71.9			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.46			
Intersection Signal Delay: 118.0		Intersection LOS: F	
Intersection Capacity Utilization 83.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	33.6
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	93	168	133	398	438	114
Future Vol, veh/h	93	168	133	398	438	114
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	98	177	140	419	461	120
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	12.7	38.4	38.8
HCM LOS	B	E	E

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	25%	100%	0%	0%
Vol Thru, %	75%	0%	0%	79%
Vol Right, %	0%	0%	100%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	531	93	168	552
LT Vol	133	93	0	0
Through Vol	398	0	0	438
RT Vol	0	0	168	114
Lane Flow Rate	559	98	177	581
Geometry Grp	2	7	7	2
Degree of Util (X)	0.891	0.214	0.327	0.899
Departure Headway (Hd)	5.736	7.886	6.654	5.568
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	452	536	645
Service Time	3.809	5.679	4.446	3.641
HCM Lane V/C Ratio	0.893	0.217	0.33	0.901
HCM Control Delay	38.4	12.8	12.7	38.8
HCM Lane LOS	E	B	B	E
HCM 95th-tile Q	10.8	0.8	1.4	11.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	636	2	5	551	7	15	0	16	17	0	13
Future Vol, veh/h	6	636	2	5	551	7	15	0	16	17	0	13
Conflicting Peds, #/hr	12	0	13	13	0	12	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	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	8	0	0	9	0	0	0	0	0	0	0
Mvmt Flow	6	669	2	5	580	7	16	0	17	18	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	599	0	0	684	0	0	1296	1304	683	1297	1302	596
Stage 1	-	-	-	-	-	-	695	695	-	606	606	-
Stage 2	-	-	-	-	-	-	601	609	-	691	696	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	988	-	-	919	-	-	140	162	453	140	162	507
Stage 1	-	-	-	-	-	-	436	447	-	487	490	-
Stage 2	-	-	-	-	-	-	491	488	-	438	446	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	978	-	-	909	-	-	134	157	448	132	157	502
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	157	-	132	157	-
Stage 1	-	-	-	-	-	-	429	439	-	479	482	-
Stage 2	-	-	-	-	-	-	475	480	-	419	438	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	25.3	27.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	210	978	-	-	909	-	-	194
HCM Lane V/C Ratio	0.155	0.006	-	-	0.006	-	-	0.163
HCM Control Delay (s)	25.3	8.7	-	-	9	-	-	27.1
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	727	535	55	27	11
Future Vol, veh/h	9	727	535	55	27	11
Conflicting Peds, #/hr	4	0	0	4	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	89	89	89	89	89	89
Heavy Vehicles, %	0	8	9	0	0	0
Mvmt Flow	10	817	601	62	30	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	667	0	-	0	1065	636
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	932	-	-	-	234	481
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	929	-	-	-	228	479
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	929	-	-	-	269
HCM Lane V/C Ratio	0.011	-	-	-	0.159
HCM Control Delay (s)	8.9	0.1	-	-	20.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	658	577	0	33	62
Future Vol, veh/h	0	658	577	0	33	62
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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	15	0	0	0
Mvmt Flow	0	715	627	0	36	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	985	314
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	358	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	249	688
Stage 1	0	-	-	0	500	-
Stage 2	0	-	-	0	684	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	249	688
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	249	688
HCM Lane V/C Ratio	-	-	0.144	0.098
HCM Control Delay (s)	-	-	21.9	10.8
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	0.3

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑↑	↱		↑↑
Traffic Vol, veh/h	13	10	919	21	16	869
Future Vol, veh/h	13	10	919	21	16	869
Conflicting Peds, #/hr	6	8	0	32	32	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, %	0	0	16	0	0	11
Mvmt Flow	14	11	999	23	17	945

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1556	551	0	0	1054	0
Stage 1	1043	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	106	483	-	-	668	-
Stage 1	305	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	97	467	-	-	650	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	297	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.2	0	0.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	148	650	-
HCM Lane V/C Ratio	-	-	0.169	0.027	-
HCM Control Delay (s)	-	-	34.2	10.7	0.3
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	189	746	115	117	746
Future Vol, veh/h	52	189	746	115	117	746
Conflicting Peds, #/hr	0	3	0	19	19	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	17	16	13	9	11
Mvmt Flow	57	208	820	126	129	820

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1570	495	0	0	965	0
Stage 1	902	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Critical Hdwy	7.04	7.24	-	-	4.28	-
Critical Hdwy Stg 1	6.04	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.62	3.47	-	-	2.29	-
Pot Cap-1 Maneuver	92	482	-	-	668	-
Stage 1	333	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	73	473	-	-	657	-
Mov Cap-2 Maneuver	73	-	-	-	-	-
Stage 1	328	-	-	-	-	-
Stage 2	358	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	45.9	0	1.6
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	73	473	657	-
HCM Lane V/C Ratio	-	-	0.783	0.439	0.196	-
HCM Control Delay (s)	-	-	146	18.4	11.8	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	3.7	2.2	0.7	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	9	5	1	176	22	703	13	219	733	17
Future Vol, veh/h	11	0	9	5	1	176	22	703	13	219	733	17
Conflicting Peds, #/hr	3	0	0	0	0	3	11	0	15	15	0	11
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	14	25	0	14	11	15	18	12	18	0
Mvmt Flow	12	0	9	5	1	185	23	740	14	231	772	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1674	2069	406	1656	2071	395	801	0	0	769	0	0
Stage 1	1254	1254	-	808	808	-	-	-	-	-	-	-
Stage 2	420	815	-	848	1263	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7.18	8	6.5	7.18	4.32	-	-	4.34	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.44	3.75	4	3.44	2.31	-	-	2.32	-	-
Pot Cap-1 Maneuver	64	55	562	51	55	571	762	-	-	779	-	-
Stage 1	185	246	-	295	397	-	-	-	-	-	-	-
Stage 2	587	394	-	278	243	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	31	37	557	37	37	562	755	-	-	769	-	-
Mov Cap-2 Maneuver	31	37	-	37	37	-	-	-	-	-	-	-
Stage 1	178	171	-	282	380	-	-	-	-	-	-	-
Stage 2	379	377	-	191	169	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	109.1	18	0.3	2.6
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	755	-	-	54	37	562	769	-	-
HCM Lane V/C Ratio	0.031	-	-	0.39	0.171	0.33	0.3	-	-
HCM Control Delay (s)	9.9	-	-	109.1	121.4	14.5	11.7	-	-
HCM Lane LOS	A	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.5	1.4	1.3	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	1	668	822	4
Future Vol, veh/h	2	4	1	668	822	4
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	17	19	0
Mvmt Flow	2	4	1	726	893	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1273	462	910	0	-	0
Stage 1	908	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	162	552	757	-	-	-
Stage 1	359	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	158	546	749	-	-	-
Mov Cap-2 Maneuver	274	-	-	-	-	-
Stage 1	355	-	-	-	-	-
Stage 2	672	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	749	-	410	-	-
HCM Lane V/C Ratio	0.001	-	0.016	-	-
HCM Control Delay (s)	9.8	-	13.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	104	542	540	43	29	104
Future Vol, veh/h	104	542	540	43	29	104
Conflicting Peds, #/hr	3	0	0	3	1	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	118	616	614	49	33	118

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	666	0	-	0	1495	644
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	853	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	928	-	-	-	137	476
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	926	-	-	-	119	474
Mov Cap-2 Maneuver	-	-	-	-	119	-
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	30.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	926	-	-	-	287
HCM Lane V/C Ratio	0.128	-	-	-	0.527
HCM Control Delay (s)	9.5	-	-	-	30.7
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	2.9

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	5	403	2	9	389
Future Vol, veh/h	2	5	403	2	9	389
Conflicting Peds, #/hr	0	0	0	8	8	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, %	0	0	24	0	0	23
Mvmt Flow	2	5	438	2	10	423

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	890	447	0	0	448	0
Stage 1	447	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	316	616	-	-	1123	-
Stage 1	649	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	310	612	-	-	1115	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	479	1115	-
HCM Lane V/C Ratio	-	-	0.016	0.009	-
HCM Control Delay (s)	-	-	12.6	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	13.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	72	154	378	40	181	425
Future Vol, veh/h	72	154	378	40	181	425
Conflicting Peds, #/hr	2	2	0	3	3	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	94	94	94	94	94	94
Heavy Vehicles, %	17	19	19	22	21	24
Mvmt Flow	77	164	402	43	193	452

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1267	429	0	0	448	0
Stage 1	427	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Critical Hdwy	6.57	6.39	-	-	4.31	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.471	-	-	2.389	-
Pot Cap-1 Maneuver	173	591	-	-	1019	-
Stage 1	627	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	128	589	-	-	1016	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	297	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	67.7	0	2.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	274	1016	-
HCM Lane V/C Ratio	-	-	0.877	0.19	-
HCM Control Delay (s)	-	-	67.7	9.4	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	7.6	0.7	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	3	528	4	3	603
Future Vol, veh/h	3	3	528	4	3	603
Conflicting Peds, #/hr	0	0	0	3	3	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, %	0	0	19	0	0	21
Mvmt Flow	3	3	574	4	3	655

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1240	579	0	0	581	0
Stage 1	579	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	195	519	-	-	1003	-
Stage 1	564	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	518	-	-	1000	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	514	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	1000	-
HCM Lane V/C Ratio	-	-	0.023	0.003	-
HCM Control Delay (s)	-	-	18.1	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	45	2	2	2	4	507	5	7	546	37
Future Vol, veh/h	0	0	45	2	2	2	4	507	5	7	546	37
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	4	4	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	49	2	2	2	4	551	5	8	593	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	615	1195	1217	558	635	0	0	560	0	0
Stage 1	-	-	-	566	566	-	-	-	-	-	-	-
Stage 2	-	-	-	629	651	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	495	165	182	533	958	-	-	1021	-	-
Stage 1	0	0	-	513	511	-	-	-	-	-	-	-
Stage 2	0	0	-	474	468	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	494	146	178	531	956	-	-	1018	-	-
Mov Cap-2 Maneuver	-	-	-	146	178	-	-	-	-	-	-	-
Stage 1	-	-	-	508	506	-	-	-	-	-	-	-
Stage 2	-	-	-	422	461	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	22.8	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	956	-	-	494	209	1018	-	-
HCM Lane V/C Ratio	0.005	-	-	0.099	0.031	0.007	-	-
HCM Control Delay (s)	8.8	0	-	13.1	22.8	8.6	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	10	1	2	2	13	6	470	0	1	625	7
Future Vol, veh/h	1	10	1	2	2	13	6	470	0	1	625	7
Conflicting Peds, #/hr	0	0	14	14	0	0	3	0	4	4	0	3
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	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	100	100	100	100	100	89	60	19	0	0	19	60
Mvmt Flow	1	11	1	2	2	14	6	505	0	1	672	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1206	1202	693	1219	1206	509	683	0	0	509	0	0
Stage 1	681	681	-	521	521	-	-	-	-	-	-	-
Stage 2	525	521	-	698	685	-	-	-	-	-	-	-
Critical Hdwy	8.1	7.5	7.2	8.1	7.5	7.09	4.7	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4.9	4.2	4.4	4.9	4.101	2.74	-	-	2.2	-	-
Pot Cap-1 Maneuver	104	122	313	101	121	425	691	-	-	1066	-	-
Stage 1	315	330	-	396	400	-	-	-	-	-	-	-
Stage 2	394	400	-	307	328	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	120	309	91	119	424	689	-	-	1062	-	-
Mov Cap-2 Maneuver	98	120	-	91	119	-	-	-	-	-	-	-
Stage 1	310	328	-	390	394	-	-	-	-	-	-	-
Stage 2	374	394	-	292	326	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.4	20.9	0.1	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	689	-	-	124	245	1062	-	-
HCM Lane V/C Ratio	0.009	-	-	0.104	0.075	0.001	-	-
HCM Control Delay (s)	10.3	0	-	37.4	20.9	8.4	0	-
HCM Lane LOS	B	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

FUTURE CONDITIONS – ROAD DIET

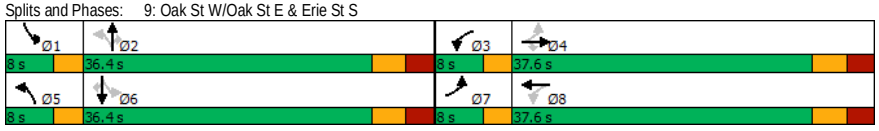
McINTOSH PERRY

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	311	104	193	385	91	128	394	234	79	487	124
Future Volume (vph)	118	311	104	193	385	91	128	394	234	79	487	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		35.0	50.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.96	0.99	0.99		1.00		0.95	0.99		0.97
Frt			0.850		0.971				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3413	0	1583	1667	1417	1770	1743	1583
Flt Permitted	0.417			0.353			0.281			0.420		
Satd. Flow (perm)	771	1863	1429	610	3413	0	466	1667	1347	772	1743	1540
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		35				191			128
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			676.7			512.5			486.5	
Travel Time (s)		14.7			48.7			36.9			35.0	
Confl. Peds. (#/hr)	9		9	9		9	12		17	17		12
Confl. Bikes (#/hr)												5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	14%	14%	14%	2%	9%	2%
Adj. Flow (vph)	122	321	107	199	397	94	132	406	241	81	502	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	321	107	199	491	0	132	406	241	81	502	128
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	28.0
Minimum Split (s)	8.0	37.5	37.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	34.5
Total Split (s)	8.0	37.6	37.6	8.0	37.6		8.0	36.4	36.4	8.0	36.4	36.4
Total Split (%)	8.9%	41.8%	41.8%	8.9%	41.8%		8.9%	40.4%	40.4%	8.9%	40.4%	40.4%
Maximum Green (s)	5.0	31.1	31.1	5.0	31.1		5.0	29.9	29.9	5.0	29.9	29.9
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	3.5
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	Max
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	6.0
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	20.0
Pedestrian Calls (#/hr)		9	9		9			16	16		12	12
Act Effct Green (s)	26.9	18.3	18.3	27.5	20.1		39.2	31.8	31.8	38.6	30.0	30.0
Actuated g/C Ratio	0.35	0.24	0.24	0.35	0.26		0.51	0.41	0.41	0.50	0.39	0.39
v/c Ratio	0.37	0.73	0.25	0.70	0.54		0.43	0.59	0.36	0.18	0.74	0.19
Control Delay	18.9	37.3	5.8	32.7	25.5		15.6	24.3	6.9	11.2	30.1	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	37.3	5.8	32.7	25.5		15.6	24.3	6.9	11.2	30.1	4.5
LOS	B	D	A	C	C		B	C	A	B	C	A
Approach Delay		27.1			27.6			17.4			23.4	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 23.5		Intersection LOS: C	
Intersection Capacity Utilization 78.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S

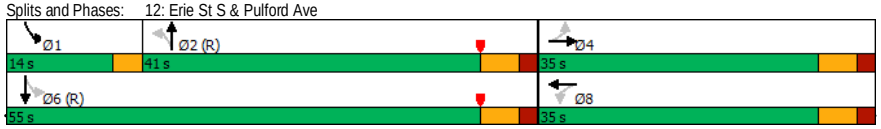


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Future Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		1.00	0.99		1.00	0.99			1.00	
Frt		0.885			0.936			0.977			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	1616	0	1770	1634	0	1770	1631	0	1641	1713	0
Flt Permitted	0.675			0.553			0.419			0.243		
Satd. Flow (perm)	1109	1616	0	1025	1634	0	777	1631	0	420	1713	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		140			44			12			4	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		4	4		4	11		15	15		11
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	15%	2%	2%	2%	2%	15%	2%	15%	2%	10%	10%	10%
Adj. Flow (vph)	57	43	140	115	73	55	72	571	104	65	618	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	183	0	115	128	0	72	675	0	65	646	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		11.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		41.0	41.0		14.0	55.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%		45.6%	45.6%		15.6%	61.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		35.0	35.0		11.0	49.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		3.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	4	4		4	4		14	14			11	
Act Effct Green (s)	16.6	16.6		16.6	16.6		50.2	50.2		64.4	61.4	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.56	0.56		0.72	0.68	
v/c Ratio	0.28	0.45		0.61	0.38		0.17	0.74		0.14	0.55	
Control Delay	32.4	11.9		46.1	22.7		7.5	13.5		6.2	11.1	
Queue Delay	0.0	0.3		0.8	0.0		0.0	2.4		0.0	1.3	
Total Delay	32.4	12.2		46.9	22.7		7.5	15.9		6.2	12.4	
LOS	C	B		D	C		A	B		A	B	
Approach Delay		17.0			34.1			15.1			11.8	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 18 (20%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 83.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 12: Erie St S & Pulford Ave

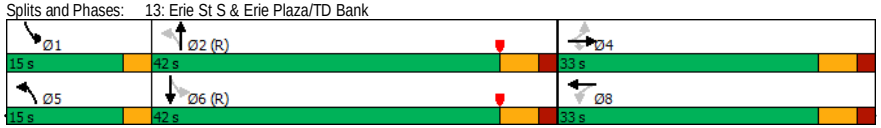


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	15	57	55	15	65	34	592	76	68	708	1
Future Volume (vph)	82	15	57	55	15	65	34	592	76	68	708	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		0.98			1.00			1.00	
Frt			0.850		0.935			0.983				
Flt Protected		0.960			0.980		0.950			0.950		
Satd. Flow (prot)	0	1664	1583	0	1617	0	1770	1690	0	1656	1743	0
Flt Permitted		0.679			0.838		0.104			0.098		
Satd. Flow (perm)	0	1172	1541	0	1379	0	194	1690	0	171	1743	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		53			9				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		185.2			244.2			140.3			138.2	
Travel Time (s)		13.3			17.6			10.1			10.0	
Confl. Peds. (#/hr)	4		4	4		4	11		14	14		11
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	91	17	63	61	17	72	38	658	84	76	787	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	63	0	150	0	38	742	0	76	788	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	42.0		15.0	42.0	
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		16.7%	46.7%		16.7%	46.7%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	36.0		12.0	36.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	4	4	4	4	4			13			11	
Act Effct Green (s)		27.0	27.0		27.0		51.6	39.0		52.2	42.0	
Actuated g/C Ratio		0.30	0.30		0.30		0.57	0.43		0.58	0.47	
v/c Ratio		0.31	0.12		0.33		0.12	1.01		0.26	0.97	
Control Delay		27.3	5.5		18.1		9.7	57.5		11.4	48.9	
Queue Delay		0.0	0.0		0.0		0.0	33.0		0.0	3.3	
Total Delay		27.3	5.5		18.1		9.7	90.5		11.4	52.2	
LOS		C	A		B		A	F		B	D	
Approach Delay		19.3			18.1			86.6			48.6	
Approach LOS		B			B			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 58.8		Intersection LOS: E	
Intersection Capacity Utilization 97.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank

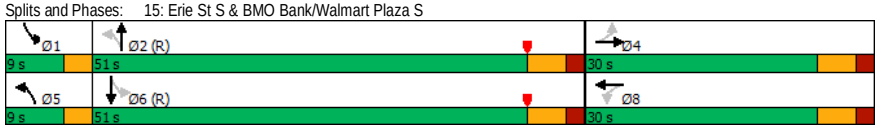


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	2	29	0	83	10	527	59	89	493	18
Future Volume (vph)	11	0	2	29	0	83	10	527	59	89	493	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		1.00	0.97		1.00	1.00		1.00	1.00	
Frt		0.850			0.850			0.985			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1580	0	1671	1247	0	1597	1478	0	1410	1510	0
Flt Permitted	0.694			0.757			0.417			0.300		
Satd. Flow (perm)	1310	1580	0	1329	1247	0	699	1478	0	444	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		336			315			9			3	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		163.7			447.4			85.9			79.3	
Travel Time (s)		11.8			32.2			6.2			5.7	
Confl. Peds. (#/hr)	4		1	1		4	7		7	7		7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	8%	0%	26%	13%	27%	19%	28%	26%	0%
Adj. Flow (vph)	13	0	2	34	0	97	12	613	69	103	573	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	2	0	34	97	0	12	682	0	103	594	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		9.0	51.0		9.0	51.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		10.0%	56.7%		10.0%	56.7%	
Maximum Green (s)	24.0	24.0		24.0	24.0		6.0	45.0		6.0	45.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	1	1		4	4			7			7	
Act Effct Green (s)	12.8	12.8		12.8	12.8		68.4	61.8		70.8	67.8	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.76	0.69		0.79	0.75	
v/c Ratio	0.07	0.00		0.18	0.22		0.02	0.67		0.25	0.52	
Control Delay	31.1	0.0		33.9	1.1		3.7	18.2		2.3	6.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.1	0.0		33.9	1.1		3.7	18.2		2.3	6.3	
LOS	C	A		C	A		A	B		A	A	
Approach Delay		26.9			9.6			18.0			5.7	
Approach LOS		C			A			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 59.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S



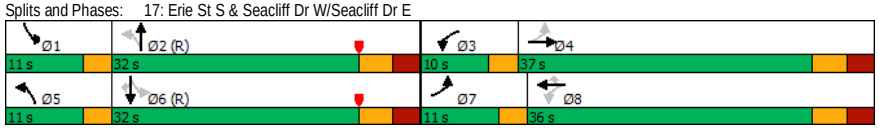
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	233	77	20	209	266	114	204	22	185	208	115
Future Volume (vph)	147	233	77	20	209	266	114	204	22	185	208	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97	0.99	1.00		0.99		0.97
Frt		0.963				0.850		0.986				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	1321	0	1253	1387	1214	1271	1474	0	1367	1545	1392
Flt Permitted	0.512			0.519			0.522			0.478		
Satd. Flow (perm)	759	1321	0	677	1387	1174	692	1474	0	683	1545	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				306		6				127
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			466.4			128.8	
Travel Time (s)		28.1			45.4			33.6			9.3	
Confl. Peds. (#/hr)	7		12	12		7	7		6	6		7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	27%	34%	46%	44%	37%	33%	42%	26%	33%	32%	23%	16%
Adj. Flow (vph)	169	268	89	23	240	306	131	234	25	213	239	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	357	0	23	240	306	131	259	0	213	239	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	11.0	37.0		10.0	36.0	36.0	11.0	32.0		11.0	32.0	32.0
Total Split (%)	12.2%	41.1%		11.1%	40.0%	40.0%	12.2%	35.6%		12.2%	35.6%	35.6%
Maximum Green (s)	8.0	30.5		7.0	29.5	29.5	8.0	25.5		8.0	25.5	25.5
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		12			7	7		6			7	7
Act Effct Green (s)	43.2	36.5		40.1	29.6	29.6	36.8	25.5		37.2	25.7	25.7
Actuated g/C Ratio	0.48	0.41		0.45	0.33	0.33	0.41	0.28		0.41	0.29	0.29
v/c Ratio	0.40	0.65		0.07	0.53	0.52	0.39	0.62		0.62	0.54	0.28
Control Delay	16.8	29.1		12.7	29.7	6.3	19.8	34.7		17.6	22.0	5.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	16.8	29.1		12.7	29.7	6.3	19.8	34.7		17.6	22.0	5.7
LOS	B	C		B	C	A	B	C		B	C	A
Approach Delay		25.1			16.4			29.7			16.7	
Approach LOS		C			B			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 21.2 Intersection LOS: C
Intersection Capacity Utilization 75.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

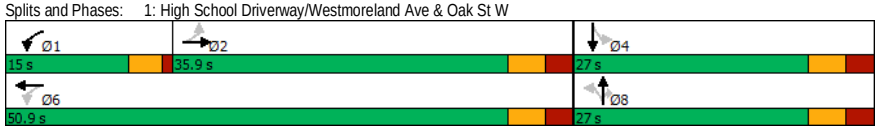


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	422	28	15	438	120	23	77	10	56	30	98
Future Volume (vph)	130	422	28	15	438	120	23	77	10	56	30	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00			0.96			0.99	0.97		0.94	
Frt		0.991			0.968				0.850		0.928	
Flt Protected	0.950			0.950				0.989			0.985	
Satd. Flow (prot)	1805	1745	0	1805	1633	0	0	1879	1615	0	1628	0
Flt Permitted	0.231			0.223				0.808			0.840	
Satd. Flow (perm)	431	1745	0	424	1633	0	0	1518	1567	0	1385	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			30				97		72	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	35		14	14		65	41		4	4		41
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Heavy Vehicles (%)	0%	8%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	203	659	44	23	684	188	36	120	16	88	47	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	703	0	23	872	0	0	156	16	0	288	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left			Left		
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	5.0	5.0	0.0	5.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	12	12			28		4	4	4	34	34	
Act Effct Green (s)	41.1	41.1		47.2	45.2			15.4	15.4		15.4	
Actuated g/C Ratio	0.57	0.57		0.65	0.62			0.21	0.21		0.21	
v/c Ratio	0.83	0.71		0.06	0.85			0.48	0.04		0.82	
Control Delay	50.8	20.7		6.2	22.5			29.9	0.2		39.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	50.8	20.7		6.2	22.5			29.9	0.2		39.7	
LOS	D	C		A	C			C	A		D	
Approach Delay		27.4			22.0			27.2			39.7	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 72.6			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 26.9		Intersection LOS: C	
Intersection Capacity Utilization 90.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W

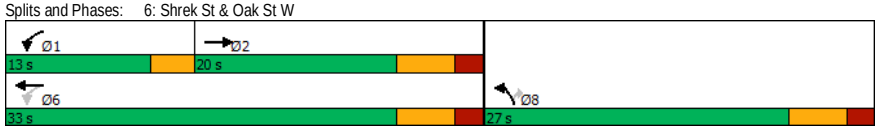


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	314	198	216	442	269	240
Future Volume (vph)	314	198	216	442	269	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00		1.00	0.98
Frt	0.942					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3138	0	1570	1863	1530	1369
Flt Permitted			0.270		0.950	
Satd. Flow (perm)	3138	0	445	1863	1525	1338
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	215					296
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)		5	2		2	12
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	388	244	267	546	332	296
Shared Lane Traffic (%)						
Lane Group Flow (vph)	632	0	267	546	332	296
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (m)	10.0		2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6		2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		7.0	27.0	9.0	9.0
Minimum Split (s)	18.0		10.0	33.0	27.0	27.0
Total Split (s)	20.0		13.0	33.0	27.0	27.0
Total Split (%)	33.3%		21.7%	55.0%	45.0%	45.0%
Maximum Green (s)	14.0		10.0	27.0	21.0	21.0
Yellow Time (s)	4.0		3.0	4.0	4.0	4.0
All-Red Time (s)	2.0		0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		3.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		None	Min	None	None
Walk Time (s)	12.0			27.0	9.0	9.0
Flash Dont Walk (s)	0.0			0.0	12.0	12.0
Pedestrian Calls (#/hr)	5			35	12	12
Act Effct Green (s)	14.9		30.2	27.2	16.2	16.2
Actuated g/C Ratio	0.27		0.54	0.49	0.29	0.29
v/c Ratio	0.63		0.62	0.60	0.74	0.49
Control Delay	15.9		15.7	14.7	28.4	5.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	15.9		15.7	14.7	28.4	5.3
LOS	B		B	B	C	A
Approach Delay	15.9			15.0	17.5	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	157	279	321	179	144	120
Future Volume (vph)	157	279	321	179	144	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			30.0	50.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99			0.96	1.00	0.97
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1712	1439	1223	1308	1380
Flt Permitted	0.457				0.950	
Satd. Flow (perm)	699	1712	1439	1172	1303	1340
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				199		133
Link Speed (k/h)		50	50		50	
Link Distance (m)		807.7	390.5		129.4	
Travel Time (s)		58.2	28.1		9.3	
Confl. Peds. (#/hr)	11			11	2	5
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	11%	32%	32%	38%	17%
Adj. Flow (vph)	174	310	357	199	160	133
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	310	357	199	160	133
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Perm	Perm
Protected Phases	5	2	6			
Permitted Phases	2			6	4	4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0	30.0	10.0	10.0
Minimum Split (s)	11.0	50.0	36.0	36.0	28.0	28.0
Total Split (s)	11.0	52.0	41.0	41.0	28.0	28.0
Total Split (%)	13.8%	65.0%	51.3%	51.3%	35.0%	35.0%
Maximum Green (s)	8.0	46.0	35.0	35.0	22.0	22.0
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	Max	None	None
Walk Time (s)		15.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)		10	11	11	5	5
Act Effct Green (s)	49.2	46.2	35.1	35.1	14.6	14.6
Actuated g/C Ratio	0.68	0.63	0.48	0.48	0.20	0.20
v/c Ratio	0.31	0.29	0.51	0.30	0.61	0.36
Control Delay	6.8	7.6	17.3	3.5	36.9	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	7.6	17.3	3.5	36.9	7.6
LOS	A	A	B	A	D	A
Approach Delay		7.3	12.4		23.6	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 72.8			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 56.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	348	50	88	370	108	113
Future Vol, veh/h	348	50	88	370	108	113
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	3	1	1	3	1	1
Mvmt Flow	370	53	94	394	115	120
Number of Lanes	1	0	1	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	17.4	16.6	12.7
HCM LOS	C	C	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	49%	0%	100%	0%
Vol Thru, %	0%	87%	0%	100%
Vol Right, %	51%	13%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	398	88	370
LT Vol	108	0	88	0
Through Vol	0	348	0	370
RT Vol	113	50	0	0
Lane Flow Rate	235	423	94	394
Geometry Grp	2	5	7	7
Degree of Util (X)	0.388	0.635	0.163	0.635
Departure Headway (Hd)	5.94	5.398	6.277	5.804
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	604	669	571	622
Service Time	3.989	3.437	4.015	3.543
HCM Lane V/C Ratio	0.389	0.632	0.165	0.633
HCM Control Delay	12.7	17.4	10.2	18.1
HCM Lane LOS	B	C	B	C
HCM 95th-tile Q	1.8	4.5	0.6	4.5

Intersection	
Intersection Delay, s/veh	30
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	86	168	154	338	238	128
Future Vol, veh/h	86	168	154	338	238	128
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	105	205	188	412	290	156
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	12.9	45.7	20.7
HCM LOS	B	E	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	31%	100%	0%	0%
Vol Thru, %	69%	0%	0%	65%
Vol Right, %	0%	0%	100%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	492	86	168	366
LT Vol	154	86	0	0
Through Vol	338	0	0	238
RT Vol	0	0	168	128
Lane Flow Rate	600	105	205	446
Geometry Grp	2	7	7	2
Degree of Util (X)	0.938	0.224	0.368	0.697
Departure Headway (Hd)	5.629	7.69	6.461	5.618
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	465	553	638
Service Time	3.698	5.474	4.244	3.694
HCM Lane V/C Ratio	0.935	0.226	0.371	0.699
HCM Control Delay	45.7	12.7	13	20.7
HCM Lane LOS	E	B	B	C
HCM 95th-tile Q	12.7	0.8	1.7	5.6

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	449	9	51	555	46	7	0	43	16	0	9
Future Vol, veh/h	32	449	9	51	555	46	7	0	43	16	0	9
Conflicting Peds, #/hr	3	0	79	79	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	8	0	0	10	0	0	0	0	0	0	0
Mvmt Flow	42	591	12	67	730	61	9	0	57	21	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	794	0	0	682	0	0	1662	1688	676	1608	1664	765
Stage 1	-	-	-	-	-	-	760	760	-	898	898	-
Stage 2	-	-	-	-	-	-	902	928	-	710	766	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	836	-	-	920	-	-	78	95	457	85	98	406
Stage 1	-	-	-	-	-	-	401	417	-	337	361	-
Stage 2	-	-	-	-	-	-	335	349	-	428	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	834	-	-	858	-	-	64	77	426	66	80	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	77	-	66	80	-
Stage 1	-	-	-	-	-	-	355	369	-	319	332	-
Stage 2	-	-	-	-	-	-	300	321	-	352	368	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.7	25.8	62.6
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	238	834	-	-	858	-	-	94
HCM Lane V/C Ratio	0.276	0.05	-	-	0.078	-	-	0.35
HCM Control Delay (s)	25.8	9.5	-	-	9.6	-	-	62.6
HCM Lane LOS	D	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0.3	-	-	1.4

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	491	675	35	21	15
Future Vol, veh/h	28	491	675	35	21	15
Conflicting Peds, #/hr	34	0	0	34	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	68	68	68	68	68	68
Heavy Vehicles, %	0	8	10	0	0	0
Mvmt Flow	41	722	993	51	31	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1078	0	-	0	1496	1053
Stage 1	-	-	-	-	1053	-
Stage 2	-	-	-	-	443	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	655	-	-	-	126	277
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	636	-	-	-	106	269
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	44.7
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	636	-	-	-	142
HCM Lane V/C Ratio	0.065	-	-	-	0.373
HCM Control Delay (s)	11.1	0.5	-	-	44.7
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	1.6

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	554	621	0	17	37
Future Vol, veh/h	0	554	621	0	17	37
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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	5	0	0	0
Mvmt Flow	0	602	675	0	18	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	976	338
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	301	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	252	664
Stage 1	0	-	-	0	473	-
Stage 2	0	-	-	0	731	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	252	664
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	731	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	252	664
HCM Lane V/C Ratio	-	-	0.073	0.061
HCM Control Delay (s)	-	-	20.4	10.8
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑			↱
Traffic Vol, veh/h	5	15	692	5	13	692
Future Vol, veh/h	5	15	692	5	13	692
Conflicting Peds, #/hr	6	6	0	10	7	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, %	0	0	2	0	0	2
Mvmt Flow	5	16	752	5	14	752

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1551	771	0	0	767	0
Stage 1	765	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	126	403	-	-	856	-
Stage 1	463	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	121	398	-	-	849	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	438	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.6	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	253	849	-
HCM Lane V/C Ratio	-	-	0.086	0.017	-
HCM Control Delay (s)	-	-	20.6	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	30.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	143	195	472	172	107	525
Future Vol, veh/h	143	195	472	172	107	525
Conflicting Peds, #/hr	0	2	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	27	26	23	31	15	20
Mvmt Flow	157	214	519	189	118	577

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1436	625	0	0	717	0
Stage 1	623	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Critical Hdwy	6.67	6.46	-	-	4.25	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.534	-	-	2.335	-
Pot Cap-1 Maneuver	~ 129	444	-	-	827	-
Stage 1	490	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 110	440	-	-	821	-
Mov Cap-2 Maneuver	~ 110	-	-	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	339	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	142.4	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	110	440	821	-
HCM Lane V/C Ratio	-	-	1.429	0.487	0.143	-
HCM Control Delay (s)	-	-	$ 308.3	20.7	10.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	11.2	2.6	0.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	12.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	2	2	0	77	21	591	6	179	593	46
Future Vol, veh/h	34	0	2	2	0	77	21	591	6	179	593	46
Conflicting Peds, #/hr	3	0	1	1	0	3	6	0	7	7	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	25	0	0	50	0	11	24	27	20	9	25	7
Mvmt Flow	39	0	2	2	0	88	24	672	7	203	674	52

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1883	1846	707	1839	1869	686	732	0	0	686	0	0
Stage 1	1112	1112	-	731	731	-	-	-	-	-	-	-
Stage 2	771	734	-	1108	1138	-	-	-	-	-	-	-
Critical Hdwy	7.35	6.5	6.2	7.6	6.5	6.31	4.34	-	-	4.19	-	-
Critical Hdwy Stg 1	6.35	5.5	-	6.6	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.35	5.5	-	6.6	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.725	4	3.3	3.95	4	3.399	2.416	-	-	2.281	-	-
Pot Cap-1 Maneuver	47	76	439	44	73	432	780	-	-	876	-	-
Stage 1	229	287	-	347	430	-	-	-	-	-	-	-
Stage 2	360	429	-	207	279	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 30	56	436	35	54	428	776	-	-	871	-	-
Mov Cap-2 Maneuver	~ 30	56	-	35	54	-	-	-	-	-	-	-
Stage 1	221	219	-	334	414	-	-	-	-	-	-	-
Stage 2	277	413	-	158	213	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 442.1	18.1	0.3	2.3
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	776	-	-	32	35	428	871	-	-
HCM Lane V/C Ratio	0.031	-	-	1.278	0.065	0.204	0.234	-	-
HCM Control Delay (s)	9.8	-	-	$ 442.1	114.9	15.6	10.4	-	-
HCM Lane LOS	A	-	-	F	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.5	0.2	0.8	0.9	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	4	1	590	522	2
Future Vol, veh/h	6	4	1	590	522	2
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	29	23	0
Mvmt Flow	7	4	1	641	567	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1218	575	576	0	-	0
Stage 1	575	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	201	521	1007	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	198	518	1001	-	-	-
Mov Cap-2 Maneuver	338	-	-	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	524	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1001	-	393	-	-
HCM Lane V/C Ratio	0.001	-	0.028	-	-
HCM Control Delay (s)	8.6	-	14.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	397	393	43	34	65
Future Vol, veh/h	65	397	393	43	34	65
Conflicting Peds, #/hr	5	0	0	5	1	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	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	74	451	447	49	39	74

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	501	0	-	0	1077	477
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1068	-	-	-	245	592
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	552	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1063	-	-	-	221	589
Mov Cap-2 Maneuver	-	-	-	-	221	-
Stage 1	-	-	-	-	568	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1063	-	-	-	375
HCM Lane V/C Ratio	0.069	-	-	-	0.3
HCM Control Delay (s)	8.6	0	-	-	18.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	7	335	1	1	262
Future Vol, veh/h	2	7	335	1	1	262
Conflicting Peds, #/hr	0	0	0	16	16	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, %	0	0	28	0	0	28
Mvmt Flow	2	8	364	1	1	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	668	381	0	0	381	0
Stage 1	381	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	426	671	-	-	1189	-
Stage 1	695	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	420	662	-	-	1173	-
Mov Cap-2 Maneuver	420	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	765	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	587	1173	-
HCM Lane V/C Ratio	-	-	0.017	0.001	-
HCM Control Delay (s)	-	-	11.2	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	109	379	45	160	244
Future Vol, veh/h	26	109	379	45	160	244
Conflicting Peds, #/hr	0	0	0	10	10	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	84	84	84	84	84	84
Heavy Vehicles, %	19	23	24	36	22	29
Mvmt Flow	31	130	451	54	190	290

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1158	488	0	0	515	0
Stage 1	488	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Critical Hdwy	6.59	6.43	-	-	4.32	-
Critical Hdwy Stg 1	5.59	-	-	-	-	-
Critical Hdwy Stg 2	5.59	-	-	-	-	-
Follow-up Hdwy	3.671	3.507	-	-	2.398	-
Pot Cap-1 Maneuver	201	539	-	-	956	-
Stage 1	583	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	534	-	-	948	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	364	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	3.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	360	948	-
HCM Lane V/C Ratio	-	-	0.446	0.201	-
HCM Control Delay (s)	-	-	22.8	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.7	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	6	485	2	4	403
Future Vol, veh/h	1	6	485	2	4	403
Conflicting Peds, #/hr	0	0	0	8	8	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, %	0	0	24	0	0	1
Mvmt Flow	1	7	527	2	4	438

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	982	536	0	0	537	0
Stage 1	536	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	279	549	-	-	1041	-
Stage 1	591	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	276	545	-	-	1034	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	646	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	478	1034	-
HCM Lane V/C Ratio	-	-	0.016	0.004	-
HCM Control Delay (s)	-	-	12.7	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	12	5	1	10	2	461	1	1	382	18
Future Vol, veh/h	0	0	12	5	1	10	2	461	1	1	382	18
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	13	5	1	11	2	501	1	1	415	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	427	939	951	508	437	0	0	508	0	0
Stage 1	-	-	-	512	512	-	-	-	-	-	-	-
Stage 2	-	-	-	427	439	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	632	246	262	569	1134	-	-	1067	-	-
Stage 1	0	0	-	548	540	-	-	-	-	-	-	-
Stage 2	0	0	-	610	582	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	631	239	259	566	1132	-	-	1062	-	-
Mov Cap-2 Maneuver	-	-	-	239	259	-	-	-	-	-	-	-
Stage 1	-	-	-	544	536	-	-	-	-	-	-	-
Stage 2	-	-	-	597	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	15	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1132	-	-	631	377	1062	-	-
HCM Lane V/C Ratio	0.002	-	-	0.021	0.046	0.001	-	-
HCM Control Delay (s)	8.2	0	-	10.8	15	8.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	11	0	0	4	6	1	511	1	5	401	1
Future Vol, veh/h	4	11	0	0	4	6	1	511	1	5	401	1
Conflicting Peds, #/hr	0	0	6	6	0	0	2	0	6	6	0	2
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	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	33	100	0	0	100	100	100	23	100	75	19	0
Mvmt Flow	5	13	0	0	5	7	1	594	1	6	466	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1084	1084	475	1094	1084	601	469	0	0	601	0	0
Stage 1	481	481	-	603	603	-	-	-	-	-	-	-
Stage 2	603	603	-	491	481	-	-	-	-	-	-	-
Critical Hdwy	7.43	7.5	6.2	7.1	7.5	7.2	5.1	-	-	4.85	-	-
Critical Hdwy Stg 1	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4.9	3.3	3.5	4.9	4.2	3.1	-	-	2.875	-	-
Pot Cap-1 Maneuver	170	147	594	193	147	358	726	-	-	702	-	-
Stage 1	512	420	-	489	363	-	-	-	-	-	-	-
Stage 2	436	363	-	563	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	160	144	590	176	144	356	725	-	-	698	-	-
Mov Cap-2 Maneuver	160	144	-	176	144	-	-	-	-	-	-	-
Stage 1	510	414	-	486	360	-	-	-	-	-	-	-
Stage 2	421	360	-	536	414	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.5	22	0	0.1
HCM LOS	D	C		

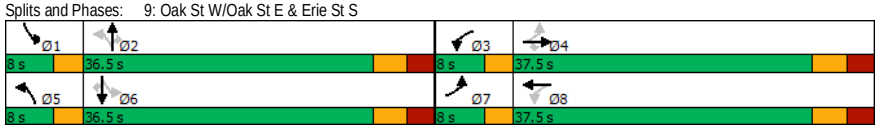
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	725	-	-	148	224	698	-	-
HCM Lane V/C Ratio	0.002	-	-	0.118	0.052	0.008	-	-
HCM Control Delay (s)	10	0	-	32.5	22	10.2	0	-
HCM Lane LOS	A	A	-	D	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	364	118	231	343	137	113	485	314	167	602	147
Future Volume (vph)	141	364	118	231	343	137	113	485	314	167	602	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		35.0	50.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.97	1.00	0.99				0.92	0.98		0.97
Frt			0.850		0.957				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3351	0	1597	1681	1429	1770	1743	1583
Flt Permitted	0.380			0.294			0.132			0.256		
Satd. Flow (perm)	703	1863	1442	511	3351	0	222	1681	1321	468	1743	1539
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126		72				209			156
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			676.7			512.5			486.5	
Travel Time (s)		14.7			48.7			36.9			35.0	
Confl. Peds. (#/hr)	9		4	4		9	12		33	33		12
Confl. Bikes (#/hr)						2						6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	13%	13%	13%	2%	9%	2%
Adj. Flow (vph)	150	387	126	246	365	146	120	516	334	178	640	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	387	126	246	511	0	120	516	334	178	640	156
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	28.0
Minimum Split (s)	8.0	37.5	37.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	34.5
Total Split (s)	8.0	37.5	37.5	8.0	37.5		8.0	36.5	36.5	8.0	36.5	36.5
Total Split (%)	8.9%	41.7%	41.7%	8.9%	41.7%		8.9%	40.6%	40.6%	8.9%	40.6%	40.6%
Maximum Green (s)	5.0	31.0	31.0	5.0	31.0		5.0	30.0	30.0	5.0	30.0	30.0
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	3.5
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	Max
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	6.0
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	20.0
Pedestrian Calls (#/hr)		1	1		6			20	20		9	9
Act Effct Green (s)	30.3	21.7	21.7	30.3	21.7		38.7	30.1	30.1	38.7	30.1	30.1
Actuated g/C Ratio	0.37	0.27	0.27	0.37	0.27		0.48	0.37	0.37	0.48	0.37	0.37
v/c Ratio	0.46	0.78	0.26	0.94	0.54		0.63	0.83	0.54	0.59	0.99	0.23
Control Delay	20.2	38.4	5.7	65.7	23.3		30.2	37.8	12.0	22.6	61.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	38.4	5.7	65.7	23.3		30.2	37.8	12.0	22.6	61.0	4.7
LOS	C	D	A	E	C		C	D	B	C	E	A
Approach Delay		28.1			37.1			28.0			44.9	
Approach LOS		C			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 81			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 35.0		Intersection LOS: C	
Intersection Capacity Utilization 87.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S

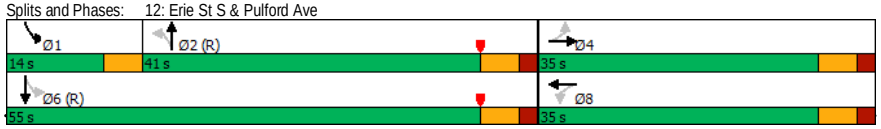


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	61	166	129	75	66	104	730	95	74	678	48
Future Volume (vph)	67	61	166	129	75	66	104	730	95	74	678	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		1.00	0.99		1.00	0.99			1.00	
Frt		0.890			0.930			0.983			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1612	1630	0	1770	1636	0	1770	1672	0	1656	1722	0
Flt Permitted	0.648			0.447			0.340			0.092		
Satd. Flow (perm)	1094	1630	0	831	1636	0	631	1672	0	160	1722	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		161			52			9			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		2	2		4	10		26	26		10
Confl. Bikes (#/hr)						1						4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	12%	2%	2%	2%	2%	12%	2%	12%	2%	9%	9%	9%
Adj. Flow (vph)	71	64	175	136	79	69	109	768	100	78	714	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	239	0	136	148	0	109	868	0	78	765	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		10.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		41.0	41.0		14.0	55.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%		45.6%	45.6%		15.6%	61.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		35.0	35.0		10.0	49.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	2	2		4	4		16	16			7	
Act Effct Green (s)	18.5	18.5		18.5	18.5		48.3	48.3		61.5	59.5	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.54	0.54		0.68	0.66	
v/c Ratio	0.32	0.52		0.80	0.39		0.32	0.96		0.28	0.67	
Control Delay	31.6	14.0		63.9	21.1		7.8	29.3		9.0	15.0	
Queue Delay	0.0	0.4		1.2	0.0		0.0	7.7		0.0	34.5	
Total Delay	31.6	14.4		65.2	21.1		7.8	37.0		9.0	49.5	
LOS	C	B		E	C		A	D		A	D	
Approach Delay		18.3			42.2			33.8			45.7	
Approach LOS		B			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 37.0		Intersection LOS: D	
Intersection Capacity Utilization 94.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 12: Erie St S & Pulford Ave

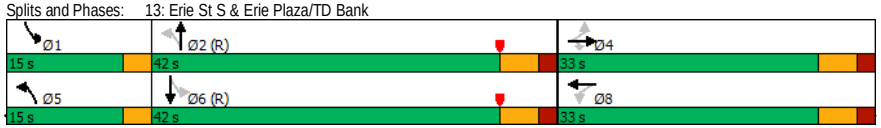


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	17	49	59	11	55	55	762	73	66	862	1
Future Volume (vph)	96	17	49	59	11	55	55	762	73	66	862	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.98		0.99			1.00			1.00	
Frt			0.850		0.940			0.987				
Flt Protected		0.959			0.977		0.950			0.950		
Satd. Flow (prot)	0	1662	1583	0	1628	0	1770	1693	0	1656	1743	0
Flt Permitted		0.689			0.801		0.091			0.091		
Satd. Flow (perm)	0	1190	1546	0	1333	0	170	1693	0	159	1743	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		45			6				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		185.2			244.2			140.3			138.2	
Travel Time (s)		13.3			17.6			10.1			10.0	
Confl. Peds. (#/hr)	3		2	2		3	9		22	22		9
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	99	18	51	61	11	57	57	786	75	68	889	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	51	0	129	0	57	861	0	68	890	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	42.0		15.0	42.0	
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		16.7%	46.7%		16.7%	46.7%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	36.0		12.0	36.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	2	2	2	3	3			15			6	
Act Effct Green (s)		27.0	27.0		27.0		58.2	46.8		58.2	46.8	
Actuated g/C Ratio		0.30	0.30		0.30		0.65	0.52		0.65	0.52	
v/c Ratio		0.33	0.10		0.30		0.18	0.98		0.23	0.98	
Control Delay		27.7	3.7		18.0		11.3	53.3		10.0	51.5	
Queue Delay		0.0	0.0		0.0		0.0	39.9		0.0	4.9	
Total Delay		27.7	3.7		18.0		11.3	93.2		10.0	56.4	
LOS		C	A		B		B	F		B	E	
Approach Delay		20.4			18.0			88.1			53.2	
Approach LOS		C			B			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 88 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 63.3		Intersection LOS: E	
Intersection Capacity Utilization 105.4%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank

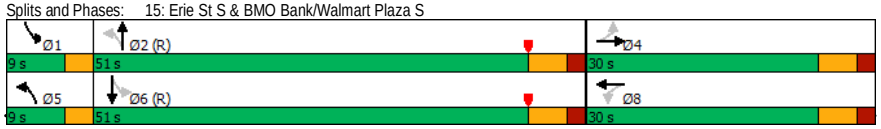


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	17	135	1	178	6	549	116	63	674	12
Future Volume (vph)	12	2	17	135	1	178	6	549	116	63	674	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		0.99	0.97		1.00	0.99		0.99	1.00	
Frt		0.865			0.851			0.974			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1511	0	1556	1381	0	1805	1569	0	1626	1592	0
Flt Permitted	0.541			0.744			0.310			0.262		
Satd. Flow (perm)	1019	1511	0	1212	1381	0	586	1569	0	446	1592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			185			17			1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		163.7			447.4			85.9			79.3	
Travel Time (s)		11.8			32.2			6.2			5.7	
Confl. Peds. (#/hr)	6		3	3		6	13		15	15		13
Confl. Bikes (#/hr)									3			2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	7%	16%	100%	13%	0%	17%	17%	11%	19%	14%
Adj. Flow (vph)	13	2	18	141	1	185	6	572	121	66	702	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	20	0	141	186	0	6	693	0	66	715	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		9.0	51.0		9.0	51.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		10.0%	56.7%		10.0%	56.7%	
Maximum Green (s)	24.0	24.0		24.0	24.0		6.0	45.0		6.0	45.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	3	3		6	6			12			10	
Act Effct Green (s)	16.2	16.2		16.2	16.2		62.1	54.3		64.2	60.0	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.69	0.60		0.71	0.67	
v/c Ratio	0.07	0.07		0.65	0.47		0.01	0.73		0.17	0.67	
Control Delay	28.2	13.3		47.0	8.6		4.0	19.6		1.9	8.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.2	13.3		47.0	8.6		4.0	19.6		1.9	8.5	
LOS	C	B		D	A		A	B		A	A	
Approach Delay		19.2			25.1			19.5			7.9	
Approach LOS		B			C			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 14 (16%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 69.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S

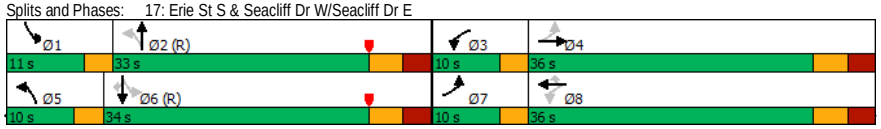


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	333	107	33	365	315	135	184	46	324	230	268
Future Volume (vph)	177	333	107	33	365	315	135	184	46	324	230	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.96	0.98	0.99		0.99		0.95
Frt		0.964				0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1411	0	1357	1508	1417	1456	1548	0	1467	1667	1346
Flt Permitted	0.341			0.337			0.554			0.506		
Satd. Flow (perm)	564	1411	0	479	1508	1362	835	1548	0	770	1667	1285
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19				328		14				276
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			466.4			128.8	
Travel Time (s)		28.1			45.4			33.6			9.3	
Confl. Peds. (#/hr)	9		7	7		9	13		12	12		13
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	14%	30%	25%	33%	26%	14%	24%	16%	26%	23%	14%	20%
Adj. Flow (vph)	184	347	111	34	380	328	141	192	48	338	240	279
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	458	0	34	380	328	141	240	0	338	240	279
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	10.0	36.0		10.0	36.0	36.0	10.0	33.0		11.0	34.0	34.0
Total Split (%)	11.1%	40.0%		11.1%	40.0%	40.0%	11.1%	36.7%		12.2%	37.8%	37.8%
Maximum Green (s)	7.0	29.5		7.0	29.5	29.5	7.0	26.5		8.0	27.5	27.5
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		4			6	6		9			10	10
Act Effct Green (s)	41.2	33.5		40.0	29.5	29.5	37.0	26.5		39.0	27.5	27.5
Actuated g/C Ratio	0.46	0.37		0.44	0.33	0.33	0.41	0.29		0.43	0.31	0.31
v/c Ratio	0.55	0.85		0.12	0.77	0.49	0.36	0.52		0.86	0.47	0.48
Control Delay	21.4	44.1		13.8	39.5	5.5	18.2	29.5		33.2	21.4	6.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	21.4	44.1		13.8	39.5	5.5	18.2	29.5		33.2	21.4	6.2
LOS	C	D		B	D	A	B	C		C	C	A
Approach Delay		37.6			23.3			25.3			21.1	
Approach LOS		D			C			C			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 90		
Offset: 42 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.86		
Intersection Signal Delay: 26.4	Intersection LOS: C	
Intersection Capacity Utilization 85.5%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

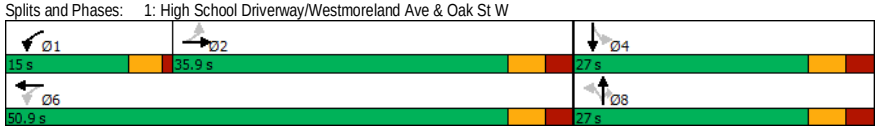


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	595	9	13	492	73	13	16	13	47	6	17
Future Volume (vph)	11	595	9	13	492	73	13	16	13	47	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00			1.00			0.99	0.96		0.98	
Frt		0.998			0.981				0.850		0.967	
Flt Protected	0.950			0.950				0.979			0.968	
Satd. Flow (prot)	1805	1757	0	1805	1720	0	0	1860	1615	0	1764	0
Flt Permitted	0.429			0.316				0.854			0.780	
Satd. Flow (perm)	809	1757	0	600	1720	0	0	1613	1544	0	1399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			16				97		19	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	6		7	7		6	6		10	10		6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	8%	0%	0%	9%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	12	654	10	14	541	80	14	18	14	52	7	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	664	0	14	621	0	0	32	14	0	78	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left			Left		
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	5.0	5.0	0.0	5.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	2	2			1		5	5	5	4	4	
Act Effct Green (s)	51.2	51.2		54.0	53.4			9.1	9.1		9.1	
Actuated g/C Ratio	0.73	0.73		0.77	0.76			0.13	0.13		0.13	
v/c Ratio	0.02	0.52		0.02	0.48			0.15	0.05		0.40	
Control Delay	7.4	10.4		3.8	6.6			27.1	0.3		27.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	7.4	10.4		3.8	6.6			27.1	0.3		27.5	
LOS	A	B		A	A			C	A		C	
Approach Delay		10.4			6.5			18.9			27.5	
Approach LOS		B			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 70.4			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	420	334	279	360	230	238
Future Volume (vph)	420	334	279	360	230	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98				1.00	0.97
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3078	0	1570	1863	1530	1369
Flt Permitted			0.157		0.950	
Satd. Flow (perm)	3078	0	259	1863	1523	1333
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	236					274
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)		5	5		2	9
Confl. Bikes (#/hr)						3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	483	384	321	414	264	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	867	0	321	414	264	274
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (m)	10.0		2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6		2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	13.0		7.0	28.0	20.0	20.0
Minimum Split (s)	19.0		10.0	34.0	26.0	26.0
Total Split (s)	35.0		25.0	60.0	30.0	30.0
Total Split (%)	38.9%		27.8%	66.7%	33.3%	33.3%
Maximum Green (s)	29.0		22.0	54.0	24.0	24.0
Yellow Time (s)	4.0		3.0	4.0	4.0	4.0
All-Red Time (s)	2.0		0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		3.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		None	Min	None	None
Walk Time (s)	13.0			28.0	8.0	8.0
Flash Dont Walk (s)	0.0			0.0	12.0	12.0
Pedestrian Calls (#/hr)	2			1	7	7
Act Effct Green (s)	22.4		43.8	40.7	21.7	21.7
Actuated g/C Ratio	0.30		0.59	0.54	0.29	0.29
v/c Ratio	0.80		0.77	0.41	0.59	0.47
Control Delay	23.9		26.8	11.0	31.8	6.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	23.9		26.8	11.0	31.8	6.6
LOS	C		C	B	C	A
Approach Delay	23.9			17.9	18.9	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74.7			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 20.6		Intersection LOS: C	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	431	619	211	222	169
Future Volume (vph)	194	431	619	211	222	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			30.0	50.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97	0.98	0.96
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1792	1532	1292	1517	1392
Flt Permitted	0.181				0.950	
Satd. Flow (perm)	279	1792	1532	1259	1492	1330
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				121		188
Link Speed (k/h)		50	50		50	
Link Distance (m)		807.7	390.5		129.4	
Travel Time (s)		58.2	28.1		9.3	
Confl. Peds. (#/hr)	3			3	8	10
Confl. Bikes (#/hr)				1		3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	6%	24%	25%	19%	16%
Adj. Flow (vph)	216	479	688	234	247	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	216	479	688	234	247	188
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0	30.0	10.0	10.0
Minimum Split (s)	14.0	50.0	36.0	36.0	28.0	28.0
Total Split (s)	14.0	62.0	48.0	48.0	28.0	28.0
Total Split (%)	15.6%	68.9%	53.3%	53.3%	31.1%	31.1%
Maximum Green (s)	11.0	56.0	42.0	42.0	22.0	22.0
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	Min	Min	None	None
Walk Time (s)		7.0	15.0	15.0	7.0	7.0
Flash Dont Walk (s)		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)		9	0	0	8	8
Act Effct Green (s)	56.6	53.5	39.9	39.9	17.7	17.7
Actuated g/C Ratio	0.68	0.64	0.48	0.48	0.21	0.21
v/c Ratio	0.64	0.42	0.94	0.35	0.77	0.44
Control Delay	16.6	9.2	44.6	8.8	48.0	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	9.2	44.6	8.8	48.0	8.0
LOS	B	A	D	A	D	A
Approach Delay		11.5	35.5		30.7	
Approach LOS		B	D		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 83.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 70.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	53.4
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	504	121	172	472	126	141
Future Vol, veh/h	504	121	172	472	126	141
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	3	1	1	3	1	1
Mvmt Flow	536	129	183	502	134	150
Number of Lanes	1	0	1	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	88.3	34.5	17.4
HCM LOS	F	D	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	47%	0%	100%	0%
Vol Thru, %	0%	81%	0%	100%
Vol Right, %	53%	19%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	267	625	172	472
LT Vol	126	0	172	0
Through Vol	0	504	0	472
RT Vol	141	121	0	0
Lane Flow Rate	284	665	183	502
Geometry Grp	2	5	7	7
Degree of Util (X)	0.527	1.094	0.349	0.893
Departure Headway (Hd)	6.949	5.926	7.083	6.606
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	523	612	511	552
Service Time	4.949	3.964	4.783	4.306
HCM Lane V/C Ratio	0.543	1.087	0.358	0.909
HCM Control Delay	17.4	88.3	13.5	42.1
HCM Lane LOS	C	F	B	E
HCM 95th-tile Q	3	19.7	1.6	10.3

Intersection	
Intersection Delay, s/veh	33.6
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	93	168	133	398	438	114
Future Vol, veh/h	93	168	133	398	438	114
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	98	177	140	419	461	120
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	12.7	38.4	38.8
HCM LOS	B	E	E

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	25%	100%	0%	0%
Vol Thru, %	75%	0%	0%	79%
Vol Right, %	0%	0%	100%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	531	93	168	552
LT Vol	133	93	0	0
Through Vol	398	0	0	438
RT Vol	0	0	168	114
Lane Flow Rate	559	98	177	581
Geometry Grp	2	7	7	2
Degree of Util (X)	0.891	0.214	0.327	0.899
Departure Headway (Hd)	5.736	7.886	6.654	5.568
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	452	536	645
Service Time	3.809	5.679	4.446	3.641
HCM Lane V/C Ratio	0.893	0.217	0.33	0.901
HCM Control Delay	38.4	12.8	12.7	38.8
HCM Lane LOS	E	B	B	E
HCM 95th-tile Q	10.8	0.8	1.4	11.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	636	2	5	551	7	15	0	16	17	0	13
Future Vol, veh/h	6	636	2	5	551	7	15	0	16	17	0	13
Conflicting Peds, #/hr	12	0	13	13	0	12	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	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	8	0	0	9	0	0	0	0	0	0	0
Mvmt Flow	6	669	2	5	580	7	16	0	17	18	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	599	0	0	684	0	0	1296	1304	683	1297	1302	596
Stage 1	-	-	-	-	-	-	695	695	-	606	606	-
Stage 2	-	-	-	-	-	-	601	609	-	691	696	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	988	-	-	919	-	-	140	162	453	140	162	507
Stage 1	-	-	-	-	-	-	436	447	-	487	490	-
Stage 2	-	-	-	-	-	-	491	488	-	438	446	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	978	-	-	909	-	-	134	157	448	132	157	502
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	157	-	132	157	-
Stage 1	-	-	-	-	-	-	429	439	-	479	482	-
Stage 2	-	-	-	-	-	-	475	480	-	419	438	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	25.3	27.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	210	978	-	-	909	-	-	194
HCM Lane V/C Ratio	0.155	0.006	-	-	0.006	-	-	0.163
HCM Control Delay (s)	25.3	8.7	-	-	9	-	-	27.1
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	727	535	55	27	11
Future Vol, veh/h	9	727	535	55	27	11
Conflicting Peds, #/hr	4	0	0	4	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	89	89	89	89	89	89
Heavy Vehicles, %	0	8	9	0	0	0
Mvmt Flow	10	817	601	62	30	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	667	0	-	0	1065	636
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	932	-	-	-	234	481
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	929	-	-	-	228	479
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	929	-	-	-	269
HCM Lane V/C Ratio	0.011	-	-	-	0.159
HCM Control Delay (s)	8.9	0.1	-	-	20.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	658	577	0	33	62
Future Vol, veh/h	0	658	577	0	33	62
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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	15	0	0	0
Mvmt Flow	0	715	627	0	36	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	985	314
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	358	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	249	688
Stage 1	0	-	-	0	500	-
Stage 2	0	-	-	0	684	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	249	688
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	249	688
HCM Lane V/C Ratio	-	-	0.144	0.098
HCM Control Delay (s)	-	-	21.9	10.8
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	0.3

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑			↱
Traffic Vol, veh/h	13	10	919	21	16	869
Future Vol, veh/h	13	10	919	21	16	869
Conflicting Peds, #/hr	6	8	0	32	32	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, %	0	0	16	0	0	11
Mvmt Flow	14	11	999	23	17	945

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2028	1051	0	0	1054	0
Stage 1	1043	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	64	278	-	-	668	-
Stage 1	342	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	59	269	-	-	650	-
Mov Cap-2 Maneuver	59	-	-	-	-	-
Stage 1	333	-	-	-	-	-
Stage 2	343	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	60.5	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	89	650	-
HCM Lane V/C Ratio	-	-	0.281	0.027	-
HCM Control Delay (s)	-	-	60.5	10.7	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	1	0.1	-

Intersection	
Int Delay, s/veh	12.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	189	746	115	117	746
Future Vol, veh/h	52	189	746	115	117	746
Conflicting Peds, #/hr	0	3	0	19	19	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	17	16	13	9	11
Mvmt Flow	57	208	820	126	129	820

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1980	905	0	0	965	0
Stage 1	902	-	-	-	-	-
Stage 2	1078	-	-	-	-	-
Critical Hdwy	6.52	6.37	-	-	4.19	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.453	-	-	2.281	-
Pot Cap-1 Maneuver	64	314	-	-	686	-
Stage 1	380	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 51	308	-	-	675	-
Mov Cap-2 Maneuver	~ 51	-	-	-	-	-
Stage 1	374	-	-	-	-	-
Stage 2	253	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	92.9	0	1.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	51	308	675	-
HCM Lane V/C Ratio	-	-	1.12	0.674	0.19	-
HCM Control Delay (s)	-	-	293.3	37.8	11.6	-
HCM Lane LOS	-	-	F	E	B	-
HCM 95th %tile Q(veh)	-	-	5	4.6	0.7	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	9	5	1	176	22	703	13	219	733	17
Future Vol, veh/h	11	0	9	5	1	176	22	703	13	219	733	17
Conflicting Peds, #/hr	3	0	0	0	0	3	11	0	15	15	0	11
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	14	25	0	14	11	15	18	12	18	0
Mvmt Flow	12	0	9	5	1	185	23	740	14	231	772	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2143	2069	792	2056	2071	765	801	0	0	769	0	0
Stage 1	1254	1254	-	808	808	-	-	-	-	-	-	-
Stage 2	889	815	-	1248	1263	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.34	7.35	6.5	6.34	4.21	-	-	4.22	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.426	3.725	4	3.426	2.299	-	-	2.308	-	-
Pot Cap-1 Maneuver	36	55	371	35	55	385	784	-	-	802	-	-
Stage 1	213	246	-	343	397	-	-	-	-	-	-	-
Stage 2	341	394	-	190	243	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	14	37	368	26	37	379	777	-	-	792	-	-
Mov Cap-2 Maneuver	14	37	-	26	37	-	-	-	-	-	-	-
Stage 1	205	173	-	329	380	-	-	-	-	-	-	-
Stage 2	168	377	-	131	171	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 349.8	28.2	0.3	2.6
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	25	27	379	792	-	-
HCM Lane V/C Ratio	0.03	-	-	0.842	0.234	0.489	0.291	-	-
HCM Control Delay (s)	9.8	-	-	$ 349.8	175.1	23.2	11.4	-	-
HCM Lane LOS	A	-	-	F	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	0.7	2.6	1.2	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	1	668	822	4
Future Vol, veh/h	2	4	1	668	822	4
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	17	19	0
Mvmt Flow	2	4	1	726	893	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1636	908	910	0	-	0
Stage 1	908	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	112	336	757	-	-	-
Stage 1	397	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	109	332	749	-	-	-
Mov Cap-2 Maneuver	246	-	-	-	-	-
Stage 1	392	-	-	-	-	-
Stage 2	477	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	749	-	297	-	-
HCM Lane V/C Ratio	0.001	-	0.022	-	-
HCM Control Delay (s)	9.8	-	17.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	104	542	540	43	29	104
Future Vol, veh/h	104	542	540	43	29	104
Conflicting Peds, #/hr	3	0	0	3	1	2
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	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	118	616	614	49	33	118

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	666	0	-	0	1495	644
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	853	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	928	-	-	-	137	476
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	926	-	-	-	110	474
Mov Cap-2 Maneuver	-	-	-	-	110	-
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	33
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	926	-	-	-	275
HCM Lane V/C Ratio	0.128	-	-	-	0.55
HCM Control Delay (s)	9.5	0	-	-	33
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	3.1

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	5	403	2	9	389
Future Vol, veh/h	2	5	403	2	9	389
Conflicting Peds, #/hr	0	0	0	8	8	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, %	0	0	24	0	0	23
Mvmt Flow	2	5	438	2	10	423

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	890	447	0	0	448	0
Stage 1	447	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	316	616	-	-	1123	-
Stage 1	649	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	310	612	-	-	1115	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	479	1115	-
HCM Lane V/C Ratio	-	-	0.016	0.009	-
HCM Control Delay (s)	-	-	12.6	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	13.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	72	154	378	40	181	425
Future Vol, veh/h	72	154	378	40	181	425
Conflicting Peds, #/hr	2	2	0	3	3	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	94	94	94	94	94	94
Heavy Vehicles, %	17	19	19	22	21	24
Mvmt Flow	77	164	402	43	193	452

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1267	429	0	0	448	0
Stage 1	427	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Critical Hdwy	6.57	6.39	-	-	4.31	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.471	-	-	2.389	-
Pot Cap-1 Maneuver	173	591	-	-	1019	-
Stage 1	627	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	128	589	-	-	1016	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	297	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	67.7	0	2.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	274	1016	-
HCM Lane V/C Ratio	-	-	0.877	0.19	-
HCM Control Delay (s)	-	-	67.7	9.4	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	7.6	0.7	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	3	528	4	3	603
Future Vol, veh/h	3	3	528	4	3	603
Conflicting Peds, #/hr	0	0	0	3	3	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, %	0	0	19	0	0	21
Mvmt Flow	3	3	574	4	3	655

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1240	579	0	0	581	0
Stage 1	579	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	195	519	-	-	1003	-
Stage 1	564	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	518	-	-	1000	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	514	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	1000	-
HCM Lane V/C Ratio	-	-	0.023	0.003	-
HCM Control Delay (s)	-	-	18.1	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	45	2	2	2	4	507	5	7	546	37
Future Vol, veh/h	0	0	45	2	2	2	4	507	5	7	546	37
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	4	4	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	49	2	2	2	4	551	5	8	593	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	615	1195	1217	558	635	0	0	560	0	0
Stage 1	-	-	-	566	566	-	-	-	-	-	-	-
Stage 2	-	-	-	629	651	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	495	165	182	533	958	-	-	1021	-	-
Stage 1	0	0	-	513	511	-	-	-	-	-	-	-
Stage 2	0	0	-	474	468	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	494	146	178	531	956	-	-	1018	-	-
Mov Cap-2 Maneuver	-	-	-	146	178	-	-	-	-	-	-	-
Stage 1	-	-	-	508	506	-	-	-	-	-	-	-
Stage 2	-	-	-	422	461	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	22.8	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	956	-	-	494	209	1018	-	-
HCM Lane V/C Ratio	0.005	-	-	0.099	0.031	0.007	-	-
HCM Control Delay (s)	8.8	0	-	13.1	22.8	8.6	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	10	1	2	2	13	6	470	0	1	625	7
Future Vol, veh/h	1	10	1	2	2	13	6	470	0	1	625	7
Conflicting Peds, #/hr	0	0	14	14	0	0	3	0	4	4	0	3
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	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	100	100	100	100	100	89	60	19	0	0	19	60
Mvmt Flow	1	11	1	2	2	14	6	505	0	1	672	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1206	1202	693	1219	1206	509	683	0	0	509	0	0
Stage 1	681	681	-	521	521	-	-	-	-	-	-	-
Stage 2	525	521	-	698	685	-	-	-	-	-	-	-
Critical Hdwy	8.1	7.5	7.2	8.1	7.5	7.09	4.7	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4.9	4.2	4.4	4.9	4.101	2.74	-	-	2.2	-	-
Pot Cap-1 Maneuver	104	122	313	101	121	425	691	-	-	1066	-	-
Stage 1	315	330	-	396	400	-	-	-	-	-	-	-
Stage 2	394	400	-	307	328	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	120	309	91	119	424	689	-	-	1062	-	-
Mov Cap-2 Maneuver	98	120	-	91	119	-	-	-	-	-	-	-
Stage 1	310	328	-	390	394	-	-	-	-	-	-	-
Stage 2	374	394	-	292	326	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.4	20.9	0.1	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	689	-	-	124	245	1062	-	-
HCM Lane V/C Ratio	0.009	-	-	0.104	0.075	0.001	-	-
HCM Control Delay (s)	10.3	0	-	37.4	20.9	8.4	0	-
HCM Lane LOS	B	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

FUTURE CONDITIONS – ULTIMATE

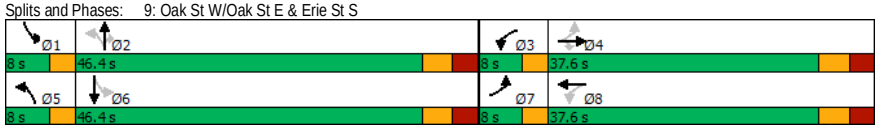
McINTOSH PERRY

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	311	104	193	385	91	128	394	234	79	487	124
Future Volume (vph)	118	311	104	193	385	91	128	394	234	79	487	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		0.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99	0.99		1.00		0.95	0.99	0.99	
Frt			0.850		0.971				0.850		0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3412	0	1583	1667	1417	1770	3236	0
Flt Permitted	0.353			0.327			0.356			0.440		
Satd. Flow (perm)	652	1863	1449	567	3412	0	590	1667	1343	808	3236	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107		30				241		38	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			676.7			512.5			486.5	
Travel Time (s)		14.7			48.7			36.9			35.0	
Confl. Peds. (#/hr)	9		9	9		9	12		17	17		12
Confl. Bikes (#/hr)												5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	14%	14%	14%	2%	9%	2%
Adj. Flow (vph)	122	321	107	199	397	94	132	406	241	81	502	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	321	107	199	491	0	132	406	241	81	630	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	4	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	
Minimum Split (s)	8.0	37.5	37.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	
Total Split (s)	8.0	37.6	37.6	8.0	37.6		8.0	46.4	46.4	8.0	46.4	
Total Split (%)	8.0%	37.6%	37.6%	8.0%	37.6%		8.0%	46.4%	46.4%	8.0%	46.4%	
Maximum Green (s)	5.0	31.1	31.1	5.0	31.1		5.0	39.9	39.9	5.0	39.9	
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)		9	9		9			16	16		12	
Act Effct Green (s)	28.9	20.4	20.4	28.9	20.4		49.2	41.8	41.8	48.5	40.0	
Actuated g/C Ratio	0.32	0.23	0.23	0.32	0.23		0.55	0.47	0.47	0.54	0.45	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.45	0.76	0.26	0.82	0.61		0.35	0.52	0.32	0.16	0.43	
Control Delay	25.5	44.1	7.2	50.5	32.2		13.2	21.8	3.7	10.7	17.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	25.5	44.1	7.2	50.5	32.2		13.2	21.8	3.7	10.7	17.7	
LOS	C	D	A	D	C		B	C	A	B	B	
Approach Delay		32.8			37.5			14.8			16.9	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 89.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 24.7		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S



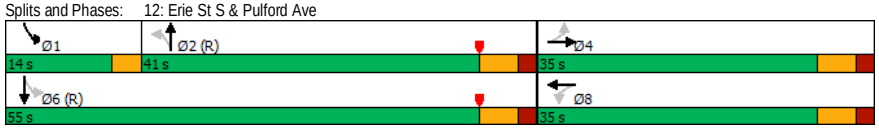
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Future Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	0.99		0.99	1.00	
Frt		0.885			0.936			0.977			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	1629	0	1770	1642	0	1770	3099	0	1641	3254	0
Flt Permitted	0.675			0.553			0.406			0.343		
Satd. Flow (perm)	1112	1629	0	1027	1642	0	752	3099	0	588	3254	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		140			44			27			8	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		4	4		4	11		15	15		11
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	15%	2%	2%	2%	2%	15%	2%	15%	2%	10%	10%	10%
Adj. Flow (vph)	57	43	140	115	73	55	72	571	104	65	618	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	183	0	115	128	0	72	675	0	65	646	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		11.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		41.0	41.0		14.0	55.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%		45.6%	45.6%		15.6%	61.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		35.0	35.0		11.0	49.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		3.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	4	4		4	4		14	14			11	
Act Effct Green (s)	16.6	16.6		16.6	16.6		50.2	50.2		64.4	61.4	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.56	0.56		0.72	0.68	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.28	0.44		0.61	0.38		0.17	0.39		0.12	0.29	
Control Delay	32.4	11.8		46.0	22.6		8.5	6.8		6.0	7.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.4	11.8		46.0	22.6		8.5	6.8		6.0	7.0	
LOS	C	B		D	C		A	A		A	A	
Approach Delay		16.7			33.7			7.0			6.9	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 18 (20%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 82.3% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



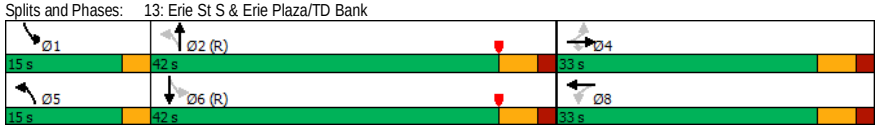
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	15	57	55	15	65	34	592	76	68	708	1
Future Volume (vph)	82	15	57	55	15	65	34	592	76	68	708	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00	0.98		0.99		0.99	1.00		0.99	1.00	
Frt			0.850		0.935			0.983				
Flt Protected		0.960			0.980		0.950			0.950		
Satd. Flow (prot)	0	1664	1583	0	1625	0	1770	3211	0	1656	3312	0
Flt Permitted		0.679			0.838		0.295			0.273		
Satd. Flow (perm)	0	1174	1558	0	1388	0	547	3211	0	472	3312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		53			18				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		185.2			244.2			140.3			138.2	
Travel Time (s)		13.3			17.6			10.1			10.0	
Confl. Peds. (#/hr)	4		4	4		4	11		14	14		11
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	91	17	63	61	17	72	38	658	84	76	787	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	63	0	150	0	38	742	0	76	788	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	42.0		15.0	42.0	
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		16.7%	46.7%		16.7%	46.7%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	36.0		12.0	36.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	4	4	4	4	4			13			11	
Act Effct Green (s)		27.0	27.0		27.0		51.6	39.0		52.2	42.0	
Actuated g/C Ratio		0.30	0.30		0.30		0.57	0.43		0.58	0.47	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.31	0.12		0.33		0.08	0.53		0.18	0.51	
Control Delay		27.3	5.5		18.0		7.8	16.2		6.9	16.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.3	5.5		18.0		7.8	16.2		6.9	16.0	
LOS		C	A		B		A	B		A	B	
Approach Delay		19.3			18.0			15.7			15.2	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank

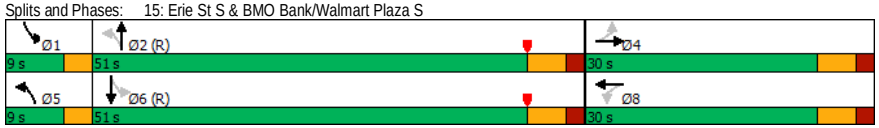


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	2	29	0	83	10	527	59	89	493	18
Future Volume (vph)	11	0	2	29	0	83	10	527	59	89	493	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Frt		0.850			0.850			0.985			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1594	0	1671	1261	0	1597	2809	0	1410	2869	0
Flt Permitted	0.694			0.757			0.428			0.362		
Satd. Flow (perm)	1313	1594	0	1330	1261	0	716	2809	0	535	2869	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		336			315			19			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		163.7			447.4			85.9			79.3	
Travel Time (s)		11.8			32.2			6.2			5.7	
Confl. Peds. (#/hr)	4		1	1		4	7		7	7		7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	8%	0%	26%	13%	27%	19%	28%	26%	0%
Adj. Flow (vph)	13	0	2	34	0	97	12	613	69	103	573	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	2	0	34	97	0	12	682	0	103	594	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		9.0	51.0		9.0	51.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		10.0%	56.7%		10.0%	56.7%	
Maximum Green (s)	24.0	24.0		24.0	24.0		6.0	45.0		6.0	45.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	1	1		4	4			7			7	
Act Effct Green (s)	12.8	12.8		12.8	12.8		68.4	61.8		70.8	67.8	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.76	0.69		0.79	0.75	
v/c Ratio	0.07	0.00		0.18	0.22		0.02	0.35		0.21	0.27	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	31.1	0.0		33.9	1.1		4.2	9.5		2.3	1.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.1	0.0		33.9	1.1		4.2	9.5		2.3	1.9	
LOS	C	A		C	A		A	A		A	A	
Approach Delay		26.9			9.6			9.4			2.0	
Approach LOS		C			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 15 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay: 6.2		Intersection LOS: A	
Intersection Capacity Utilization 52.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S

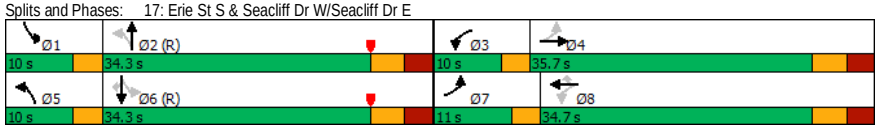


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	233	77	20	209	266	114	204	22	185	208	115
Future Volume (vph)	147	233	77	20	209	266	114	204	22	185	208	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.98	0.99	1.00		0.99		0.97
Frt		0.963				0.850		0.986				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	1321	0	1253	1387	1214	1271	1474	0	1367	1545	1392
Flt Permitted	0.504			0.512			0.533			0.501		
Satd. Flow (perm)	750	1321	0	667	1387	1190	707	1474	0	716	1545	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				306		6				132
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			466.4			128.8	
Travel Time (s)		28.1			45.4			33.6			9.3	
Confl. Peds. (#/hr)	7		12	12		7	7		6	6		7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	27%	34%	46%	44%	37%	33%	42%	26%	33%	32%	23%	16%
Adj. Flow (vph)	169	268	89	23	240	306	131	234	25	213	239	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	357	0	23	240	306	131	259	0	213	239	132
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	11.0	35.7		10.0	34.7	34.7	10.0	34.3		10.0	34.3	34.3
Total Split (%)	12.2%	39.7%		11.1%	38.6%	38.6%	11.1%	38.1%		11.1%	38.1%	38.1%
Maximum Green (s)	8.0	29.2		7.0	28.2	28.2	7.0	27.8		7.0	27.8	27.8
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		12			7	7		6			7	7
Act Effct Green (s)	41.9	35.2		38.8	28.3	28.3	38.3	27.8		38.3	27.8	27.8
Actuated g/C Ratio	0.47	0.39		0.43	0.31	0.31	0.43	0.31		0.43	0.31	0.31
v/c Ratio	0.41	0.68		0.07	0.55	0.52	0.38	0.56		0.60	0.50	0.26

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	17.9	31.0		13.4	31.4	6.6	18.8	31.1		18.1	21.1	6.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	17.9	31.0		13.4	31.4	6.6	18.8	31.1		18.1	21.1	6.4
LOS	B	C		B	C	A	B	C		B	C	A
Approach Delay		26.8			17.3			27.0			16.7	
Approach LOS		C			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 39 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	422	28	15	438	120	23	77	10	56	30	98
Future Volume (vph)	130	422	28	15	438	120	23	77	10	56	30	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00			0.96			0.99	0.97		0.94	
Frt		0.991			0.968				0.850		0.928	
Flt Protected	0.950			0.950				0.989			0.985	
Satd. Flow (prot)	1805	1745	0	1805	1633	0	0	1879	1615	0	1628	0
Flt Permitted	0.231			0.223				0.808			0.840	
Satd. Flow (perm)	431	1745	0	424	1633	0	0	1518	1567	0	1385	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			30				97		72	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	35		14	14		65	41		4	4		41
Peak Hour Factor	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Heavy Vehicles (%)	0%	8%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	203	659	44	23	684	188	36	120	16	88	47	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	703	0	23	872	0	0	156	16	0	288	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	12	12			28		4	4	4	34	34	
Act Effct Green (s)	41.1	41.1		47.2	45.2			15.4	15.4		15.4	
Actuated g/C Ratio	0.57	0.57		0.65	0.62			0.21	0.21		0.21	
v/c Ratio	0.83	0.71		0.06	0.85			0.48	0.04		0.82	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	50.8	20.7		6.2	22.5			29.9	0.2		39.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	50.8	20.7		6.2	22.5			29.9	0.2		39.7	
LOS	D	C		A	C			C	A		D	
Approach Delay		27.4			22.0			27.2			39.7	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 72.6			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 26.9		Intersection LOS: C	
Intersection Capacity Utilization 90.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W

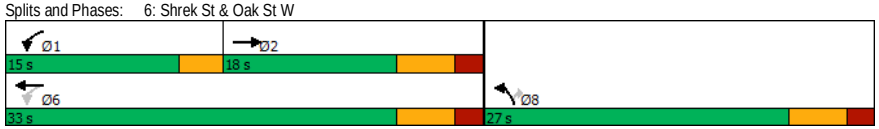


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	314	198	216	442	269	240
Future Volume (vph)	314	198	216	442	269	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00		1.00	0.98
Frt	0.942					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3138	0	1570	1863	1530	1369
Flt Permitted			0.260		0.950	
Satd. Flow (perm)	3138	0	429	1863	1525	1338
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	206					296
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)		5	2		2	12
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	388	244	267	546	332	296
Shared Lane Traffic (%)						
Lane Group Flow (vph)	632	0	267	546	332	296
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	12.0		7.0	27.0	9.0	9.0
Minimum Split (s)	18.0		10.0	33.0	27.0	27.0
Total Split (s)	18.0		15.0	33.0	27.0	27.0
Total Split (%)	30.0%		25.0%	55.0%	45.0%	45.0%
Maximum Green (s)	12.0		12.0	27.0	21.0	21.0
Yellow Time (s)	4.0		3.0	4.0	4.0	4.0
All-Red Time (s)	2.0		0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		3.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		None	Min	None	None
Walk Time (s)	12.0			27.0	9.0	9.0
Flash Dont Walk (s)	0.0			0.0	12.0	12.0
Pedestrian Calls (#/hr)	5			35	12	12
Act Effct Green (s)	14.1		30.2	27.2	16.2	16.2
Actuated g/C Ratio	0.25		0.54	0.49	0.29	0.29
v/c Ratio	0.66		0.61	0.60	0.74	0.49

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Control Delay	18.4		14.4	14.7	28.4	5.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	18.4		14.4	14.7	28.4	5.3
LOS	B		B	B	C	A
Approach Delay	18.4			14.6	17.5	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W

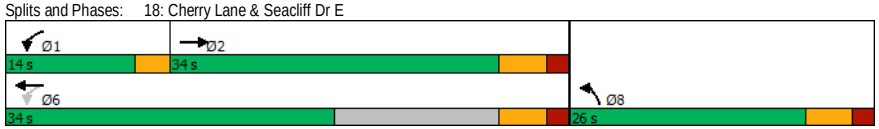


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	348	50	88	370	108	113
Future Volume (vph)	348	50	88	370	108	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	10.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.99		0.99	
Frt	0.983				0.931	
Flt Protected			0.950		0.976	
Satd. Flow (prot)	1811	0	1787	1845	1696	0
Flt Permitted			0.394		0.976	
Satd. Flow (perm)	1811	0	737	1845	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11				70	
Link Speed (k/h)	50			50	50	
Link Distance (m)	630.4			50.9	419.7	
Travel Time (s)	45.4			3.7	30.2	
Confl. Peds. (#/hr)		9	9		1	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	1%	1%	3%	1%	1%
Adj. Flow (vph)	370	53	94	394	115	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	423	0	94	394	235	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	28.0		8.0	28.0	10.0	
Minimum Split (s)	34.0		11.0	34.0	16.0	
Total Split (s)	34.0		14.0	34.0	26.0	
Total Split (%)	45.9%		18.9%	45.9%	35.1%	
Maximum Green (s)	28.0		11.0	28.0	20.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Walk Time (s)	20.0				7.0	
Flash Dont Walk (s)	8.0				13.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	28.3		39.9	36.8	12.5	
Actuated g/C Ratio	0.46		0.65	0.60	0.20	
v/c Ratio	0.50		0.15	0.36	0.59	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Control Delay	15.6		5.1	7.8	22.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	15.6		5.1	7.8	22.4	
LOS	B		A	A	C	
Approach Delay	15.6			7.3	22.4	
Approach LOS	B			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 61.5			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 56.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 18: Cherry Lane & Seacliff Dr E

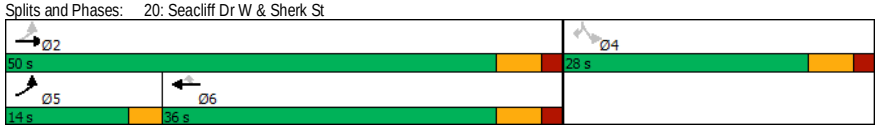


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	157	279	321	179	144	120
Future Volume (vph)	157	279	321	179	144	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			30.0	50.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99			0.96	1.00	0.97
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1712	1439	1223	1308	1380
Flt Permitted	0.446				0.950	
Satd. Flow (perm)	682	1712	1439	1172	1303	1341
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				199		133
Link Speed (k/h)		50	50		50	
Link Distance (m)		807.7	390.5		129.4	
Travel Time (s)		58.2	28.1		9.3	
Confl. Peds. (#/hr)	11			11	2	5
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	11%	32%	32%	38%	17%
Adj. Flow (vph)	174	310	357	199	160	133
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	310	357	199	160	133
Turn Type	pm+pt	NA	NA	Perm	Perm	Perm
Protected Phases	5	2	6			
Permitted Phases	2			6	4	4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0	30.0	10.0	10.0
Minimum Split (s)	11.0	50.0	36.0	36.0	28.0	28.0
Total Split (s)	14.0	50.0	36.0	36.0	28.0	28.0
Total Split (%)	17.9%	64.1%	46.2%	46.2%	35.9%	35.9%
Maximum Green (s)	11.0	44.0	30.0	30.0	22.0	22.0
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	Max	None	None
Walk Time (s)		15.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)		10	11	11	5	5
Act Effct Green (s)	47.2	44.1	32.1	32.1	14.4	14.4
Actuated g/C Ratio	0.67	0.62	0.45	0.45	0.20	0.20

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
v/c Ratio	0.31	0.29	0.55	0.31	0.60	0.35
Control Delay	6.9	7.8	19.5	4.0	35.2	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	7.8	19.5	4.0	35.2	7.4
LOS	A	A	B	A	D	A
Approach Delay		7.4	14.0		22.6	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 78			
Actuated Cycle Length: 70.6			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 56.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	33.6
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	93	168	133	398	438	114
Future Vol, veh/h	93	168	133	398	438	114
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	98	177	140	419	461	120
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	12.7	38.4	38.8
HCM LOS	B	E	E

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	25%	100%	0%	0%
Vol Thru, %	75%	0%	0%	79%
Vol Right, %	0%	0%	100%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	531	93	168	552
LT Vol	133	93	0	0
Through Vol	398	0	0	438
RT Vol	0	0	168	114
Lane Flow Rate	559	98	177	581
Geometry Grp	2	7	7	2
Degree of Util (X)	0.891	0.214	0.327	0.899
Departure Headway (Hd)	5.736	7.886	6.654	5.568
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	452	536	645
Service Time	3.809	5.679	4.446	3.641
HCM Lane V/C Ratio	0.893	0.217	0.33	0.901
HCM Control Delay	38.4	12.8	12.7	38.8
HCM Lane LOS	E	B	B	E
HCM 95th-tile Q	10.8	0.8	1.4	11.2

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	449	9	51	555	46	7	0	43	16	0	9
Future Vol, veh/h	32	449	9	51	555	46	7	0	43	16	0	9
Conflicting Peds, #/hr	3	0	79	79	0	3	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	8	0	0	10	0	0	0	0	0	0	0
Mvmt Flow	42	591	12	67	730	61	9	0	57	21	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	794	0	0	682	0	0	1662	1688	676	1608	1664	765
Stage 1	-	-	-	-	-	-	760	760	-	898	898	-
Stage 2	-	-	-	-	-	-	902	928	-	710	766	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	836	-	-	920	-	-	78	95	457	85	98	406
Stage 1	-	-	-	-	-	-	401	417	-	337	361	-
Stage 2	-	-	-	-	-	-	335	349	-	428	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	834	-	-	858	-	-	64	77	426	66	80	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	77	-	66	80	-
Stage 1	-	-	-	-	-	-	355	369	-	319	332	-
Stage 2	-	-	-	-	-	-	300	321	-	352	368	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.7	25.8	62.6
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	238	834	-	-	858	-	-	94
HCM Lane V/C Ratio	0.276	0.05	-	-	0.078	-	-	0.35
HCM Control Delay (s)	25.8	9.5	-	-	9.6	-	-	62.6
HCM Lane LOS	D	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0.3	-	-	1.4

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	491	675	35	21	15
Future Vol, veh/h	28	491	675	35	21	15
Conflicting Peds, #/hr	34	0	0	34	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	68	68	68	68	68	68
Heavy Vehicles, %	0	8	10	0	0	0
Mvmt Flow	41	722	993	51	31	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1078	0	-	0	1496	1053
Stage 1	-	-	-	-	1053	-
Stage 2	-	-	-	-	443	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	655	-	-	-	126	277
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	636	-	-	-	106	269
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	44.7
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	636	-	-	-	142
HCM Lane V/C Ratio	0.065	-	-	-	0.373
HCM Control Delay (s)	11.1	0.5	-	-	44.7
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	1.6

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	554	621	0	17	37
Future Vol, veh/h	0	554	621	0	17	37
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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	5	0	0	0
Mvmt Flow	0	602	675	0	18	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	976	338
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	301	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	252	664
Stage 1	0	-	-	0	473	-
Stage 2	0	-	-	0	731	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	252	664
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	731	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	252	664
HCM Lane V/C Ratio	-	-	0.073	0.061
HCM Control Delay (s)	-	-	20.4	10.8
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑↑			↑↑
Traffic Vol, veh/h	5	15	692	5	13	692
Future Vol, veh/h	5	15	692	5	13	692
Conflicting Peds, #/hr	6	6	0	10	7	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, %	0	0	2	0	0	2
Mvmt Flow	5	16	752	5	14	752

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1175	395	0	0	767	0
Stage 1	765	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	188	610	-	-	856	-
Stage 1	425	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	180	602	-	-	849	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	422	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	380	849	-
HCM Lane V/C Ratio	-	-	0.057	0.017	-
HCM Control Delay (s)	-	-	15	9.3	0.1
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	20.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	143	195	472	172	107	525
Future Vol, veh/h	143	195	472	172	107	525
Conflicting Peds, #/hr	0	2	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	27	26	23	31	15	20
Mvmt Flow	157	214	519	189	118	577

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1148	365	0	0	717	0
Stage 1	623	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	7.34	7.42	-	-	4.4	-
Critical Hdwy Stg 1	6.34	-	-	-	-	-
Critical Hdwy Stg 2	6.34	-	-	-	-	-
Follow-up Hdwy	3.77	3.56	-	-	2.35	-
Pot Cap-1 Maneuver	158	568	-	-	799	-
Stage 1	434	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 133	563	-	-	793	-
Mov Cap-2 Maneuver	~ 133	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	419	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	93.3	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	133	563	793	-
HCM Lane V/C Ratio	-	-	1.182	0.381	0.148	-
HCM Control Delay (s)	-	-	199.6	15.3	10.3	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	9.3	1.8	0.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	0	2	2	0	77	21	591	6	179	593	46
Future Vol, veh/h	34	0	2	2	0	77	21	591	6	179	593	46
Conflicting Peds, #/hr	3	0	1	1	0	3	6	0	7	7	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	25	0	0	50	0	11	24	27	20	9	25	7
Mvmt Flow	39	0	2	2	0	88	24	672	7	203	674	52

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1499	1846	370	1475	1869	350	732	0	0	686	0	0
Stage 1	1112	1112	-	731	731	-	-	-	-	-	-	-
Stage 2	387	734	-	744	1138	-	-	-	-	-	-	-
Critical Hdwy	8	6.5	6.9	8.5	6.5	7.12	4.58	-	-	4.28	-	-
Critical Hdwy Stg 1	7	5.5	-	7.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	5.5	-	7.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4	3.3	4	4	3.41	2.44	-	-	2.29	-	-
Pot Cap-1 Maneuver	68	76	633	56	73	621	737	-	-	858	-	-
Stage 1	187	287	-	287	430	-	-	-	-	-	-	-
Stage 2	550	429	-	281	279	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	46	55	629	44	53	616	733	-	-	853	-	-
Mov Cap-2 Maneuver	46	55	-	44	53	-	-	-	-	-	-	-
Stage 1	180	218	-	276	413	-	-	-	-	-	-	-
Stage 2	455	412	-	213	211	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	219.6	13.8	0.3	2.3
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	733	-	-	48	44	616	853	-	-
HCM Lane V/C Ratio	0.033	-	-	0.852	0.052	0.142	0.238	-	-
HCM Control Delay (s)	10.1	-	-	219.6	91.2	11.8	10.5	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.5	0.2	0.5	0.9	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	4	1	590	522	2
Future Vol, veh/h	6	4	1	590	522	2
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	29	23	0
Mvmt Flow	7	4	1	641	567	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	898	292	576	0	-	0
Stage 1	575	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	283	710	1007	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	279	706	1001	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1001	-	482	-	-
HCM Lane V/C Ratio	0.001	-	0.023	-	-
HCM Control Delay (s)	8.6	-	12.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	397	393	43	34	65
Future Vol, veh/h	65	397	393	43	34	65
Conflicting Peds, #/hr	5	0	0	5	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	74	451	447	49	39	74

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	501	0	-	0	1077	477
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1068	-	-	-	245	592
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	552	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1063	-	-	-	226	589
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	18.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1063	-	-	-	380
HCM Lane V/C Ratio	0.069	-	-	-	0.296
HCM Control Delay (s)	8.6	-	-	-	18.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	7	335	1	1	262
Future Vol, veh/h	2	7	335	1	1	262
Conflicting Peds, #/hr	0	0	0	16	16	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, %	0	0	28	0	0	28
Mvmt Flow	2	8	364	1	1	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	668	381	0	0	381	0
Stage 1	381	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	426	671	-	-	1189	-
Stage 1	695	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	420	662	-	-	1173	-
Mov Cap-2 Maneuver	420	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	765	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	587	1173	-
HCM Lane V/C Ratio	-	-	0.017	0.001	-
HCM Control Delay (s)	-	-	11.2	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	109	379	45	160	244
Future Vol, veh/h	26	109	379	45	160	244
Conflicting Peds, #/hr	0	0	0	10	10	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	84	84	84	84	84	84
Heavy Vehicles, %	19	23	24	36	22	29
Mvmt Flow	31	130	451	54	190	290

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1158	488	0	0	515	0
Stage 1	488	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Critical Hdwy	6.59	6.43	-	-	4.32	-
Critical Hdwy Stg 1	5.59	-	-	-	-	-
Critical Hdwy Stg 2	5.59	-	-	-	-	-
Follow-up Hdwy	3.671	3.507	-	-	2.398	-
Pot Cap-1 Maneuver	201	539	-	-	956	-
Stage 1	583	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	534	-	-	948	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	364	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	3.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	360	948	-
HCM Lane V/C Ratio	-	-	0.446	0.201	-
HCM Control Delay (s)	-	-	22.8	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.7	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	6	485	2	4	403
Future Vol, veh/h	1	6	485	2	4	403
Conflicting Peds, #/hr	0	0	0	8	8	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, %	0	0	24	0	0	1
Mvmt Flow	1	7	527	2	4	438

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	982	536	0	0	537	0
Stage 1	536	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	279	549	-	-	1041	-
Stage 1	591	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	276	545	-	-	1034	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	646	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	478	1034	-
HCM Lane V/C Ratio	-	-	0.016	0.004	-
HCM Control Delay (s)	-	-	12.7	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	12	5	1	10	2	461	1	1	382	18
Future Vol, veh/h	0	0	12	5	1	10	2	461	1	1	382	18
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	13	5	1	11	2	501	1	1	415	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	427	939	951	508	437	0	0	508	0	0
Stage 1	-	-	-	512	512	-	-	-	-	-	-	-
Stage 2	-	-	-	427	439	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	632	246	262	569	1134	-	-	1067	-	-
Stage 1	0	0	-	548	540	-	-	-	-	-	-	-
Stage 2	0	0	-	610	582	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	631	239	259	566	1132	-	-	1062	-	-
Mov Cap-2 Maneuver	-	-	-	239	259	-	-	-	-	-	-	-
Stage 1	-	-	-	544	536	-	-	-	-	-	-	-
Stage 2	-	-	-	597	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	15	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1132	-	-	631	377	1062	-	-
HCM Lane V/C Ratio	0.002	-	-	0.021	0.046	0.001	-	-
HCM Control Delay (s)	8.2	0	-	10.8	15	8.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	11	0	0	4	6	1	511	1	5	401	1
Future Vol, veh/h	4	11	0	0	4	6	1	511	1	5	401	1
Conflicting Peds, #/hr	0	0	6	6	0	0	2	0	6	6	0	2
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	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	33	100	0	0	100	100	100	23	100	75	19	0
Mvmt Flow	5	13	0	0	5	7	1	594	1	6	466	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1084	1084	475	1094	1084	601	469	0	0	601	0	0
Stage 1	481	481	-	603	603	-	-	-	-	-	-	-
Stage 2	603	603	-	491	481	-	-	-	-	-	-	-
Critical Hdwy	7.43	7.5	6.2	7.1	7.5	7.2	5.1	-	-	4.85	-	-
Critical Hdwy Stg 1	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	6.5	-	6.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4.9	3.3	3.5	4.9	4.2	3.1	-	-	2.875	-	-
Pot Cap-1 Maneuver	170	147	594	193	147	358	726	-	-	702	-	-
Stage 1	512	420	-	489	363	-	-	-	-	-	-	-
Stage 2	436	363	-	563	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	160	144	590	176	144	356	725	-	-	698	-	-
Mov Cap-2 Maneuver	160	144	-	176	144	-	-	-	-	-	-	-
Stage 1	510	414	-	486	360	-	-	-	-	-	-	-
Stage 2	421	360	-	536	414	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.5	22	0	0.1
HCM LOS	D	C		

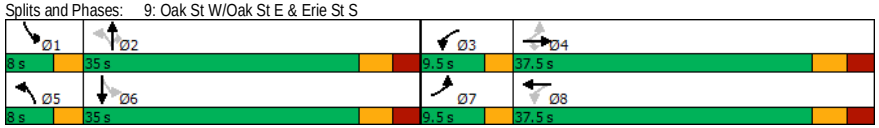
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	725	-	-	148	224	698	-	-
HCM Lane V/C Ratio	0.002	-	-	0.118	0.052	0.008	-	-
HCM Control Delay (s)	10	0	-	32.5	22	10.2	0	-
HCM Lane LOS	A	A	-	D	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	364	118	231	343	137	113	485	314	167	602	147
Future Volume (vph)	141	364	118	231	343	137	113	485	314	167	602	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	100.0		100.0	40.0		0.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	45.0			25.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	1.00	0.99		1.00		0.92	0.98	0.99	
Frt			0.850		0.957				0.850		0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1482	1656	3351	0	1597	1681	1429	1770	3239	0
Flt Permitted	0.378			0.290			0.256			0.231		
Satd. Flow (perm)	699	1863	1458	505	3351	0	429	1681	1321	422	3239	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126		72				334		35	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		204.4			676.7			512.5			486.5	
Travel Time (s)		14.7			48.7			36.9			35.0	
Confl. Peds. (#/hr)	9		4	4		9	12		33	33		12
Confl. Bikes (#/hr)						2						6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	9%	9%	2%	2%	13%	13%	13%	2%	9%	2%
Adj. Flow (vph)	150	387	126	246	365	146	120	516	334	178	640	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	150	387	126	246	511	0	120	516	334	178	796	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	4	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	26.0	26.0	5.0	28.0	
Minimum Split (s)	8.0	37.5	37.5	8.0	37.5		8.0	32.5	32.5	8.0	34.5	
Total Split (s)	9.5	37.5	37.5	9.5	37.5		8.0	35.0	35.0	8.0	35.0	
Total Split (%)	10.6%	41.7%	41.7%	10.6%	41.7%		8.9%	38.9%	38.9%	8.9%	38.9%	
Maximum Green (s)	6.5	31.0	31.0	6.5	31.0		5.0	28.5	28.5	5.0	28.5	
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0	0.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5	3.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	
Walk Time (s)		6.0	6.0		6.0			6.0	6.0		6.0	
Flash Dont Walk (s)		20.0	20.0		20.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)		1	1		6			20	20		9	
Act Effct Green (s)	31.8	21.7	21.7	31.8	21.7		37.2	28.6	28.6	37.8	30.4	
Actuated g/C Ratio	0.39	0.27	0.27	0.39	0.27		0.46	0.35	0.35	0.47	0.38	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.42	0.78	0.26	0.85	0.54		0.45	0.87	0.49	0.64	0.64	
Control Delay	17.8	38.4	5.7	44.9	23.3		19.1	43.4	5.5	26.9	24.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	17.8	38.4	5.7	44.9	23.3		19.1	43.4	5.5	26.9	24.5	
LOS	B	D	A	D	C		B	D	A	C	C	
Approach Delay		27.6			30.3			27.4			25.0	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 81			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 9: Oak St W/Oak St E & Erie St S



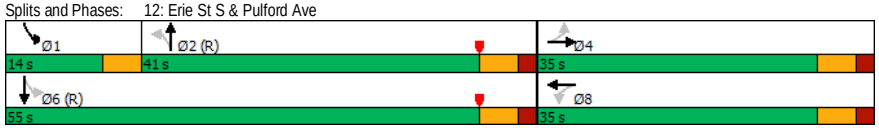
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	61	166	129	75	84	104	712	95	74	678	48
Future Volume (vph)	67	61	166	129	75	84	104	712	95	74	678	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99	1.00	
Frt		0.890			0.921			0.982			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1612	1641	0	1770	1617	0	1770	3174	0	1656	3271	0
Flt Permitted	0.605			0.447			0.362			0.255		
Satd. Flow (perm)	1023	1641	0	832	1617	0	672	3174	0	440	3271	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		161			66			19			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		2	2		4	10		26	26		10
Confl. Bikes (#/hr)						1						4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	12%	2%	2%	2%	2%	12%	2%	12%	2%	9%	9%	9%
Adj. Flow (vph)	71	64	175	136	79	88	109	749	100	78	714	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	239	0	136	167	0	109	849	0	78	765	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		10.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		31.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		41.0	41.0		14.0	55.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%		45.6%	45.6%		15.6%	61.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		35.0	35.0		10.0	49.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		4.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0		10.0	10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)	2	2		4	4		16	16			7	
Act Effct Green (s)	18.5	18.5		18.5	18.5		48.3	48.3		61.5	59.5	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.54	0.54		0.68	0.66	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.34	0.51		0.80	0.43		0.30	0.50		0.18	0.35	
Control Delay	32.5	14.0		63.6	20.5		9.1	7.5		7.4	8.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.5	14.0		63.6	20.5		9.1	7.5		7.4	8.2	
LOS	C	B		E	C		A	A		A	A	
Approach Delay		18.2			39.9			7.7			8.1	
Approach LOS		B			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 13.2 Intersection LOS: B
Intersection Capacity Utilization 84.3% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



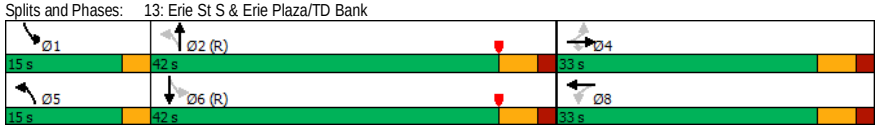
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	17	49	44	11	73	55	726	40	66	862	1
Future Volume (vph)	96	17	49	44	11	73	55	726	40	66	862	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			20.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00	0.99		0.99		1.00	1.00		0.99	1.00	
Frt			0.850		0.923			0.992				
Flt Protected		0.959			0.983		0.950			0.950		
Satd. Flow (prot)	0	1662	1583	0	1594	0	1770	3230	0	1656	3312	0
Flt Permitted		0.682			0.858		0.245			0.290		
Satd. Flow (perm)	0	1180	1561	0	1391	0	455	3230	0	500	3312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		75			7				
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		185.2			244.2			140.3			138.2	
Travel Time (s)		13.3			17.6			10.1			10.0	
Confl. Peds. (#/hr)	3		2	2		3	9		22	22		9
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	11%	2%	2%	2%	2%	11%	2%	11%	2%	9%	9%	9%
Adj. Flow (vph)	99	18	51	45	11	75	57	748	41	68	889	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	51	0	131	0	57	789	0	68	890	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0	27.0	27.0	27.0		12.0	26.0		12.0	26.0	
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	32.0		15.0	32.0	
Total Split (s)	33.0	33.0	33.0	33.0	33.0		15.0	42.0		15.0	42.0	
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		16.7%	46.7%		16.7%	46.7%	
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		12.0	36.0		12.0	36.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)	9.0	9.0	9.0	9.0	9.0			12.0			12.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			14.0			14.0	
Pedestrian Calls (#/hr)	2	2	2	3	3			15			6	
Act Effct Green (s)		27.0	27.0		27.0		58.2	46.8		58.2	46.8	
Actuated g/C Ratio		0.30	0.30		0.30		0.65	0.52		0.65	0.52	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.33	0.10		0.28		0.12	0.47		0.14	0.52	
Control Delay		27.7	3.7		13.1		7.7	16.2		6.5	17.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.1	
Total Delay		27.7	3.7		13.1		7.7	16.2		6.5	17.4	
LOS		C	A		B		A	B		A	B	
Approach Delay		20.4			13.1			15.6			16.7	
Approach LOS		C			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 88 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 16.3 Intersection LOS: B
Intersection Capacity Utilization 83.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 13: Erie St S & Erie Plaza/TD Bank



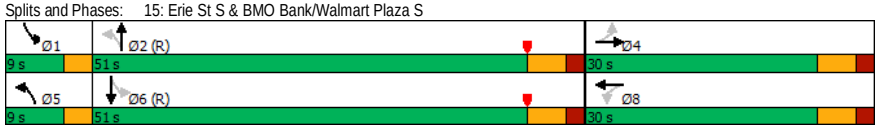
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	17	115	1	178	6	534	93	63	665	12
Future Volume (vph)	12	2	17	115	1	178	6	534	93	63	665	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		0.0	20.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			15.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99	0.99		1.00	0.98		0.99	0.99		0.99	1.00	
Frt		0.865			0.851			0.978			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1525	0	1556	1399	0	1805	2997	0	1626	3025	0
Flt Permitted	0.531			0.744			0.383			0.366		
Satd. Flow (perm)	1004	1525	0	1215	1399	0	723	2997	0	621	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			185			31			3	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		163.7			447.4			85.9			79.3	
Travel Time (s)		11.8			32.2			6.2			5.7	
Confl. Peds. (#/hr)	6		3	3		6	13		15	15		13
Confl. Bikes (#/hr)									3			2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	7%	16%	100%	13%	0%	17%	17%	11%	19%	14%
Adj. Flow (vph)	13	2	18	120	1	185	6	556	97	66	693	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	20	0	120	186	0	6	653	0	66	706	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		6.0	29.0		6.0	29.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	35.0		9.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		9.0	51.0		9.0	51.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		10.0%	56.7%		10.0%	56.7%	
Maximum Green (s)	24.0	24.0		24.0	24.0		6.0	45.0		6.0	45.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			10.0			10.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			19.0			19.0	
Pedestrian Calls (#/hr)	3	3		6	6			12			10	
Act Effct Green (s)	15.3	15.3		15.3	15.3		63.0	55.2		65.1	60.9	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.70	0.61		0.72	0.68	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.08	0.07		0.58	0.48		0.01	0.35		0.13	0.34	
Control Delay	29.0	13.6		44.6	8.9		3.0	7.8		1.5	1.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.0	13.6		44.6	8.9		3.0	7.8		1.5	1.9	
LOS	C	B		D	A		A	A		A	A	
Approach Delay		19.7			22.9			7.8			1.9	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 14 (16%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 8.0 Intersection LOS: A
Intersection Capacity Utilization 56.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 15: Erie St S & BMO Bank/Walmart Plaza S



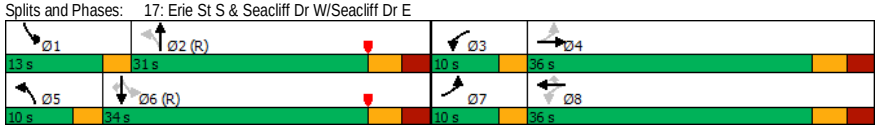
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	333	107	33	394	277	135	184	46	324	230	239
Future Volume (vph)	177	333	107	33	394	277	135	184	46	324	230	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	90.0		0.0	90.0		50.0	20.0		0.0	50.0		0.0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (m)	0.0			0.0			20.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	0.98	0.99		0.99		0.95
Frt		0.964				0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1411	0	1357	1508	1417	1456	1548	0	1467	1667	1346
Flt Permitted	0.307			0.337			0.602			0.453		
Satd. Flow (perm)	509	1411	0	479	1508	1384	906	1548	0	690	1667	1285
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19				289		14				249
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		390.5			630.4			466.4			128.8	
Travel Time (s)		28.1			45.4			33.6			9.3	
Confl. Peds. (#/hr)	9		7	7		9	13		12	12		13
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	14%	30%	25%	33%	26%	14%	24%	16%	26%	23%	14%	20%
Adj. Flow (vph)	184	347	111	34	410	289	141	192	48	338	240	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	458	0	34	410	289	141	240	0	338	240	249
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	23.0		7.0	23.0	23.0	7.0	24.0		7.0	24.0	24.0
Minimum Split (s)	10.0	29.5		10.0	29.5	29.5	10.0	30.5		10.0	30.5	30.5
Total Split (s)	10.0	36.0		10.0	36.0	36.0	10.0	31.0		13.0	34.0	34.0
Total Split (%)	11.1%	40.0%		11.1%	40.0%	40.0%	11.1%	34.4%		14.4%	37.8%	37.8%
Maximum Green (s)	7.0	29.5		7.0	29.5	29.5	7.0	24.5		10.0	27.5	27.5
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	3.0		0.0	3.0	3.0	0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.5		3.0	6.5	6.5	3.0	6.5		3.0	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Max		None	Max	Max	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		16.0			16.0	16.0		17.0			17.0	17.0
Pedestrian Calls (#/hr)		4			6	6		9			10	10
Act Effct Green (s)	41.2	33.5		40.0	29.5	29.5	35.0	24.5		41.0	27.5	27.5
Actuated g/C Ratio	0.46	0.37		0.44	0.33	0.33	0.39	0.27		0.46	0.31	0.31

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.58	0.85		0.12	0.83	0.45	0.36	0.56		0.84	0.47	0.44
Control Delay	23.0	44.1		13.8	44.3	5.3	18.3	32.2		35.6	22.8	9.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	23.0	44.1		13.8	44.3	5.3	18.3	32.2		35.6	22.8	9.6
LOS	C	D		B	D	A	B	C		D	C	A
Approach Delay		38.1			27.5			27.1			24.0	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 45 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 29.0 Intersection LOS: C
Intersection Capacity Utilization 86.0% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 17: Erie St S & Seacliff Dr W/Seacliff Dr E



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	595	9	13	492	73	13	16	13	47	6	17
Future Volume (vph)	11	595	9	13	492	73	13	16	13	47	6	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		0.0	100.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	45.0			0.0			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00			1.00			0.99	0.96		0.98	
Frt		0.998			0.981				0.850		0.967	
Flt Protected	0.950			0.950				0.979			0.968	
Satd. Flow (prot)	1805	1757	0	1805	1720	0	0	1860	1615	0	1764	0
Flt Permitted	0.429			0.316				0.854			0.780	
Satd. Flow (perm)	809	1757	0	600	1720	0	0	1613	1544	0	1399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			16				97		19	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.6			165.1			177.4			248.8	
Travel Time (s)		24.4			11.9			12.8			17.9	
Confl. Peds. (#/hr)	6		7	7		6	6		10	10		6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	8%	0%	0%	9%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	12	654	10	14	541	80	14	18	14	52	7	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	664	0	14	621	0	0	32	14	0	78	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	30.0	30.0		7.0	30.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	35.9	35.9		11.0	50.9		22.0	22.0	22.0	22.0	22.0	
Total Split (s)	35.9	35.9		15.0	50.9		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	46.1%	46.1%		19.3%	65.3%		34.7%	34.7%	34.7%	34.7%	34.7%	
Maximum Green (s)	30.0	30.0		11.0	45.0		21.0	21.0	21.0	21.0	21.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	2.6		1.0	2.6		2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	5.9	5.9		4.0	5.9			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	Max	Max		None	Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	7.0	7.0			7.0		9.0	9.0	9.0	9.0	9.0	
Pedestrian Calls (#/hr)	2	2			1		5	5	5	4	4	
Act Effct Green (s)	51.2	51.2		54.0	53.4			9.1	9.1		9.1	
Actuated g/C Ratio	0.73	0.73		0.77	0.76			0.13	0.13		0.13	
v/c Ratio	0.02	0.52		0.02	0.48			0.15	0.05		0.40	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	7.4	10.4		3.8	6.6			27.1	0.3		27.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	7.4	10.4		3.8	6.6			27.1	0.3		27.5	
LOS	A	B		A	A			C	A		C	
Approach Delay		10.4			6.5			18.9			27.5	
Approach LOS		B			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 77.9			
Actuated Cycle Length: 70.4			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: High School Driverway/Westmoreland Ave & Oak St W



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	420	334	279	360	230	238
Future Volume (vph)	420	334	279	360	230	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		25.0	0.0		0.0	80.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98				1.00	0.97
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3078	0	1570	1863	1530	1369
Flt Permitted			0.157		0.950	
Satd. Flow (perm)	3078	0	259	1863	1523	1333
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	236					274
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.7			65.5	205.4	
Travel Time (s)	2.4			4.7	14.8	
Confl. Peds. (#/hr)		5	5		2	9
Confl. Bikes (#/hr)						3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	15%	15%	2%	18%	18%
Adj. Flow (vph)	483	384	321	414	264	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	867	0	321	414	264	274
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	13.0		7.0	28.0	20.0	20.0
Minimum Split (s)	19.0		10.0	34.0	26.0	26.0
Total Split (s)	35.0		25.0	60.0	30.0	30.0
Total Split (%)	38.9%		27.8%	66.7%	33.3%	33.3%
Maximum Green (s)	29.0		22.0	54.0	24.0	24.0
Yellow Time (s)	4.0		3.0	4.0	4.0	4.0
All-Red Time (s)	2.0		0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		3.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		None	Min	None	None
Walk Time (s)	13.0			28.0	8.0	8.0
Flash Dont Walk (s)	0.0			0.0	12.0	12.0
Pedestrian Calls (#/hr)	2			1	7	7
Act Effct Green (s)	22.4		43.8	40.7	21.7	21.7
Actuated g/C Ratio	0.30		0.59	0.54	0.29	0.29

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.80		0.77	0.41	0.59	0.47
Control Delay	23.9		26.8	11.0	31.8	6.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	23.9		26.8	11.0	31.8	6.6
LOS	C		C	B	C	A
Approach Delay	23.9			17.9	18.9	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74.7			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 20.6		Intersection LOS: C	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Shrek St & Oak St W

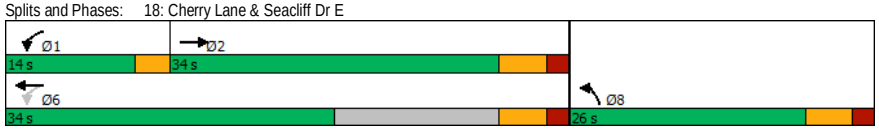


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	504	121	172	472	126	141
Future Volume (vph)	504	121	172	472	126	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	10.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			20.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00		0.99	
Frt	0.974				0.929	
Flt Protected			0.950		0.977	
Satd. Flow (prot)	1793	0	1787	1845	1694	0
Flt Permitted			0.159		0.977	
Satd. Flow (perm)	1793	0	298	1845	1691	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	19				75	
Link Speed (k/h)	50			50	50	
Link Distance (m)	630.4			50.9	419.7	
Travel Time (s)	45.4			3.7	30.2	
Confl. Peds. (#/hr)		7	7		2	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	1%	1%	3%	1%	1%
Adj. Flow (vph)	536	129	183	502	134	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	665	0	183	502	284	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	28.0		8.0	28.0	10.0	
Minimum Split (s)	34.0		11.0	34.0	16.0	
Total Split (s)	34.0		14.0	34.0	26.0	
Total Split (%)	45.9%		18.9%	45.9%	35.1%	
Maximum Green (s)	28.0		11.0	28.0	20.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	Max	None	
Walk Time (s)	20.0				7.0	
Flash Dont Walk (s)	8.0				13.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	28.2		43.0	40.0	14.0	
Actuated g/C Ratio	0.43		0.65	0.61	0.21	
v/c Ratio	0.86		0.47	0.45	0.68	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Control Delay	32.0		9.4	9.3	26.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	32.0		9.4	9.3	26.3	
LOS	C		A	A	C	
Approach Delay	32.0			9.3	26.3	
Approach LOS	C			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 74			
Actuated Cycle Length: 66.1			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 72.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 18: Cherry Lane & Seacliff Dr E



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	194	431	619	211	222	169
Future Volume (vph)	194	431	619	211	222	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0			30.0	50.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	45.0				25.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97	0.98	0.96
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1467	1792	1532	1292	1517	1392
Flt Permitted	0.198				0.950	
Satd. Flow (perm)	306	1792	1532	1260	1492	1330
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				129		188
Link Speed (k/h)		50	50		50	
Link Distance (m)		807.7	390.5		129.4	
Travel Time (s)		58.2	28.1		9.3	
Confl. Peds. (#/hr)	3			3	8	10
Confl. Bikes (#/hr)				1		3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	23%	6%	24%	25%	19%	16%
Adj. Flow (vph)	216	479	688	234	247	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	216	479	688	234	247	188
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	8.0	30.0	30.0	30.0	10.0	10.0
Minimum Split (s)	11.0	50.0	36.0	36.0	28.0	28.0
Total Split (s)	11.0	62.0	51.0	51.0	28.0	28.0
Total Split (%)	12.2%	68.9%	56.7%	56.7%	31.1%	31.1%
Maximum Green (s)	8.0	56.0	45.0	45.0	22.0	22.0
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	Min	Min	None	None
Walk Time (s)		7.0	15.0	15.0	7.0	7.0
Flash Dont Walk (s)		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)		9	0	0	8	8
Act Effct Green (s)	54.7	51.7	40.5	40.5	17.5	17.5
Actuated g/C Ratio	0.67	0.64	0.50	0.50	0.21	0.21

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
v/c Ratio	0.67	0.42	0.90	0.34	0.76	0.43
Control Delay	18.1	9.3	37.0	7.4	46.5	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	9.3	37.0	7.4	46.5	7.9
LOS	B	A	D	A	D	A
Approach Delay		12.0	29.5		29.8	
Approach LOS		B	C		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 81.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 70.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 20: Seacliff Dr W & Sherk St



Intersection	
Intersection Delay, s/veh	30
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	86	168	154	338	238	128
Future Vol, veh/h	86	168	154	338	238	128
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	1	1	1
Mvmt Flow	105	205	188	412	290	156
Number of Lanes	1	1	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay	12.9	45.7	20.7
HCM LOS	B	E	C

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	31%	100%	0%	0%
Vol Thru, %	69%	0%	0%	65%
Vol Right, %	0%	0%	100%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	492	86	168	366
LT Vol	154	86	0	0
Through Vol	338	0	0	238
RT Vol	0	0	168	128
Lane Flow Rate	600	105	205	446
Geometry Grp	2	7	7	2
Degree of Util (X)	0.938	0.224	0.368	0.697
Departure Headway (Hd)	5.629	7.69	6.461	5.618
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	465	553	638
Service Time	3.698	5.474	4.244	3.694
HCM Lane V/C Ratio	0.935	0.226	0.371	0.699
HCM Control Delay	45.7	12.7	13	20.7
HCM Lane LOS	E	B	B	C
HCM 95th-tile Q	12.7	0.8	1.7	5.6

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	636	2	5	551	7	15	0	16	17	0	13
Future Vol, veh/h	6	636	2	5	551	7	15	0	16	17	0	13
Conflicting Peds, #/hr	12	0	13	13	0	12	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	1000	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	8	0	0	9	0	0	0	0	0	0	0
Mvmt Flow	6	669	2	5	580	7	16	0	17	18	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	599	0	0	684	0	0	1296	1304	683	1297	1302	596
Stage 1	-	-	-	-	-	-	695	695	-	606	606	-
Stage 2	-	-	-	-	-	-	601	609	-	691	696	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	988	-	-	919	-	-	140	162	453	140	162	507
Stage 1	-	-	-	-	-	-	436	447	-	487	490	-
Stage 2	-	-	-	-	-	-	491	488	-	438	446	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	978	-	-	909	-	-	134	157	448	132	157	502
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	157	-	132	157	-
Stage 1	-	-	-	-	-	-	429	439	-	479	482	-
Stage 2	-	-	-	-	-	-	475	480	-	419	438	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	25.3	27.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	210	978	-	-	909	-	-	194
HCM Lane V/C Ratio	0.155	0.006	-	-	0.006	-	-	0.163
HCM Control Delay (s)	25.3	8.7	-	-	9	-	-	27.1
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	727	535	55	27	11
Future Vol, veh/h	9	727	535	55	27	11
Conflicting Peds, #/hr	4	0	0	4	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	89	89	89	89	89	89
Heavy Vehicles, %	0	8	9	0	0	0
Mvmt Flow	10	817	601	62	30	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	667	0	-	0	1065	636
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	4.1	-	-	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	932	-	-	-	234	481
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	929	-	-	-	228	479
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	929	-	-	-	269
HCM Lane V/C Ratio	0.011	-	-	-	0.159
HCM Control Delay (s)	8.9	0.1	-	-	20.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰	↱
Traffic Vol, veh/h	0	658	577	0	33	62
Future Vol, veh/h	0	658	577	0	33	62
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	250
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	8	15	0	0	0
Mvmt Flow	0	715	627	0	36	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	985	314
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	358	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	249	688
Stage 1	0	-	-	0	500	-
Stage 2	0	-	-	0	684	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	249	688
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	249	688
HCM Lane V/C Ratio	-	-	0.144	0.098
HCM Control Delay (s)	-	-	21.9	10.8
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	0.3

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↑↑	↱		↑↑
Traffic Vol, veh/h	13	10	919	21	16	869
Future Vol, veh/h	13	10	919	21	16	869
Conflicting Peds, #/hr	6	8	0	32	32	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, %	0	0	16	0	0	11
Mvmt Flow	14	11	999	23	17	945

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1556	551	0	0	1054	0
Stage 1	1043	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	106	483	-	-	668	-
Stage 1	305	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	97	467	-	-	650	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	297	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.2	0	0.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	148	650	-
HCM Lane V/C Ratio	-	-	0.169	0.027	-
HCM Control Delay (s)	-	-	34.2	10.7	0.3
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	189	746	115	117	746
Future Vol, veh/h	52	189	746	115	117	746
Conflicting Peds, #/hr	0	3	0	19	19	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	17	16	13	9	11
Mvmt Flow	57	208	820	126	129	820

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1570	495	0	0	965	0
Stage 1	902	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Critical Hdwy	7.04	7.24	-	-	4.28	-
Critical Hdwy Stg 1	6.04	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.62	3.47	-	-	2.29	-
Pot Cap-1 Maneuver	92	482	-	-	668	-
Stage 1	333	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	73	473	-	-	657	-
Mov Cap-2 Maneuver	73	-	-	-	-	-
Stage 1	328	-	-	-	-	-
Stage 2	358	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	45.9	0	1.6
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	73	473	657	-
HCM Lane V/C Ratio	-	-	0.783	0.439	0.196	-
HCM Control Delay (s)	-	-	146	18.4	11.8	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	3.7	2.2	0.7	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	9	5	1	122	22	688	13	213	724	17
Future Vol, veh/h	11	0	9	5	1	122	22	688	13	213	724	17
Conflicting Peds, #/hr	3	0	0	0	0	3	11	0	15	15	0	11
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	500	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	14	25	0	14	11	15	18	12	18	0
Mvmt Flow	12	0	9	5	1	128	23	724	14	224	762	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1642	2029	401	1621	2031	387	791	0	0	753	0	0
Stage 1	1230	1230	-	792	792	-	-	-	-	-	-	-
Stage 2	412	799	-	829	1239	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	7.18	8	6.5	7.18	4.32	-	-	4.34	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.44	3.75	4	3.44	2.31	-	-	2.32	-	-
Pot Cap-1 Maneuver	67	58	566	54	58	579	769	-	-	790	-	-
Stage 1	191	252	-	302	404	-	-	-	-	-	-	-
Stage 2	593	401	-	286	250	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	39	561	40	39	570	762	-	-	780	-	-
Mov Cap-2 Maneuver	38	39	-	40	39	-	-	-	-	-	-	-
Stage 1	184	178	-	289	387	-	-	-	-	-	-	-
Stage 2	443	384	-	200	177	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	84.9	17.7	0.3	2.6
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	762	-	-	65	40	570	780	-	-
HCM Lane V/C Ratio	0.03	-	-	0.324	0.158	0.225	0.287	-	-
HCM Control Delay (s)	9.9	-	-	84.9	111.2	13.1	11.5	-	-
HCM Lane LOS	A	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.2	0.5	0.9	1.2	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	1	630	793	4
Future Vol, veh/h	2	4	1	630	793	4
Conflicting Peds, #/hr	0	0	13	0	0	13
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	17	19	0
Mvmt Flow	2	4	1	685	862	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1222	446	879	0	-	0
Stage 1	877	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	175	565	777	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	694	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	171	559	768	-	-	-
Mov Cap-2 Maneuver	286	-	-	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	686	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	768	-	424	-	-
HCM Lane V/C Ratio	0.001	-	0.015	-	-
HCM Control Delay (s)	9.7	-	13.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	104	542	540	43	29	104
Future Vol, veh/h	104	542	540	43	29	104
Conflicting Peds, #/hr	3	0	0	3	1	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	1	3	3	1	0	0
Mvmt Flow	118	616	614	49	33	118

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	666	0	-	0	1495	644
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	853	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	928	-	-	-	137	476
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	926	-	-	-	119	474
Mov Cap-2 Maneuver	-	-	-	-	119	-
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	30.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	926	-	-	-	287
HCM Lane V/C Ratio	0.128	-	-	-	0.527
HCM Control Delay (s)	9.5	-	-	-	30.7
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	2.9

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	5	403	2	9	389
Future Vol, veh/h	2	5	403	2	9	389
Conflicting Peds, #/hr	0	0	0	8	8	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, %	0	0	24	0	0	23
Mvmt Flow	2	5	438	2	10	423

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	890	447	0	0	448	0
Stage 1	447	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	316	616	-	-	1123	-
Stage 1	649	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	310	612	-	-	1115	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	479	1115	-
HCM Lane V/C Ratio	-	-	0.016	0.009	-
HCM Control Delay (s)	-	-	12.6	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	13.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	72	154	378	40	181	425
Future Vol, veh/h	72	154	378	40	181	425
Conflicting Peds, #/hr	2	2	0	3	3	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	94	94	94	94	94	94
Heavy Vehicles, %	17	19	19	22	21	24
Mvmt Flow	77	164	402	43	193	452

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1267	429	0	0	448	0
Stage 1	427	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Critical Hdwy	6.57	6.39	-	-	4.31	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.471	-	-	2.389	-
Pot Cap-1 Maneuver	173	591	-	-	1019	-
Stage 1	627	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	128	589	-	-	1016	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	297	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	67.7	0	2.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	274	1016	-
HCM Lane V/C Ratio	-	-	0.877	0.19	-
HCM Control Delay (s)	-	-	67.7	9.4	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	7.6	0.7	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	3	528	4	3	603
Future Vol, veh/h	3	3	528	4	3	603
Conflicting Peds, #/hr	0	0	0	3	3	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, %	0	0	19	0	0	21
Mvmt Flow	3	3	574	4	3	655

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1240	579	0	0	581	0
Stage 1	579	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	195	519	-	-	1003	-
Stage 1	564	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	518	-	-	1000	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	514	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	1000	-
HCM Lane V/C Ratio	-	-	0.023	0.003	-
HCM Control Delay (s)	-	-	18.1	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	45	2	2	2	4	507	5	7	546	37
Future Vol, veh/h	0	0	45	2	2	2	4	507	5	7	546	37
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	4	4	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	1	0	0	19	0
Mvmt Flow	0	0	49	2	2	2	4	551	5	8	593	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	615	1195	1217	558	635	0	0	560	0	0
Stage 1	-	-	-	566	566	-	-	-	-	-	-	-
Stage 2	-	-	-	629	651	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	0	495	165	182	533	958	-	-	1021	-	-
Stage 1	0	0	-	513	511	-	-	-	-	-	-	-
Stage 2	0	0	-	474	468	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	494	146	178	531	956	-	-	1018	-	-
Mov Cap-2 Maneuver	-	-	-	146	178	-	-	-	-	-	-	-
Stage 1	-	-	-	508	506	-	-	-	-	-	-	-
Stage 2	-	-	-	422	461	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	22.8	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	956	-	-	494	209	1018	-	-
HCM Lane V/C Ratio	0.005	-	-	0.099	0.031	0.007	-	-
HCM Control Delay (s)	8.8	0	-	13.1	22.8	8.6	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	10	1	2	2	13	6	470	0	1	625	7
Future Vol, veh/h	1	10	1	2	2	13	6	470	0	1	625	7
Conflicting Peds, #/hr	0	0	14	14	0	0	3	0	4	4	0	3
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	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	100	100	100	100	100	89	60	19	0	0	19	60
Mvmt Flow	1	11	1	2	2	14	6	505	0	1	672	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1206	1202	693	1219	1206	509	683	0	0	509	0	0
Stage 1	681	681	-	521	521	-	-	-	-	-	-	-
Stage 2	525	521	-	698	685	-	-	-	-	-	-	-
Critical Hdwy	8.1	7.5	7.2	8.1	7.5	7.09	4.7	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	6.5	-	7.1	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4.9	4.2	4.4	4.9	4.101	2.74	-	-	2.2	-	-
Pot Cap-1 Maneuver	104	122	313	101	121	425	691	-	-	1066	-	-
Stage 1	315	330	-	396	400	-	-	-	-	-	-	-
Stage 2	394	400	-	307	328	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	120	309	91	119	424	689	-	-	1062	-	-
Mov Cap-2 Maneuver	98	120	-	91	119	-	-	-	-	-	-	-
Stage 1	310	328	-	390	394	-	-	-	-	-	-	-
Stage 2	374	394	-	292	326	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.4	20.9	0.1	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	689	-	-	124	245	1062	-	-
HCM Lane V/C Ratio	0.009	-	-	0.104	0.075	0.001	-	-
HCM Control Delay (s)	10.3	0	-	37.4	20.9	8.4	0	-
HCM Lane LOS	B	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

APPENDIX C – QUEUE ANALYSIS REPORTS

McINTOSH PERRY

EXISTING CONDITIONS

McINTOSH PERRY

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	28.4	55.3	8.6	69.9	31.8	9.0	44.2
Average Queue (m)	13.5	23.5	1.5	24.2	12.2	1.9	19.2
95th Queue (m)	24.4	45.3	6.4	51.0	24.8	7.7	33.2
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (m)	12.6	1.7	11.8	14.4	11.9
Average Queue (m)	2.5	0.1	3.0	6.8	4.6
95th Queue (m)	9.5	1.2	10.2	14.1	12.1
Link Distance (m)		144.1		69.8	70.6
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	100.0		20.0		
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (m)	38.4	22.0	28.8	16.3	18.2
Average Queue (m)	13.7	3.5	2.1	0.8	5.7
95th Queue (m)	30.4	16.5	17.3	7.3	14.5
Link Distance (m)	15.0	15.0	214.2	13.0	58.4
Upstream Blk Time (%)	6	1		0	
Queuing Penalty (veh)	12	2		1	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	21.2	21.6	38.2	48.7	55.5	32.1
Average Queue (m)	14.7	11.7	19.1	25.2	24.9	15.9
95th Queue (m)	20.6	20.1	33.6	45.9	44.2	27.2
Link Distance (m)	13.0	13.0	45.3	45.3	183.2	
Upstream Blk Time (%)	19	5	0	1		
Queuing Penalty (veh)	39	10	0	2		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	1.7	21.6	10.5	13.8
Average Queue (m)	0.1	1.4	4.0	5.7
95th Queue (m)	1.2	9.6	11.5	13.1
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				25.0
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Oak St W & Fox St

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (m)	26.9	1.4
Average Queue (m)	5.3	0.0
95th Queue (m)	18.2	0.9
Link Distance (m)	111.8	182.2
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	TR
Maximum Queue (m)	40.7	66.2	26.2	48.8	39.8	50.5	56.2	81.9	39.8	45.0	68.5	55.7
Average Queue (m)	12.9	31.3	9.7	23.7	16.3	25.5	16.5	30.8	15.0	12.1	35.1	22.3
95th Queue (m)	27.4	51.7	19.8	41.3	31.2	44.1	34.1	59.4	30.7	27.1	57.3	44.6
Link Distance (m)		182.2	182.2		365.7			491.8	491.8		308.9	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			100.0		100.0	40.0			50.0		50.0
Storage Blk Time (%)	0	4					0	4		0	1	0
Queuing Penalty (veh)	0	3					1	4		0	5	0

Intersection: 10: Countess St & Erie St S

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	13.1	20.9
Average Queue (m)	4.1	2.2
95th Queue (m)	11.8	11.2
Link Distance (m)	193.6	491.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (m)	48.4	34.9	19.7	15.0	25.1	25.3	1.8
Average Queue (m)	21.4	17.5	1.3	1.1	8.5	1.9	0.1
95th Queue (m)	38.6	29.3	8.9	7.3	20.8	12.2	1.3
Link Distance (m)	124.3	124.3	45.7	45.7		236.2	236.2
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)					15.0		
Storage Blk Time (%)					2	0	
Queuing Penalty (veh)					4	0	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	21.1	38.1	32.3	37.2	19.8	36.8	53.8	30.0	50.4	37.3
Average Queue (m)	6.7	16.8	15.7	15.4	7.4	9.4	17.0	8.2	22.4	12.9
95th Queue (m)	17.6	29.9	27.0	30.6	16.7	24.5	37.3	20.4	44.1	29.5
Link Distance (m)		371.7		296.4		119.4	119.4		45.7	45.7
Upstream Blk Time (%)								0	1	0
Queuing Penalty (veh)								0	2	0
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	0	3	2	1		0		0	1	
Queuing Penalty (veh)	0	1	2	1		0		0	0	

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (m)	32.6	17.0	45.4	14.3	51.4	71.0	50.0	65.5	48.1
Average Queue (m)	13.7	6.4	16.6	4.0	19.4	27.4	10.4	30.3	17.3
95th Queue (m)	27.0	14.7	33.3	11.3	43.2	55.6	29.7	55.4	35.8
Link Distance (m)	109.6	109.6	134.1		115.8	115.8		119.4	119.4
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				40.0			40.0		
Storage Blk Time (%)					1			3	
Queuing Penalty (veh)					0			2	

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (m)	23.4	13.7	21.8	13.4	1.8	6.8	33.0	17.8	1.1
Average Queue (m)	8.1	0.6	9.9	1.6	0.1	0.2	9.6	1.1	0.0
95th Queue (m)	18.7	5.3	18.5	8.1	1.3	3.0	22.0	9.4	0.8
Link Distance (m)	164.1	91.3	91.3		60.5	60.5		115.8	115.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				10.0			50.0		
Storage Blk Time (%)				1				0	
Queuing Penalty (veh)				1				0	

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	9.1	8.9	28.2	26.8	11.3	37.1	49.9	42.6	63.3	39.6
Average Queue (m)	2.1	0.7	7.5	11.7	1.4	7.9	14.0	13.2	23.3	7.9
95th Queue (m)	8.1	4.6	18.6	23.2	6.9	25.6	37.8	32.1	55.3	24.7
Link Distance (m)	73.5	73.5		146.8		65.5	65.5		60.5	60.5
Upstream Blk Time (%)							0		1	0
Queuing Penalty (veh)							0		1	0
Storage Bay Dist (m)			70.0		20.0			30.0		
Storage Blk Time (%)					0	2		1	4	
Queuing Penalty (veh)					0	0		1	3	

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (m)	9.2	1.8
Average Queue (m)	2.3	0.1
95th Queue (m)	8.6	1.3
Link Distance (m)	363.2	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		10.0
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	55.8	77.9	16.6	67.4	67.5	39.8	89.0	57.2	85.4	26.8
Average Queue (m)	18.5	30.1	3.9	26.6	22.5	20.6	34.5	31.4	27.8	8.8
95th Queue (m)	38.4	59.0	13.2	53.7	43.9	39.9	68.9	57.8	58.0	20.4
Link Distance (m)		365.9		606.3			203.9		108.2	108.2
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									0	
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		
Storage Blk Time (%)	0	0		1	0	9	20	4	1	
Queuing Penalty (veh)	0	0		3	0	17	18	6	2	

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	52.6	29.2	36.7	43.5
Average Queue (m)	22.0	10.2	15.9	19.1
95th Queue (m)	41.1	22.1	30.9	33.9
Link Distance (m)	610.0		38.1	210.8
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		10	16	
Queuing Penalty (veh)		29	11	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (m)	18.2	5.5	18.5
Average Queue (m)	5.0	0.3	10.1
95th Queue (m)	13.9	2.9	16.3
Link Distance (m)	38.1	158.6	158.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (m)	43.2	50.5	97.8	55.0	40.1
Average Queue (m)	17.3	15.8	38.5	22.6	12.4
95th Queue (m)	32.9	35.7	73.2	44.8	27.0
Link Distance (m)		379.5	365.9		108.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	50.0			50.0	
Storage Blk Time (%)	0	0		1	
Queuing Penalty (veh)	0	0		0	

Intersection: 21: Sherk St & Coronation Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	10.2	3.3
Average Queue (m)	1.7	0.1
95th Queue (m)	7.3	2.3
Link Distance (m)	363.2	425.0
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	32.8	4.1	42.0
Average Queue (m)	14.8	0.2	12.3
95th Queue (m)	25.7	2.8	29.4
Link Distance (m)	371.7	425.0	83.8
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	8.7	8.8	12.2
Average Queue (m)	1.1	0.4	0.7
95th Queue (m)	5.9	5.4	5.5
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	14.4	20.2	42.2	39.4
Average Queue (m)	6.9	11.2	21.2	17.9
95th Queue (m)	14.3	17.5	34.2	28.6
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			1	
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (m)	9.3	1.6
Average Queue (m)	3.2	0.1
95th Queue (m)	10.2	1.1
Link Distance (m)	137.4	215.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	23.8	22.3	9.6	14.1
Average Queue (m)	5.1	4.0	0.4	0.8
95th Queue (m)	18.5	16.2	3.9	6.2
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 178

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	9.2	64.0	7.3	45.0	14.2	9.1	23.1
Average Queue (m)	2.2	21.2	1.0	14.3	5.1	2.4	9.6
95th Queue (m)	8.5	46.6	5.2	33.2	13.8	8.6	18.4
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (m)	8.9	7.2	15.6	11.4
Average Queue (m)	0.6	0.3	5.5	5.4
95th Queue (m)	4.2	3.0	13.2	12.7
Link Distance (m)			69.8	70.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	100.0	20.0		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	SB
Directions Served	LT	T	T	LR
Maximum Queue (m)	39.5	35.7	44.5	22.7
Average Queue (m)	18.8	10.9	4.7	6.4
95th Queue (m)	35.5	27.9	27.2	15.6
Link Distance (m)	15.0	15.0	214.2	58.4
Upstream Blk Time (%)	15	4		
Queuing Penalty (veh)	35	9		
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	R	L	T	L	R
Maximum Queue (m)	24.4	25.9	46.4	51.1	51.4	34.9
Average Queue (m)	16.2	16.0	22.5	23.3	24.3	15.6
95th Queue (m)	20.2	22.9	39.9	42.8	43.1	26.9
Link Distance (m)	13.0	13.0	45.3	45.3	183.2	
Upstream Blk Time (%)	33	12	1	1		
Queuing Penalty (veh)	90	33	2	1		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	11.4	9.2	13.1	14.1
Average Queue (m)	0.6	0.5	5.7	7.6
95th Queue (m)	6.7	4.9	13.6	13.5
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				25.0
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 8: Oak St W & Fox St

Movement	EB
Directions Served	LT
Maximum Queue (m)	22.1
Average Queue (m)	3.9
95th Queue (m)	14.3
Link Distance (m)	111.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	TR
Maximum Queue (m)	33.2	70.4	26.1	75.9	36.9	50.1	58.0	106.5	57.5	49.9	85.0	79.8
Average Queue (m)	14.9	39.1	10.7	31.7	13.5	23.9	17.3	48.1	23.2	22.8	42.5	27.0
95th Queue (m)	26.5	62.5	21.9	61.1	28.6	44.0	42.1	86.2	44.4	44.4	71.8	57.5
Link Distance (m)		182.2	182.2		365.7			491.8	491.8		308.9	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			100.0		100.0	40.0			50.0		50.0
Storage Blk Time (%)	0	9					0	13		0	3	0
Queuing Penalty (veh)	0	8					2	12		1	16	1

Intersection: 10: Countess St & Erie St S

Movement	WB	NB	NB	SB
Directions Served	LR	T	TR	LT
Maximum Queue (m)	14.5	5.0	5.5	24.8
Average Queue (m)	4.7	0.3	0.3	3.5
95th Queue (m)	12.9	3.5	3.0	14.8
Link Distance (m)	193.6	236.2	236.2	491.8
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (m)	25.6	33.3	15.2	15.4	26.2	29.6	1.7
Average Queue (m)	9.1	16.5	0.8	1.6	11.4	3.3	0.1
95th Queue (m)	19.3	27.7	6.1	8.2	23.4	18.4	1.2
Link Distance (m)	124.3	124.3	45.7	45.7		236.2	236.2
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)					15.0		
Storage Blk Time (%)					4	0	
Queuing Penalty (veh)					12	0	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	25.5	43.8	37.5	39.6	26.7	55.7	64.5	39.6	48.9	40.4
Average Queue (m)	10.3	20.3	17.8	16.6	11.9	23.0	28.7	9.3	25.1	16.6
95th Queue (m)	22.1	37.2	31.4	32.4	23.0	45.4	52.4	23.4	47.2	34.0
Link Distance (m)		371.7		296.4		119.4	119.4		45.7	45.7
Upstream Blk Time (%)								0	1	0
Queuing Penalty (veh)								0	2	0
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	0	5	4	3		2		0	1	
Queuing Penalty (veh)	1	2	5	3		2		0	0	

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (m)	35.3	20.5	33.2	21.2	53.2	59.0	59.6	88.3	63.7
Average Queue (m)	16.2	6.6	15.2	5.9	27.5	34.4	10.5	40.6	25.3
95th Queue (m)	30.1	15.8	28.9	14.7	48.4	55.9	28.3	74.5	49.1
Link Distance (m)	109.6	109.6	134.1		115.8	115.8		119.4	119.4
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				40.0			40.0		
Storage Blk Time (%)					2			7	
Queuing Penalty (veh)					1			4	

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (m)	15.0	14.8	31.3	14.1	8.8	16.6	45.4	14.0	8.2
Average Queue (m)	3.9	1.7	16.6	2.3	0.5	1.4	16.3	0.7	0.3
95th Queue (m)	12.1	8.5	28.1	9.3	4.9	9.0	33.1	7.2	4.0
Link Distance (m)	164.1	91.3	91.3		60.5	60.5		115.8	115.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				10.0			50.0		
Storage Blk Time (%)				1	0		0		
Queuing Penalty (veh)				4	0		0		

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	10.3	16.6	52.1	38.7	8.9	37.6	51.5	33.7	50.7	30.4
Average Queue (m)	2.1	3.6	25.4	16.9	0.7	16.9	24.2	9.0	17.7	10.0
95th Queue (m)	8.3	11.6	43.8	29.4	4.6	32.2	41.1	23.1	39.9	24.5
Link Distance (m)	73.5	73.5		146.8		65.5	65.5		60.5	60.5
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									0	
Storage Bay Dist (m)			70.0		20.0			30.0		
Storage Blk Time (%)						4		0	3	
Queuing Penalty (veh)						0		0	1	

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	NB	SB
Directions Served	LR	L	T
Maximum Queue (m)	10.4	1.8	14.8
Average Queue (m)	1.6	0.1	0.7
95th Queue (m)	7.3	1.3	7.8
Link Distance (m)	363.2		65.5
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		10.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	72.2	104.4	23.2	77.4	45.4	39.7	64.4	57.2	91.5	53.7
Average Queue (m)	23.7	48.7	7.3	39.2	20.3	22.3	29.8	39.0	32.9	22.2
95th Queue (m)	53.9	90.0	19.1	69.6	36.1	39.5	55.2	60.8	71.4	40.5
Link Distance (m)		365.9		606.3			203.9		108.2	108.2
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									1	
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		
Storage Blk Time (%)	0	1		5	0	10	18	7	0	
Queuing Penalty (veh)	0	1		13	1	20	18	13	1	

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	82.1	29.9	40.6	50.1
Average Queue (m)	37.9	16.1	21.1	24.0
95th Queue (m)	64.6	28.5	38.8	43.1
Link Distance (m)	610.0		38.1	210.8
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			2	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		23	19	
Queuing Penalty (veh)		78	27	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	19.0	7.8	14.6	25.8
Average Queue (m)	7.7	0.3	1.1	11.5
95th Queue (m)	17.2	4.2	7.1	18.9
Link Distance (m)	38.1	38.1	158.6	158.0
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (m)	48.6	54.5	225.4	59.7	36.6
Average Queue (m)	21.2	21.7	95.3	26.9	16.4
95th Queue (m)	37.2	41.3	187.6	49.0	28.8
Link Distance (m)		379.5	365.9		108.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	50.0			50.0	
Storage Blk Time (%)	0	0		1	0
Queuing Penalty (veh)	0	0		1	0

Intersection: 21: Sherk St & Coronation Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	10.6	8.6
Average Queue (m)	2.0	0.8
95th Queue (m)	8.1	5.3
Link Distance (m)	363.2	425.0
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	40.4	1.3	38.8
Average Queue (m)	19.2	0.0	13.0
95th Queue (m)	33.0	0.9	31.5
Link Distance (m)	371.7	425.0	83.8
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	9.2	18.9	11.6
Average Queue (m)	1.3	1.1	0.4
95th Queue (m)	6.4	9.2	6.1
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	15.7	23.7	41.6	47.0
Average Queue (m)	7.9	11.7	22.9	21.2
95th Queue (m)	14.9	18.5	36.1	35.4
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)			1	
Queuing Penalty (veh)			2	
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	EB	WB	NB	SB
Directions Served	R	LTR	LTR	LTR
Maximum Queue (m)	3.2	9.3	6.1	10.4
Average Queue (m)	0.1	2.2	0.2	0.6
95th Queue (m)	2.2	8.5	2.7	4.5
Link Distance (m)	164.1	137.4	215.6	223.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	23.1	24.6	14.3	11.4
Average Queue (m)	6.3	7.9	1.3	0.7
95th Queue (m)	20.5	22.2	7.9	5.8
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 401

FUTURE CONDITIONS – DO NOTHING

McINTOSH PERRY

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	41.0	77.4	11.1	80.7	36.1	9.0	45.8
Average Queue (m)	18.2	31.6	2.6	35.6	16.6	2.3	24.4
95th Queue (m)	33.9	57.9	8.6	62.9	30.1	8.5	41.2
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)		0		0			
Queuing Penalty (veh)		0		0			

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	16.0	4.3	13.2	10.6	22.3	15.6
Average Queue (m)	4.8	0.1	4.6	0.5	8.8	6.0
95th Queue (m)	12.9	2.3	12.4	5.4	16.5	14.1
Link Distance (m)		144.1		214.2	69.8	70.6
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	100.0		20.0			
Storage Blk Time (%)			0	0		
Queuing Penalty (veh)			0	0		

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (m)	36.1	40.9	59.8	18.8	29.8
Average Queue (m)	17.9	13.6	6.2	1.0	8.7
95th Queue (m)	34.6	32.5	30.1	7.5	21.3
Link Distance (m)	15.0	15.0	214.2	13.0	58.4
Upstream Blk Time (%)	13	8		0	
Queuing Penalty (veh)	33	20		0	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	22.8	25.3	47.6	52.2	74.1	47.6
Average Queue (m)	15.6	15.8	26.3	31.6	37.2	20.8
95th Queue (m)	20.2	22.4	43.0	52.2	61.8	35.6
Link Distance (m)	13.0	13.0	45.3	45.3	183.2	
Upstream Blk Time (%)	29	19	1	2		
Queuing Penalty (veh)	75	48	2	7		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	16.1	30.2	13.1	12.0
Average Queue (m)	0.7	3.3	3.9	6.4
95th Queue (m)	6.9	15.9	11.7	13.3
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				25.0
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Oak St W & Fox St

Movement	EB	EB
Directions Served	LT	T
Maximum Queue (m)	38.2	6.0
Average Queue (m)	7.6	0.2
95th Queue (m)	24.2	4.2
Link Distance (m)	111.8	111.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	TR
Maximum Queue (m)	68.1	80.4	25.7	67.5	46.6	56.1	64.9	112.9	55.4	49.9	86.1	74.0
Average Queue (m)	18.2	42.2	11.5	32.4	24.2	32.7	25.8	57.4	19.3	18.4	49.3	37.0
95th Queue (m)	39.1	68.2	21.9	55.7	43.3	51.6	55.8	99.4	39.8	42.8	75.3	65.0
Link Distance (m)		182.2	182.2		365.7			491.8	491.8		308.9	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			100.0		100.0	40.0			50.0		50.0
Storage Blk Time (%)	0	12					1	17		0	6	1
Queuing Penalty (veh)	1	14					5	22		1	25	3

Intersection: 10: Countess St & Erie St S

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (m)	10.6	13.1	10.4	28.4	18.0
Average Queue (m)	4.1	1.3	0.6	4.2	1.4
95th Queue (m)	11.6	7.1	4.3	17.2	8.5
Link Distance (m)	193.6	236.2	236.2	491.8	491.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (m)	103.6	49.4	18.2	23.9	24.7	39.7	10.0
Average Queue (m)	45.3	19.4	1.6	2.3	11.0	4.6	0.4
95th Queue (m)	89.2	35.1	9.6	11.8	23.1	22.7	4.4
Link Distance (m)	124.3	124.3	45.7	45.7		236.2	236.2
Upstream Blk Time (%)	0						
Queuing Penalty (veh)	0						
Storage Bay Dist (m)					15.0		
Storage Blk Time (%)					4	1	
Queuing Penalty (veh)					10	1	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	34.7	45.6	36.2	42.4	22.0	55.4	61.6	31.1	51.0	46.8
Average Queue (m)	13.8	19.6	18.8	19.5	8.0	15.6	23.8	11.0	30.2	19.9
95th Queue (m)	28.6	34.9	32.0	34.8	18.0	34.9	47.2	27.4	53.3	40.2
Link Distance (m)		371.7		296.4		119.4	119.4		45.7	45.7
Upstream Blk Time (%)								0	2	0
Queuing Penalty (veh)								0	5	1
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	2	4	5	4		0		0	2	
Queuing Penalty (veh)	4	2	6	4		0		0	1	

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (m)	35.8	22.0	46.5	26.8	69.8	87.4	48.7	78.2	58.2
Average Queue (m)	15.6	8.5	18.1	5.7	28.5	37.5	13.3	34.9	21.6
95th Queue (m)	31.1	18.1	34.0	16.3	56.1	72.0	33.0	62.0	45.9
Link Distance (m)	109.6	109.6	134.1		115.8	115.8		119.4	119.4
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				40.0			40.0		
Storage Blk Time (%)					2		0	5	
Queuing Penalty (veh)					1		1	3	

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (m)	29.8	11.3	26.2	18.9	9.8	11.4	39.3	40.9	8.8
Average Queue (m)	10.1	0.6	11.9	3.1	0.4	0.8	12.6	3.4	0.4
95th Queue (m)	23.8	4.8	21.7	12.4	5.3	6.8	27.3	20.4	5.8
Link Distance (m)	164.1	91.3	91.3		60.5	60.5		115.8	115.8
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				10.0			50.0		
Storage Blk Time (%)				2	0				
Queuing Penalty (veh)				5	0				

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	13.0	8.8	21.7	30.6	15.2	40.6	55.8	42.7	67.3	50.4
Average Queue (m)	2.5	0.7	6.9	14.4	1.8	10.7	19.2	18.3	27.8	12.5
95th Queue (m)	9.4	4.4	17.7	26.6	8.6	30.5	46.4	39.7	64.6	36.0
Link Distance (m)	73.5	73.5		146.8		65.5	65.5		60.5	60.5
Upstream Blk Time (%)							0		1	0
Queuing Penalty (veh)							0		4	0
Storage Bay Dist (m)			70.0		20.0			30.0		
Storage Blk Time (%)					0	2		1	5	
Queuing Penalty (veh)					0	0		3	5	

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	SB
Directions Served	LR	T
Maximum Queue (m)	9.2	27.0
Average Queue (m)	2.5	1.4
95th Queue (m)	8.9	12.9
Link Distance (m)	363.2	65.5
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	89.7	124.5	20.7	87.0	84.4	39.8	111.9	57.3	106.9	41.9
Average Queue (m)	27.8	48.5	5.5	36.5	29.5	26.2	48.9	38.8	43.9	12.7
95th Queue (m)	60.6	96.8	16.3	68.3	55.0	44.7	87.2	62.8	89.5	28.7
Link Distance (m)		365.9		606.3			203.9		108.2	108.2
Upstream Blk Time (%)									1	
Queuing Penalty (veh)									2	
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		
Storage Blk Time (%)	0	1		4	1	14	30	8	4	
Queuing Penalty (veh)	0	1		12	1	31	35	17	6	

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	38.1	23.0	35.8	29.6
Average Queue (m)	21.5	10.1	18.6	15.4
95th Queue (m)	31.0	17.9	28.5	24.4
Link Distance (m)	606.3		36.1	215.0
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		7	28	
Queuing Penalty (veh)		28	25	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	37.6	13.2	36.1
Average Queue (m)	11.5	0.6	12.4
95th Queue (m)	28.3	5.9	25.0
Link Distance (m)	36.1	158.6	159.9
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	2		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (m)	53.3	46.7	126.5	64.5	70.2
Average Queue (m)	22.6	20.6	59.9	30.6	17.5
95th Queue (m)	41.4	40.0	113.3	53.3	39.6
Link Distance (m)		379.5	365.9		108.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	50.0			50.0	
Storage Blk Time (%)	0	0		1	0
Queuing Penalty (veh)	1	0		2	0

Intersection: 21: Sherk St & Coronation Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	9.2	8.4
Average Queue (m)	2.1	0.4
95th Queue (m)	8.1	4.9
Link Distance (m)	363.2	425.0
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	38.6	17.4	54.2
Average Queue (m)	18.8	0.8	19.2
95th Queue (m)	32.8	7.7	41.4
Link Distance (m)	371.7	425.0	83.8
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	9.1	33.8	20.6
Average Queue (m)	1.9	3.4	1.4
95th Queue (m)	7.8	18.5	9.7
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	17.2	25.7	46.2	46.1
Average Queue (m)	9.4	13.2	29.0	21.8
95th Queue (m)	15.0	21.8	43.6	35.1
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)			1	
Queuing Penalty (veh)			6	
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (m)	9.2	3.3	9.1
Average Queue (m)	3.9	0.2	0.3
95th Queue (m)	11.0	2.0	4.4
Link Distance (m)	137.4	215.6	223.4
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	21.3	23.2	12.1	25.4
Average Queue (m)	6.4	5.3	0.9	2.3
95th Queue (m)	19.3	18.6	6.0	12.7
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 484

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	38.9	105.0	8.8	66.0	21.7	10.3	28.2
Average Queue (m)	3.5	46.1	2.1	26.2	6.2	3.3	12.0
95th Queue (m)	23.9	112.6	7.6	52.6	16.3	10.3	23.4
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)		4					
Queuing Penalty (veh)		0					

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (m)	63.3	99.8	7.1	21.6	18.6
Average Queue (m)	3.4	40.3	0.5	6.9	7.3
95th Queue (m)	30.0	137.8	3.8	16.7	17.3
Link Distance (m)		144.1		69.8	70.6
Upstream Blk Time (%)		3			
Queuing Penalty (veh)		21			
Storage Bay Dist (m)	100.0		20.0		
Storage Blk Time (%)	0	15			
Queuing Penalty (veh)	0	1			

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	SB
Directions Served	LT	T	T	LR
Maximum Queue (m)	38.2	46.8	213.6	65.6
Average Queue (m)	28.8	34.3	126.4	25.3
95th Queue (m)	43.9	48.6	267.3	72.6
Link Distance (m)	15.2	15.2	214.2	135.0
Upstream Blk Time (%)	40	46	9	2
Queuing Penalty (veh)	133	156	59	0
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	24.2	30.5	51.7	48.0	69.6	49.8
Average Queue (m)	16.8	20.5	35.3	29.5	30.5	21.4
95th Queue (m)	21.1	28.0	52.8	48.6	52.1	37.6
Link Distance (m)	12.8	12.8	45.3	45.3	183.2	
Upstream Blk Time (%)	55	47	5	1		
Queuing Penalty (veh)	207	176	17	5		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)					0	0
Queuing Penalty (veh)					0	0

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	36.7	21.9	15.8	19.1
Average Queue (m)	4.6	1.9	6.7	8.3
95th Queue (m)	21.5	11.0	15.2	15.1
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				25.0
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 8: Oak St W & Fox St

Movement	EB	EB	WB
Directions Served	LT	T	TR
Maximum Queue (m)	39.1	10.5	4.0
Average Queue (m)	8.8	0.4	0.1
95th Queue (m)	27.3	4.7	2.1
Link Distance (m)	111.8	111.8	182.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	TR
Maximum Queue (m)	59.5	82.0	27.4	103.9	116.2	78.5	64.9	228.4	124.1	49.9	131.8	91.6
Average Queue (m)	24.6	47.1	12.8	61.0	54.4	37.6	35.3	99.2	38.7	34.5	60.0	47.0
95th Queue (m)	45.4	73.4	23.0	116.7	189.4	69.2	74.9	199.6	95.2	58.4	98.0	84.1
Link Distance (m)		182.2	182.2		365.7			491.8	491.8		308.9	
Upstream Blk Time (%)					2							
Queuing Penalty (veh)					0							
Storage Bay Dist (m)	40.0			100.0		100.0	40.0			50.0		50.0
Storage Blk Time (%)	2	15		13	0	0	3	37		2	10	2
Queuing Penalty (veh)	8	21		62	0	0	14	42		16	63	12

Intersection: 10: Countess St & Erie St S

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (m)	15.5	12.7	20.8	82.6	71.7
Average Queue (m)	6.4	0.9	1.1	10.3	4.7
95th Queue (m)	15.1	7.8	8.7	51.2	43.9
Link Distance (m)	193.6	236.2	236.2	491.8	491.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (m)	40.2	37.9	26.5	31.0	28.9	94.0	69.0
Average Queue (m)	15.0	18.1	1.6	3.5	13.6	18.4	10.2
95th Queue (m)	33.2	30.6	11.1	16.0	25.7	96.4	80.7
Link Distance (m)	124.3	124.3	45.7	45.7		236.2	236.2
Upstream Blk Time (%)				0		1	0
Queuing Penalty (veh)				0		6	0
Storage Bay Dist (m)					15.0		
Storage Blk Time (%)					5	6	
Queuing Penalty (veh)					19	7	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	39.4	59.9	52.5	72.9	45.6	81.2	76.7	41.3	50.9	48.5
Average Queue (m)	13.6	28.7	23.3	24.6	16.3	33.4	39.9	14.0	35.1	26.2
95th Queue (m)	30.9	51.9	41.7	50.9	34.7	63.2	67.4	30.7	56.3	48.0
Link Distance (m)		371.7		296.4		119.4	119.4		45.7	45.7
Upstream Blk Time (%)								0	6	2
Queuing Penalty (veh)								0	26	6
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	2	12	12	6	2	8		0	7	
Queuing Penalty (veh)	4	8	16	7	8	8		0	5	

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (m)	40.8	18.6	47.5	41.2	80.4	88.2	59.8	125.8	118.5
Average Queue (m)	17.4	6.6	17.7	8.6	41.3	48.8	19.7	65.1	43.2
95th Queue (m)	35.1	15.3	34.6	22.3	68.9	75.4	51.8	118.9	91.9
Link Distance (m)	109.6	109.6	134.1		115.8	115.8		119.4	119.4
Upstream Blk Time (%)								3	1
Queuing Penalty (veh)								17	4
Storage Bay Dist (m)				40.0			40.0		
Storage Blk Time (%)					8			22	
Queuing Penalty (veh)					4			15	

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (m)	17.5	14.2	48.5	13.8	20.5	21.6	62.7	90.9	69.0
Average Queue (m)	5.2	1.9	21.4	3.4	1.0	1.6	25.2	15.9	9.9
95th Queue (m)	14.5	8.5	36.4	11.0	8.7	11.2	54.9	76.2	59.2
Link Distance (m)	164.1	91.3	91.3		60.5	60.5		115.8	115.8
Upstream Blk Time (%)								2	1
Queuing Penalty (veh)								11	4
Storage Bay Dist (m)				10.0			50.0		
Storage Blk Time (%)				3	0		1	7	
Queuing Penalty (veh)				11	0		2	15	

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	10.4	18.6	70.5	86.4	19.9	52.9	57.2	44.8	63.1	63.1
Average Queue (m)	1.7	4.9	30.0	23.3	1.6	22.6	27.2	15.7	34.2	18.5
95th Queue (m)	7.5	14.4	61.1	62.8	9.3	43.5	49.4	37.9	66.2	45.4
Link Distance (m)	73.5	73.5		146.8		65.5	65.5		60.5	60.5
Upstream Blk Time (%)				1		0	0		9	1
Queuing Penalty (veh)				0		0	0		34	3
Storage Bay Dist (m)			70.0		20.0			30.0		
Storage Blk Time (%)			4	0		9		0	19	
Queuing Penalty (veh)			7	0		1		1	12	

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	NB	SB	SB
Directions Served	LR	L	T	TR
Maximum Queue (m)	9.1	1.8	74.5	57.2
Average Queue (m)	1.6	0.1	26.5	9.3
95th Queue (m)	7.1	1.3	78.0	44.8
Link Distance (m)	363.2		65.5	65.5
Upstream Blk Time (%)			9	1
Queuing Penalty (veh)			36	6
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	84.7	158.2	89.8	582.6	90.0	39.9	221.2	57.4	117.8	106.6
Average Queue (m)	37.5	69.4	20.7	424.6	81.7	35.0	140.8	52.8	80.4	54.0
95th Queue (m)	77.6	127.9	74.6	661.0	119.1	48.9	267.0	66.6	136.7	106.3
Link Distance (m)		365.9		606.3			203.9		108.2	108.2
Upstream Blk Time (%)				3			34		18	5
Queuing Penalty (veh)				19			0		74	19
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		
Storage Blk Time (%)	0	5	0	82	3	68	29	43	6	
Queuing Penalty (veh)	0	8	1	284	14	156	39	100	19	

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	197.7	29.8	39.6	58.2
Average Queue (m)	82.5	18.3	26.8	22.0
95th Queue (m)	179.3	32.2	40.7	44.0
Link Distance (m)	606.3		36.1	215.0
Upstream Blk Time (%)			5	
Queuing Penalty (veh)			30	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		21	51	
Queuing Penalty (veh)		97	88	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	40.4	107.2	72.7
Average Queue (m)	23.3	22.5	29.8
95th Queue (m)	44.4	94.8	81.9
Link Distance (m)	36.1	158.6	159.9
Upstream Blk Time (%)	3	3	0
Queuing Penalty (veh)	18	0	0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (m)	71.2	74.0	372.3	67.8	62.7
Average Queue (m)	34.9	34.9	361.2	36.1	22.0
95th Queue (m)	58.6	61.8	401.1	58.9	42.6
Link Distance (m)		379.5	365.9		108.8
Upstream Blk Time (%)			14		0
Queuing Penalty (veh)			107		0
Storage Bay Dist (m)	50.0			50.0	
Storage Blk Time (%)	3	1		2	0
Queuing Penalty (veh)	15	2		3	0

Intersection: 21: Sherk St & Coronation Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	10.5	22.2
Average Queue (m)	1.6	1.6
95th Queue (m)	7.1	9.4
Link Distance (m)	363.2	425.0
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	127.3	17.2	64.0
Average Queue (m)	47.1	0.8	22.5
95th Queue (m)	108.3	8.3	47.0
Link Distance (m)	371.7	425.0	83.8
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	9.2	52.5	21.5
Average Queue (m)	1.6	12.1	1.2
95th Queue (m)	7.0	44.6	10.1
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)		0	0
Queuing Penalty (veh)		1	0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	25.1	29.2	54.9	123.7
Average Queue (m)	11.1	15.2	33.5	52.5
95th Queue (m)	18.9	25.0	51.3	112.1
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)			6	
Queuing Penalty (veh)			31	
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	EB	WB	NB	SB
Directions Served	R	LTR	LTR	LTR
Maximum Queue (m)	6.4	9.2	13.1	19.7
Average Queue (m)	0.2	1.9	0.6	1.2
95th Queue (m)	3.3	7.8	6.1	10.6
Link Distance (m)	164.1	137.4	215.6	223.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	20.8	30.8	36.0	15.2
Average Queue (m)	4.8	7.9	3.2	1.0
95th Queue (m)	17.1	23.0	18.0	6.6
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 2444

FUTURE CONDITIONS – ROAD DIET

McINTOSH PERRY

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	43.3	75.2	8.8	88.4	31.5	10.2	50.4
Average Queue (m)	20.4	30.6	2.2	37.4	15.6	2.4	22.8
95th Queue (m)	35.9	59.1	7.8	69.9	26.6	8.8	40.2
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	12.9	1.6	15.8	5.4	15.6	14.5
Average Queue (m)	3.4	0.1	5.2	0.2	7.4	6.0
95th Queue (m)	10.9	1.1	14.0	2.0	14.5	13.7
Link Distance (m)		144.1		214.2	69.8	70.6
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	100.0		20.0			
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (m)	36.6	39.9	51.8	12.4	20.8
Average Queue (m)	16.0	15.4	6.7	0.9	7.8
95th Queue (m)	34.6	33.2	31.4	6.5	17.5
Link Distance (m)	15.0	15.0	214.2	13.0	58.4
Upstream Blk Time (%)	10	9		0	
Queuing Penalty (veh)	26	22		0	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	19.2	26.6	50.4	50.0	76.6	55.8
Average Queue (m)	15.1	16.3	26.0	33.0	35.3	21.9
95th Queue (m)	19.3	22.4	43.6	51.6	61.7	40.1
Link Distance (m)	13.0	13.0	45.3	45.3	183.2	
Upstream Blk Time (%)	25	19	1	3		
Queuing Penalty (veh)	64	48	2	8		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)					0	
Queuing Penalty (veh)					1	

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	13.0	42.2	13.1	13.0
Average Queue (m)	0.6	4.8	3.7	6.6
95th Queue (m)	5.2	22.3	11.5	13.7
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				25.0
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Oak St W & Fox St

Movement	EB	EB	WB
Directions Served	LT	T	TR
Maximum Queue (m)	37.7	11.7	2.6
Average Queue (m)	10.2	0.4	0.1
95th Queue (m)	30.3	6.0	1.3
Link Distance (m)	111.8	111.8	182.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	R
Maximum Queue (m)	42.4	81.1	26.8	77.7	75.2	58.8	62.2	152.7	65.0	49.9	133.5	33.0
Average Queue (m)	15.8	39.0	11.4	32.9	25.0	34.7	25.5	57.0	30.9	22.3	73.4	12.6
95th Queue (m)	31.3	65.3	22.7	64.5	58.5	55.3	51.6	113.6	66.3	50.0	122.2	23.9
Link Distance (m)		182.2	182.2		662.8			491.8			472.7	472.7
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			100.0		100.0	40.0		35.0	50.0		
Storage Blk Time (%)	0	9		1			2	17	1	0	20	
Queuing Penalty (veh)	0	10		4			14	61	8	1	16	

Intersection: 10: Countess St & Erie St S

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	13.4	18.2	50.8
Average Queue (m)	4.5	1.7	5.2
95th Queue (m)	12.5	9.3	23.7
Link Distance (m)	197.2	236.1	491.8
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (m)	362.1	341.0	22.4	29.8	115.6
Average Queue (m)	238.8	156.5	3.8	15.8	29.0
95th Queue (m)	441.3	425.8	15.2	29.5	81.8
Link Distance (m)	367.5	367.5	45.7		236.1
Upstream Blk Time (%)	28	22			
Queuing Penalty (veh)	0	0			
Storage Bay Dist (m)				15.0	
Storage Blk Time (%)				12	8
Queuing Penalty (veh)				62	8

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	27.5	52.5	47.0	89.8	56.1	122.6	44.8	53.6
Average Queue (m)	11.4	22.1	21.6	27.2	13.6	51.8	12.0	42.2
95th Queue (m)	24.5	40.4	42.0	76.1	37.1	111.5	28.9	59.8
Link Distance (m)		375.3		387.8		119.4		45.7
Upstream Blk Time (%)						1	0	9
Queuing Penalty (veh)						6	0	62
Storage Bay Dist (m)	25.0		25.0		35.0		45.0	
Storage Blk Time (%)	1	8	12	6	1	14	0	10
Queuing Penalty (veh)	2	4	14	6	5	9	0	6

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (m)	38.5	23.6	47.5	59.8	120.8	59.9	122.8
Average Queue (m)	17.6	9.2	21.5	14.9	95.9	18.7	70.4
95th Queue (m)	32.8	19.9	39.5	48.4	144.0	48.7	125.0
Link Distance (m)	175.0	175.0	234.0		115.6		119.4
Upstream Blk Time (%)					11		2
Queuing Penalty (veh)					74		19
Storage Bay Dist (m)				40.0		40.0	
Storage Blk Time (%)					39	0	23
Queuing Penalty (veh)					13	1	16

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	L	TR	L	TR
Maximum Queue (m)	66.0	4.8	50.3	22.6	65.4	43.4	35.8
Average Queue (m)	24.3	0.3	22.4	5.7	26.3	19.9	3.5
95th Queue (m)	69.9	3.0	57.3	17.8	71.2	38.5	23.5
Link Distance (m)	167.6	340.5	340.5		60.5		115.6
Upstream Blk Time (%)					5		
Queuing Penalty (veh)					31		
Storage Bay Dist (m)				10.0		50.0	
Storage Blk Time (%)				4	14	0	0
Queuing Penalty (veh)				24	3	2	0

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	10.3	9.8	19.5	45.9	19.9	67.8	44.8	64.1
Average Queue (m)	3.2	0.8	6.2	16.7	2.7	41.2	15.7	26.2
95th Queue (m)	10.0	5.2	16.1	34.5	13.1	81.7	33.3	57.2
Link Distance (m)	153.1	153.1		437.2		65.2		60.5
Upstream Blk Time (%)						7		1
Queuing Penalty (veh)						43		5
Storage Bay Dist (m)			70.0		20.0		30.0	
Storage Blk Time (%)				0		20	1	5
Queuing Penalty (veh)				0		2	5	4

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (m)	10.5	3.5	88.0	45.3
Average Queue (m)	2.3	0.1	18.9	2.4
95th Queue (m)	8.8	1.8	74.9	18.6
Link Distance (m)	366.9		108.2	65.2
Upstream Blk Time (%)			2	0
Queuing Penalty (veh)			11	0
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		0	9	
Queuing Penalty (veh)		0	0	

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	82.3	121.4	25.9	115.3	81.8	39.8	126.7	57.3	109.6	44.9
Average Queue (m)	29.4	45.8	6.5	40.9	36.1	26.3	52.9	33.5	40.9	15.3
95th Queue (m)	62.9	91.8	19.9	91.3	69.6	45.6	99.2	60.3	90.2	39.7
Link Distance (m)		365.8		610.0			456.1		108.2	
Upstream Blk Time (%)									1	
Queuing Penalty (veh)									4	
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		25.0
Storage Blk Time (%)	1	1		5	5	18	32	4	15	0
Queuing Penalty (veh)	2	1		15	12	40	37	11	46	1

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	45.8	23.9	33.6	29.4
Average Queue (m)	23.8	10.8	20.0	15.3
95th Queue (m)	37.5	20.3	30.0	23.7
Link Distance (m)	610.0		36.0	409.5
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			1	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		9	29	
Queuing Penalty (veh)		32	25	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	37.7	22.7	27.5
Average Queue (m)	11.7	1.5	11.9
95th Queue (m)	30.5	10.8	20.5
Link Distance (m)	36.0	652.2	372.2
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	2		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	WB	SB	SB
Directions Served	L	T	T	R	L	R
Maximum Queue (m)	50.6	50.8	98.1	54.9	59.2	40.8
Average Queue (m)	22.5	19.7	35.1	20.5	31.2	12.8
95th Queue (m)	41.2	40.2	75.2	45.9	53.2	26.8
Link Distance (m)		797.6	365.8			104.9
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	50.0			30.0	50.0	
Storage Blk Time (%)	0	0	8	0	2	0
Queuing Penalty (veh)	0	0	14	1	2	0

Intersection: 21: Sherk St & Coronation Ave

Movement	WB
Directions Served	LR
Maximum Queue (m)	9.0
Average Queue (m)	1.8
95th Queue (m)	7.6
Link Distance (m)	366.9
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	48.6	16.9	53.1
Average Queue (m)	19.6	1.3	20.3
95th Queue (m)	36.4	7.8	43.9
Link Distance (m)	375.3	425.0	83.8
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	9.0	51.9	7.9
Average Queue (m)	2.0	4.1	0.3
95th Queue (m)	8.0	23.4	3.6
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	19.9	25.1	49.2	45.4
Average Queue (m)	10.2	13.1	30.6	22.7
95th Queue (m)	16.7	21.0	46.2	36.8
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)			2	
Queuing Penalty (veh)			10	
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (m)	10.5	4.6
Average Queue (m)	3.6	0.2
95th Queue (m)	10.8	2.8
Link Distance (m)	137.4	215.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	22.4	23.0	13.3	25.3
Average Queue (m)	6.9	4.7	0.8	1.6
95th Queue (m)	20.2	17.4	6.3	10.7
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 983

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	67.3	234.1	9.9	71.8	19.6	14.2	57.0
Average Queue (m)	3.5	118.8	2.1	25.8	6.5	4.1	17.6
95th Queue (m)	31.3	341.5	7.7	55.6	16.5	12.3	43.1
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)		24					
Queuing Penalty (veh)		0					
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)		26		0			
Queuing Penalty (veh)		3		0			

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	EB	WB	WB	B4	NB	SB
Directions Served	L	TR	L	TR	T	LTR	LTR
Maximum Queue (m)	27.1	88.6	9.0	47.1	6.2	31.8	35.7
Average Queue (m)	1.8	45.1	0.5	5.6	0.4	9.1	11.5
95th Queue (m)	20.9	155.0	4.0	61.3	5.9	23.8	28.8
Link Distance (m)		144.1		214.2	15.0	69.8	70.6
Upstream Blk Time (%)		18		1	1		
Queuing Penalty (veh)		117		7	4		
Storage Bay Dist (m)	100.0		20.0				
Storage Blk Time (%)	0	25		3			
Queuing Penalty (veh)	0	2		0			

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (m)	35.3	42.7	178.7	5.4	39.7
Average Queue (m)	20.5	27.6	92.9	0.2	15.9
95th Queue (m)	41.8	45.5	241.9	3.2	41.3
Link Distance (m)	15.0	15.0	214.2	13.0	58.4
Upstream Blk Time (%)	18	44	21	0	5
Queuing Penalty (veh)	62	146	141	2	0
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	20.3	27.9	50.6	47.8	74.4	40.8
Average Queue (m)	13.6	16.7	39.8	25.6	35.7	19.2
95th Queue (m)	22.5	24.7	55.2	49.2	61.3	31.7
Link Distance (m)	13.0	13.0	45.3	45.3	183.2	
Upstream Blk Time (%)	31	43	22	1		
Queuing Penalty (veh)	117	162	69	5		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	87.5	80.8	52.8	27.4
Average Queue (m)	23.2	12.0	10.3	10.5
95th Queue (m)	84.7	62.8	34.5	23.0
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)	11	5		
Queuing Penalty (veh)	31	15		
Storage Bay Dist (m)				25.0
Storage Blk Time (%)			4	5
Queuing Penalty (veh)			2	2

Intersection: 8: Oak St W & Fox St

Movement	EB	EB	WB	WB
Directions Served	LT	T	T	TR
Maximum Queue (m)	32.8	4.7	100.0	104.5
Average Queue (m)	6.5	0.2	13.0	11.9
95th Queue (m)	21.4	3.3	75.4	71.7
Link Distance (m)	111.8	111.8	182.2	182.2
Upstream Blk Time (%)			0	0
Queuing Penalty (veh)			1	1
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	R
Maximum Queue (m)	50.5	93.6	39.2	120.3	348.1	84.0	64.9	158.6	65.0	49.9	484.7	472.3
Average Queue (m)	18.3	40.9	14.0	78.9	107.6	36.5	24.4	68.1	40.5	37.1	325.3	226.0
95th Queue (m)	38.2	74.4	32.5	140.0	371.5	72.7	55.8	130.4	77.0	64.2	579.8	579.0
Link Distance (m)		182.2	182.2		662.8			491.8			472.7	472.7
Upstream Blk Time (%)					3						36	20
Queuing Penalty (veh)					0						0	0
Storage Bay Dist (m)	40.0			100.0		100.0	40.0		35.0	50.0		
Storage Blk Time (%)	2	13		28	0	0	3	23	4	2	57	
Queuing Penalty (veh)	7	18		133	0	0	21	98	24	14	96	

Intersection: 10: Countess St & Erie St S

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	42.5	35.6	494.0
Average Queue (m)	15.8	2.8	296.1
95th Queue (m)	41.0	16.9	631.4
Link Distance (m)	197.2	236.1	491.8
Upstream Blk Time (%)			9
Queuing Penalty (veh)			85
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (m)	291.6	160.9	34.5	29.9	240.3
Average Queue (m)	153.8	44.0	4.0	19.6	204.2
95th Queue (m)	297.0	164.3	19.5	37.7	314.9
Link Distance (m)	367.5	367.5	45.7		236.1
Upstream Blk Time (%)	1	0	0		26
Queuing Penalty (veh)	0	0	1		233
Storage Bay Dist (m)				15.0	
Storage Blk Time (%)				10	55
Queuing Penalty (veh)				74	65

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	49.1	113.0	55.0	389.4	59.9	123.3	44.4	52.3
Average Queue (m)	14.2	50.6	45.1	253.7	30.1	88.7	18.1	47.7
95th Queue (m)	42.9	148.5	72.7	476.7	63.1	142.7	42.8	52.0
Link Distance (m)		375.3		387.8		119.4		45.7
Upstream Blk Time (%)				31		9	0	45
Queuing Penalty (veh)				0		81	0	360
Storage Bay Dist (m)	25.0		25.0		35.0		45.0	
Storage Blk Time (%)	1	28	76	17	15	38	0	46
Queuing Penalty (veh)	3	18	107	22	121	40	1	34

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (m)	81.1	56.7	80.0	59.8	121.5	59.8	125.7
Average Queue (m)	25.8	10.3	26.6	22.7	118.1	21.2	110.9
95th Queue (m)	69.8	35.6	83.9	63.4	124.8	58.7	160.8
Link Distance (m)	175.0	175.0	234.0		115.6		119.4
Upstream Blk Time (%)	1	1	1		35		21
Queuing Penalty (veh)	0	0	0		308		203
Storage Bay Dist (m)				40.0		40.0	
Storage Blk Time (%)					61	0	49
Queuing Penalty (veh)					33	0	32

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	L	TR	L	TR
Maximum Queue (m)	49.6	354.0	354.8	24.8	66.3	69.9	119.5
Average Queue (m)	20.9	264.3	319.0	4.5	58.5	35.5	47.4
95th Queue (m)	45.6	489.6	421.4	17.1	78.3	70.3	130.2
Link Distance (m)	167.6	340.5	340.5		60.5		115.6
Upstream Blk Time (%)		68	74		28		5
Queuing Penalty (veh)		0	0		207		45
Storage Bay Dist (m)				10.0		50.0	
Storage Blk Time (%)				4	52	2	17
Queuing Penalty (veh)				25	11	13	37

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	20.4	16.9	74.8	255.2	19.9	69.4	42.2	66.7
Average Queue (m)	4.8	4.3	37.6	95.4	1.5	65.6	14.7	48.3
95th Queue (m)	15.5	12.9	77.2	296.6	10.2	77.1	37.9	78.0
Link Distance (m)	153.1	153.1		437.2		65.2		60.5
Upstream Blk Time (%)				6		45		22
Queuing Penalty (veh)				0		302		166
Storage Bay Dist (m)			70.0		20.0		30.0	
Storage Blk Time (%)			1	22	0	62	0	33
Queuing Penalty (veh)			2	30	0	4	2	21

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (m)	10.5	6.9	114.2	68.7
Average Queue (m)	2.2	0.3	97.0	42.6
95th Queue (m)	8.7	4.3	150.3	90.8
Link Distance (m)	366.9		108.2	65.2
Upstream Blk Time (%)			26	12
Queuing Penalty (veh)			178	97
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		0	57	
Queuing Penalty (veh)		1	1	

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	89.9	371.0	89.7	450.0	90.0	39.9	249.4	57.4	113.0	45.0
Average Queue (m)	83.9	316.8	11.6	238.3	72.5	29.5	100.7	53.6	93.1	30.5
95th Queue (m)	113.0	484.7	42.9	555.3	114.0	48.5	269.8	68.7	145.2	54.7
Link Distance (m)		365.8		610.0			456.1		108.2	
Upstream Blk Time (%)		35		4			2		18	
Queuing Penalty (veh)		230		21			0		153	
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		25.0
Storage Blk Time (%)	62	36	0	23	53	27	44	41	19	13
Queuing Penalty (veh)	271	64	0	80	212	62	60	205	114	70

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	152.6	29.6	40.8	59.2
Average Queue (m)	53.2	18.8	26.3	21.0
95th Queue (m)	112.9	31.5	39.3	41.2
Link Distance (m)	610.0		36.0	409.5
Upstream Blk Time (%)			5	
Queuing Penalty (veh)			31	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		20	50	
Queuing Penalty (veh)		93	86	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	37.4	126.4	57.8
Average Queue (m)	19.2	23.3	21.4
95th Queue (m)	39.2	134.2	45.7
Link Distance (m)	36.0	652.2	372.2
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	8		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	WB	SB	SB
Directions Served	L	T	T	R	L	R
Maximum Queue (m)	95.0	752.9	267.6	55.0	74.9	112.8
Average Queue (m)	57.9	399.1	113.5	31.7	61.7	77.5
95th Queue (m)	118.8	938.1	262.4	68.3	92.1	146.0
Link Distance (m)		797.6	365.8			104.9
Upstream Blk Time (%)		20	0			51
Queuing Penalty (veh)		0	0			201
Storage Bay Dist (m)	50.0			30.0	50.0	
Storage Blk Time (%)	6	59	27	1	63	3
Queuing Penalty (veh)	27	115	57	6	107	7

Intersection: 21: Sherk St & Coronation Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	12.6	395.6
Average Queue (m)	2.5	218.1
95th Queue (m)	9.4	523.9
Link Distance (m)	366.9	425.0
Upstream Blk Time (%)		23
Queuing Penalty (veh)		115
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	295.3	15.5	82.2
Average Queue (m)	113.9	0.8	40.3
95th Queue (m)	331.2	7.6	92.2
Link Distance (m)	375.3	425.0	83.8
Upstream Blk Time (%)	11		22
Queuing Penalty (veh)	25		133
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	13.0	44.6	41.0
Average Queue (m)	2.1	6.5	12.3
95th Queue (m)	8.9	29.2	42.4
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)			21
Queuing Penalty (veh)			126
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	50.6	167.7	50.6	212.5
Average Queue (m)	12.4	41.9	30.2	122.1
95th Queue (m)	40.4	142.1	48.3	260.9
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)		2	3	24
Queuing Penalty (veh)		0	17	142
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)	0	9		
Queuing Penalty (veh)	0	8		

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	EB	WB	NB	SB
Directions Served	R	LTR	LTR	LTR
Maximum Queue (m)	30.5	10.5	5.9	185.2
Average Queue (m)	3.4	1.9	0.2	58.9
95th Queue (m)	21.2	7.8	3.2	214.0
Link Distance (m)	164.1	137.4	215.6	223.4
Upstream Blk Time (%)				18
Queuing Penalty (veh)				115
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	33.0	38.4	20.7	151.4
Average Queue (m)	8.5	10.7	1.5	39.8
95th Queue (m)	28.5	34.4	11.1	162.6
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				16
Queuing Penalty (veh)				98
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 7321

FUTURE CONDITIONS – ULTIMATE

McINTOSH PERRY

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	37.1	77.6	11.2	72.8	35.8	8.9	55.2
Average Queue (m)	18.1	34.0	2.4	36.6	16.1	2.0	23.6
95th Queue (m)	32.8	61.8	8.3	63.9	29.5	7.9	42.3
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	15.7	11.1	13.0	7.5	17.2	11.8
Average Queue (m)	4.8	0.6	5.0	0.2	8.3	5.1
95th Queue (m)	12.8	6.5	13.1	3.6	15.1	12.5
Link Distance (m)		144.1		214.2	69.8	70.6
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	100.0		20.0			
Storage Blk Time (%)			0	0		
Queuing Penalty (veh)			0	0		

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (m)	36.5	41.5	66.1	16.1	19.3
Average Queue (m)	20.1	16.4	10.0	1.5	7.9
95th Queue (m)	37.7	37.4	42.0	9.3	17.3
Link Distance (m)	15.0	15.0	214.2	13.0	58.4
Upstream Blk Time (%)	15	11		0	
Queuing Penalty (veh)	38	28		2	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	21.0	28.3	46.6	50.9	73.7	44.9
Average Queue (m)	15.4	17.0	26.6	35.7	36.0	19.7
95th Queue (m)	19.4	24.5	43.9	54.8	60.1	35.2
Link Distance (m)	13.0	13.0	45.3	45.3	183.2	
Upstream Blk Time (%)	30	22	1	3		
Queuing Penalty (veh)	77	55	2	10		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)					0	
Queuing Penalty (veh)					1	

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	14.1	34.5	13.1	15.3
Average Queue (m)	0.7	4.8	4.2	6.7
95th Queue (m)	6.3	20.3	11.8	14.2
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				25.0
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Oak St W & Fox St

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (m)	35.4	2.4
Average Queue (m)	8.8	0.1
95th Queue (m)	25.4	1.2
Link Distance (m)	111.8	182.2
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	TR
Maximum Queue (m)	58.4	88.6	25.8	84.8	58.4	66.0	64.8	96.9	53.6	49.8	64.9	67.5
Average Queue (m)	19.6	47.6	11.8	41.2	27.3	37.9	25.1	48.2	20.2	17.0	36.8	35.2
95th Queue (m)	39.2	77.2	21.7	74.8	49.0	59.4	54.3	84.9	41.5	38.7	58.1	59.0
Link Distance (m)		182.2	182.2		662.8			491.8	491.8		472.7	472.7
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			100.0		100.0	40.0			50.0		
Storage Blk Time (%)	0	17		0			1	12		0	2	
Queuing Penalty (veh)	1	20		2			2	16		0	1	

Intersection: 10: Countess St & Erie St S

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (m)	11.5	12.0	11.9	17.4	8.8
Average Queue (m)	5.2	0.8	0.6	2.8	0.7
95th Queue (m)	12.8	5.8	4.9	11.4	5.5
Link Distance (m)	193.6	236.1	236.1	491.8	491.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (m)	92.2	34.8	14.7	15.5	26.4	37.4	20.6
Average Queue (m)	37.0	18.5	1.2	1.7	11.2	3.8	0.7
95th Queue (m)	75.3	28.5	8.0	8.7	23.5	19.8	10.2
Link Distance (m)	363.9	363.9	45.8	45.8		236.1	236.1
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)					15.0		
Storage Blk Time (%)					4	1	
Queuing Penalty (veh)					12	1	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	31.0	46.0	46.2	52.2	23.5	53.7	71.5	41.8	50.8	46.6
Average Queue (m)	13.8	17.6	19.2	20.8	10.9	16.7	24.0	12.2	29.3	19.2
95th Queue (m)	28.0	33.6	34.1	39.0	21.4	39.8	53.8	27.7	51.9	40.2
Link Distance (m)		371.7		384.2		119.4	119.4		45.8	45.8
Upstream Blk Time (%)								0	1	0
Queuing Penalty (veh)								0	5	1
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	2	3	5	5		1		0	1	
Queuing Penalty (veh)	3	2	6	6		1		0	1	

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (m)	44.1	20.8	46.7	16.4	59.1	69.0	41.6	66.5	47.4
Average Queue (m)	18.1	8.0	20.0	5.5	23.0	33.0	11.9	33.0	21.1
95th Queue (m)	33.8	16.9	36.5	13.4	45.2	60.4	27.7	59.1	40.2
Link Distance (m)	171.4	171.4	230.4		115.9	115.9		119.4	119.4
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				40.0			40.0		
Storage Blk Time (%)					1		0	5	
Queuing Penalty (veh)					0		0	3	

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (m)	28.6	15.1	27.6	19.6	13.3	23.1	45.4	21.6	3.2
Average Queue (m)	10.3	0.7	11.9	3.8	0.8	1.6	14.8	0.9	0.2
95th Queue (m)	24.1	5.8	21.3	13.5	6.6	10.1	31.0	12.3	2.7
Link Distance (m)	164.1	336.9	336.9		60.5	60.5		115.9	115.9
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)				10.0			50.0		
Storage Blk Time (%)				2	0		0		
Queuing Penalty (veh)				7	0		1		

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	13.9	8.7	19.0	32.7	17.7	40.0	53.4	38.7	52.6	29.0
Average Queue (m)	3.0	0.6	6.4	14.9	2.1	12.0	18.3	12.3	10.7	4.6
95th Queue (m)	10.1	4.3	16.9	27.9	10.0	31.8	44.1	27.6	32.4	17.7
Link Distance (m)	149.5	149.5		433.6		65.2	65.2		60.5	60.5
Upstream Blk Time (%)							0		0	
Queuing Penalty (veh)							0		0	
Storage Bay Dist (m)			70.0		20.0			30.0		
Storage Blk Time (%)					0	2		1	1	
Queuing Penalty (veh)					0	0		1	1	

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	NB	SB
Directions Served	LR	L	T
Maximum Queue (m)	9.2	1.8	4.1
Average Queue (m)	2.0	0.1	0.2
95th Queue (m)	8.1	1.8	3.2
Link Distance (m)	363.2		65.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		10.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	89.0	123.8	32.7	99.0	77.1	39.8	101.0	57.3	86.6	29.9
Average Queue (m)	28.7	45.8	4.0	38.1	27.2	26.5	45.1	33.3	36.1	10.6
95th Queue (m)	61.5	93.5	18.5	71.1	51.2	45.3	83.5	58.0	70.8	23.3
Link Distance (m)		365.8		606.3			456.1		108.2	108.2
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									0	
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		
Storage Blk Time (%)	0	1		4	1	15	27	3	2	
Queuing Penalty (veh)	0	2		12	1	34	31	6	3	

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	51.4	28.2	36.1	30.3
Average Queue (m)	23.8	11.3	19.4	15.3
95th Queue (m)	40.3	20.7	29.4	23.9
Link Distance (m)	606.3		36.0	409.5
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			1	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		8	29	
Queuing Penalty (veh)		30	25	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	35.5	20.0	24.4
Average Queue (m)	9.5	1.2	11.3
95th Queue (m)	26.4	10.9	19.7
Link Distance (m)	36.0	652.2	372.2
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	1		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	WB	SB	SB
Directions Served	L	T	T	R	L	R
Maximum Queue (m)	46.9	50.8	106.7	50.0	62.6	44.0
Average Queue (m)	21.6	19.3	41.3	22.5	29.2	13.1
95th Queue (m)	39.1	41.2	83.3	47.7	52.6	30.1
Link Distance (m)		797.6	365.8			104.9
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	50.0			30.0	50.0	
Storage Blk Time (%)	0	0	11	1	2	0
Queuing Penalty (veh)	0	0	19	2	2	0

Intersection: 21: Sherk St & Coronation Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	9.2	5.0
Average Queue (m)	2.4	0.2
95th Queue (m)	8.8	2.6
Link Distance (m)	363.2	425.0
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	42.4	15.6	64.9
Average Queue (m)	19.4	0.8	21.2
95th Queue (m)	33.8	6.8	49.7
Link Distance (m)	371.7	425.0	83.8
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	9.0	50.0	10.8
Average Queue (m)	1.8	5.3	0.6
95th Queue (m)	7.5	26.2	5.2
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	18.2	26.0	51.1	50.6
Average Queue (m)	9.7	13.3	29.6	23.5
95th Queue (m)	15.3	21.3	46.1	39.6
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)			2	
Queuing Penalty (veh)			7	
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	EB	WB	NB	SB
Directions Served	R	LTR	LTR	LTR
Maximum Queue (m)	3.3	10.3	6.3	7.0
Average Queue (m)	0.1	3.6	0.3	0.4
95th Queue (m)	2.3	10.9	3.2	6.0
Link Distance (m)	164.1	137.4	215.6	223.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	22.4	22.9	5.4	26.4
Average Queue (m)	6.5	5.4	0.3	1.8
95th Queue (m)	19.6	18.7	3.1	11.7
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 483

Intersection: 1: High School Driverway/Westmoreland Ave & Oak St W

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	9.2	73.2	8.5	74.8	16.8	11.6	25.0
Average Queue (m)	1.6	32.4	2.6	26.8	5.7	2.9	10.9
95th Queue (m)	7.0	60.5	8.3	57.6	14.3	9.8	21.7
Link Distance (m)		330.1		144.1	167.0	167.0	238.5
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: Oak St W & Industrial Rd

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (m)	9.0	13.3	9.1	15.6	17.0
Average Queue (m)	0.8	0.4	0.9	5.8	6.6
95th Queue (m)	4.9	9.4	5.3	13.8	15.1
Link Distance (m)		144.1		69.8	70.6
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	100.0		20.0		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oak St W & Poplar Street

Movement	EB	EB	B4	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (m)	39.4	44.8	137.5	7.2	33.3
Average Queue (m)	24.0	27.5	37.6	0.3	11.9
95th Queue (m)	40.6	45.3	110.1	3.3	28.2
Link Distance (m)	15.0	15.0	214.2	13.0	58.4
Upstream Blk Time (%)	25	25	0	0	0
Queuing Penalty (veh)	85	84	1	1	0
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Shrek St & Oak St W

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	21.0	31.5	49.8	48.0	75.1	61.1
Average Queue (m)	15.9	17.9	37.3	27.2	35.5	23.8
95th Queue (m)	19.5	24.9	53.8	47.9	61.4	43.7
Link Distance (m)	13.0	13.0	45.3	45.3	183.2	
Upstream Blk Time (%)	40	33	7	1		
Queuing Penalty (veh)	152	125	22	4		
Storage Bay Dist (m)						80.0
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 7: Oak St W & Chestnut St

Movement	WB	WB	SB	SB
Directions Served	T	T	L	R
Maximum Queue (m)	48.1	25.8	19.6	19.1
Average Queue (m)	8.1	2.0	7.2	8.5
95th Queue (m)	31.5	12.1	15.6	15.9
Link Distance (m)	111.8	111.8	157.4	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				25.0
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 8: Oak St W & Fox St

Movement	EB	EB	WB
Directions Served	LT	T	TR
Maximum Queue (m)	44.2	8.2	1.3
Average Queue (m)	10.1	0.6	0.0
95th Queue (m)	31.6	7.6	0.9
Link Distance (m)	111.8	111.8	182.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Oak St W/Oak St E & Erie St S

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	TR
Maximum Queue (m)	52.0	81.5	29.3	102.7	81.1	71.7	64.9	206.0	95.1	49.9	104.1	103.5
Average Queue (m)	21.7	49.0	13.1	55.5	25.9	33.9	35.7	104.4	35.7	33.4	54.6	51.1
95th Queue (m)	40.4	77.9	24.8	103.0	61.0	56.7	73.3	195.7	70.9	56.3	94.4	87.5
Link Distance (m)		182.2	182.2		662.8			491.8	491.8		472.7	472.7
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			100.0		100.0	40.0			50.0		
Storage Blk Time (%)	0	17		4	0		2	40		7	11	
Queuing Penalty (veh)	1	24		19	0		10	45		21	18	

Intersection: 10: Countess St & Erie St S

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (m)	15.6	20.1	16.8	46.2	18.5
Average Queue (m)	5.7	2.2	1.8	8.4	1.8
95th Queue (m)	14.1	11.0	9.3	29.2	10.6
Link Distance (m)	193.6	236.1	236.1	491.8	491.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Erie St S & Fresco Plaza

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (m)	47.6	43.6	18.4	26.3	29.6	74.9	49.2
Average Queue (m)	14.9	19.9	1.8	3.6	14.6	13.0	4.9
95th Queue (m)	35.3	33.6	10.5	15.7	28.0	56.4	31.9
Link Distance (m)	363.9	363.9	45.8	45.8		236.1	236.1
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)					15.0		
Storage Blk Time (%)					7	5	
Queuing Penalty (veh)					27	6	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	41.8	64.1	49.1	106.2	33.1	61.0	65.3	44.8	54.7	50.6
Average Queue (m)	15.0	26.3	25.1	30.1	14.3	23.3	28.3	15.9	32.5	25.4
95th Queue (m)	32.6	48.0	44.5	81.9	26.3	48.2	53.5	35.6	56.0	48.6
Link Distance (m)		371.7		384.2		119.4	119.4		45.8	45.8
Upstream Blk Time (%)								0	5	2
Queuing Penalty (veh)								0	20	7
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	3	11	17	8	1	2		0	5	
Queuing Penalty (veh)	6	7	26	10	2	2		0	4	

Intersection: 13: Erie St S & Erie Plaza/TD Bank

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (m)	42.6	21.7	39.4	30.9	62.3	66.9	53.5	119.9	105.9
Average Queue (m)	19.8	7.5	16.5	8.4	32.0	36.0	13.6	54.9	34.9
95th Queue (m)	36.8	17.5	30.8	19.5	56.2	58.7	36.5	104.8	81.4
Link Distance (m)	171.4	171.4	230.4		115.9	115.9		119.4	119.4
Upstream Blk Time (%)								3	0
Queuing Penalty (veh)								13	2
Storage Bay Dist (m)				40.0			40.0		
Storage Blk Time (%)				0	4			19	
Queuing Penalty (veh)				0	2			12	

Intersection: 14: Erie St S & Pardale Ave/Walmart Plaza N

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (m)	16.9	10.3	34.4	14.9	16.5	21.0	61.4	82.7	72.4
Average Queue (m)	5.0	1.5	15.5	3.3	0.9	1.4	28.2	18.2	11.6
95th Queue (m)	13.5	7.1	26.8	11.3	7.5	8.6	59.7	82.3	62.5
Link Distance (m)	164.1	336.9	336.9		60.5	60.5		115.9	115.9
Upstream Blk Time (%)								2	0
Queuing Penalty (veh)								11	1
Storage Bay Dist (m)				10.0			50.0		
Storage Blk Time (%)				3	0		0	9	
Queuing Penalty (veh)				12	0		0	19	

Intersection: 15: Erie St S & BMO Bank/Walmart Plaza S

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	12.9	16.8	58.9	40.3	12.5	46.0	55.8	36.4	58.6	54.3
Average Queue (m)	2.8	3.9	24.8	18.8	1.3	17.8	24.3	11.0	25.0	13.6
95th Queue (m)	10.0	12.1	46.9	32.3	7.2	38.6	46.9	29.1	61.6	42.9
Link Distance (m)	149.5	149.5		433.6		65.2	65.2		60.5	60.5
Upstream Blk Time (%)							0		11	1
Queuing Penalty (veh)							0		40	4
Storage Bay Dist (m)			70.0		20.0			30.0		
Storage Blk Time (%)			0			4		0	16	
Queuing Penalty (veh)			1			0		0	10	

Intersection: 16: Erie St S & Coronation Ave

Movement	EB	NB	SB	SB
Directions Served	LR	T	T	TR
Maximum Queue (m)	10.4	8.4	71.5	50.9
Average Queue (m)	2.0	0.3	24.8	9.2
95th Queue (m)	8.2	5.9	73.9	48.4
Link Distance (m)	363.2	108.2	65.2	65.2
Upstream Blk Time (%)			9	2
Queuing Penalty (veh)			36	8
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 17: Erie St S & Seacliff Dr W/Seacliff Dr E

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	T	R
Maximum Queue (m)	89.9	195.0	63.6	192.3	90.0	39.9	131.6	57.4	117.3	78.8
Average Queue (m)	45.3	85.9	11.1	77.3	34.7	30.4	58.4	52.3	79.3	31.4
95th Queue (m)	91.5	157.0	38.0	137.8	78.4	47.5	109.7	68.4	141.6	61.2
Link Distance (m)		365.8		606.3			456.1		108.2	108.2
Upstream Blk Time (%)									15	
Queuing Penalty (veh)									58	
Storage Bay Dist (m)	90.0		90.0		50.0	20.0		50.0		
Storage Blk Time (%)	0	8	0	22	0	23	37	41	5	
Queuing Penalty (veh)	2	14	0	68	0	54	50	95	15	

Intersection: 18: Cherry Lane & Seacliff Dr E

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (m)	178.1	29.8	37.3	40.5
Average Queue (m)	65.2	17.4	26.0	19.5
95th Queue (m)	138.6	29.8	37.6	33.4
Link Distance (m)	606.3		36.0	409.5
Upstream Blk Time (%)			1	
Queuing Penalty (veh)			5	
Storage Bay Dist (m)		10.0		
Storage Blk Time (%)		20	45	
Queuing Penalty (veh)		93	77	

Intersection: 19: Seacliff Dr E & Danforth Ave

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	38.6	44.7	47.1
Average Queue (m)	18.9	6.9	18.6
95th Queue (m)	37.9	27.3	34.7
Link Distance (m)	36.0	652.2	372.2
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	10		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Seacliff Dr W & Sherk St

Movement	EB	EB	WB	WB	SB	SB
Directions Served	L	T	T	R	L	R
Maximum Queue (m)	66.9	78.7	213.4	50.0	66.5	75.4
Average Queue (m)	35.2	34.9	111.8	33.3	37.5	23.6
95th Queue (m)	61.2	64.7	202.3	62.5	61.6	53.8
Link Distance (m)		797.6	365.8			104.9
Upstream Blk Time (%)						0
Queuing Penalty (veh)						0
Storage Bay Dist (m)	50.0			30.0	50.0	
Storage Blk Time (%)	5	2	32	1	4	1
Queuing Penalty (veh)	20	3	67	7	7	2

Intersection: 21: Sherk St & Coronation Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (m)	9.1	25.7
Average Queue (m)	1.5	2.3
95th Queue (m)	6.9	12.3
Link Distance (m)	363.2	425.0
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Sherk St & Pulford Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	151.6	18.5	66.0
Average Queue (m)	56.9	1.5	24.2
95th Queue (m)	139.0	10.6	52.4
Link Distance (m)	371.7	425.0	83.8
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Sherk St & Melrose Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (m)	9.1	73.5	32.6
Average Queue (m)	1.9	19.2	1.8
95th Queue (m)	7.8	59.5	13.4
Link Distance (m)	222.8	83.8	39.1
Upstream Blk Time (%)		1	0
Queuing Penalty (veh)		3	0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 24: Sherk St & Ellison Ave

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (m)	19.9	31.8	55.6	169.4
Average Queue (m)	11.1	15.2	38.0	75.5
95th Queue (m)	18.2	25.5	53.2	172.6
Link Distance (m)		271.9	39.1	215.6
Upstream Blk Time (%)			9	2
Queuing Penalty (veh)			46	11
Storage Bay Dist (m)	100.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 25: Sherk St & NFFRC/William Ave

Movement	EB	WB	NB	SB
Directions Served	R	LTR	LTR	LTR
Maximum Queue (m)	9.6	9.1	20.3	44.5
Average Queue (m)	0.5	1.3	1.2	4.9
95th Queue (m)	5.3	6.5	8.7	34.8
Link Distance (m)	164.1	137.4	215.6	223.4
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 26: Sherk St/Shrek St & Parking Lot/Highbury Canco

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	23.4	25.0	45.2	11.0
Average Queue (m)	5.2	8.2	3.6	0.9
95th Queue (m)	18.6	22.5	19.4	5.7
Link Distance (m)	153.4	224.0	223.4	183.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1613

APPENDIX D – VISSIM CALIBRATION

1.0 MODEL DEVELOPMENT AND ASSUMPTIONS

The Vissim model for the Erie Street corridor was developed based on existing road network configurations using Bing Maps background, native to the Vissim software as well as a field review conducted in September 30, 2020.

1.1 Simulation Settings.

The model uses a 15-minute warm up period followed by a 1-hour analysis period.

The VISSIM parameters and assumed values related to simulation speed and resolution, as well as vehicle classes and Heavy Goods Vehicle (HGV) proportions, are provided in **Table 1-1**.

Table 1-1: Parameters and Assumed Values

Parameter	Value
Simulation Speed	Maximum
Simulation Resolution	10 time steps per simulation second
Vehicle Types and Classes	VISSIM Defaults
HGV Proportions	Applied according to available vehicle classification data.

1.2 Vehicle Attributes and Routes

The Vissim model utilizes balanced weekday AM and PM peak hour traffic volumes. The model was coded using static vehicle routes. Separate vehicle routes were coded for cars and heavy vehicles. Static routes typically begin upstream of each intersection and end downstream of that intersection. The static routes vehicles were distributed according to turning movement count (TMC) data. In some cases where the link length between intersections was short and would result in unrealistic weaving patterns, static routes were combined.

Table 1-2 provides the assumed vehicles types and sizes.

Table 1-2: Vehicle Size Assumptions

Vehicle Model / Type	Length (source)	Comment
Auto	5.6 m (TAC)	
Medium trucks and buses (single unit)	11.5 m (TAC)	Assumed to be 50% of HGV
Heavy Truck	22.7 m (TAC)	Assumed to be 50% of HGV

1.3 Intersection Operations

Current signal timing plans for signalized study intersection, provided by the Municipality of Leamington were imported into Vissim along with the balanced weekday AM and PM peak hour volumes. Detectors used for

signal actuation were placed on the corresponding movement's lane with an assumed length of 2 m at turning lanes and 0.6 m at through lanes, unless otherwise indicated by the signal timing plan.

The *Conflict Area* feature was used to model vehicle movements at conflict points using default parameters, except where needed by checking/observing the simulation runs.

1.4 Acceleration, Deceleration and Speed Distributions

Table 1-3 provides the default acceleration and deceleration functions, as defined in VISSIM, used in the subject model.

Table 1-3: Default Acceleration and Deceleration Values

Parameter	Automobiles (m/s^2)	Commercial Vehicles (m/s^2)
Maximum acceleration (default)	3.5	2.5
Desired acceleration (default)	3.0	2.5
Maximum deceleration (default)	-7.5	-5.5
Desired deceleration (default)	-2.8	-1.3

As stated previously, Erie Street South has a posted speed limit of 50 km/h. As such, the desired speed throughout the network was based on the 50 km/h desired speed distribution. *Reduced speed* areas were coded for right-turn and left-turn movements at intersections as described in Table 1-4.

Table 1-4: Assumed Reduced Speeds at Intersections

Movement	Vehicle Class	Reduced Speed (km/h)
Right-Turn	Autos/HGV	15
Left-Turn	Autos/HGV	25

1.5 Driver Behaviour Parameters

Since the posted speed limit on Erie Street South is 50 km/h, the Wiedemann 74 car following model was used which is suitable for urban traffic and merging areas. The default and calibrated Wiedemann 74 car following model driving parameters are presented in **Table 1-5.**

Table 1-5: Driving Behaviour Parameters for Highway Segments/Links

Parameter	Default Value	Calibrated Values
Average Standstill Distance	2.0 m	2.5 m
Additive Part of Safety Distance	2.00	2.50
Multiplicative Part of Safety Distance	3.00	3.50

The lane change distance parameter was set to at least 200 meters for each lane change. The emergency stop distance was set to 5 m at each connector.

2.0 MODEL CALIBRATION AND VALIDATION

In order to take advantage of the complexity and detailed analysis a Vissim model can produce, it is important that the model be validated to a high degree of accuracy so as to represent the real-worlds traffic network.

The criteria used for the calibration and validation of the Vissim model are detailed below and are based on the Federal Highway Administration (FHWA*) Guidelines for Applying Traffic Microsimulation Modeling Software*. Both the existing (2020) weekday AM and PM peak hour analysis were developed using traffic volume and travel time comparisons.

In order to achieve calibration, the following parameters were considered for adjustment:

- Wiedemann 74 average standstill distance and the additive and multiplicative part of the safety distance;
- Minimum and Maximum look ahead distance;
- Desired speed distribution, and;
- Connector lane change and emergency stop parameters.

2.1 Traffic Volume Calibration

Detailed GEH statistic calculations were performed to assess model validity for each link segment within the study area and compared to FHWA thresholds. The GEH formula used for this study is as follows:

$$GEH = \sqrt{\frac{(E-V)^2}{(E+V)/2}}$$

Where:

E = model volume

V = observed volume

The summary of link calibration results of modelled versus observed traffic volumes for the weekday AM and PM peak hour is illustrated in **Table 2-1.**

Table 2-2 summarizes the results of the FHWA calibration targets. The results indicate that the AM and PM peak hour modelled traffic link volumes meet the required FHWA calibration thresholds.

Table 2-1: Modelled Link Volumes Versus Observed

Link Segment	AM Peak Hour				PM Peak Hour			
	Observed Volume (V)	Modelled Volume (E)	Observed/ Modelled Volume	GEH	Observed Volume (V)	Modelled Volume (E)	GEH	Observed/ Modelled Volume
Erie St NB (Seacliff Drive - BMO/Walmart Plaza)	484	485	100%	0.05	542	541	0.04	100%
Erie St SB (Seacliff Drive - BMO/Walmart Plaza)	414	403	103%	0.54	641	643	0.08	100%
Erie St NB (BMO/Walmart Plaza - Parkdale Ave)	502	504	100%	0.09	629	627	0.08	100%
Erie St SB (BMO/Walmart Plaza - Parkdale Ave)	461	451	102%	0.47	611	608	0.12	100%
Erie St NB (Parkdale Ave - Erie Plaza/TD Bank)	575	577	100%	0.08	751	748	0.11	100%
Erie St SB (Parkdale Ave - Erie Plaza/TD Bank)	704	691	102%	0.49	781	781	0.00	100%
Erie St NB (Erie Plaza/TD Bank - Pulford Ave)	626	630	99%	0.16	749	748	0.04	100%
Erie St SB (Erie Plaza/TD Bank - Pulford Ave)	673	658	102%	0.58	742	744	0.07	100%
Erie St NB (Pulford Ave - Oak St)	589	590	100%	0.04	709	710	0.04	100%
Erie St SB (Pulford Ave - Oak St)	528	514	103%	0.61	597	604	0.29	99%
Total	5,556	5,503	101.0%	0.71	6,752	6,754	0.02	100%

Table 2-2: FHWA Checklist

FHWA Link Volume Criteria	Calibration Acceptance Targets	Check
< 700 veh/hr	Within 100 veh/hr of Field flow for >85% of cases	OK
700 to 2,700 veh/hr	Within 15% of Field flow for >85% of cases	OK
Sum of all link flows	within 5% of sum of all link counts	OK
GEH Statistic for individual link flows	GEH < 5 for 85% of cases	OK
GEH Statistic for sum of all link flows	GEH <4 for sum of all link counts	OK

2.2 Travel Time

In addition to traffic volumes, the model was validated based on travel times. Along Erie Street South, between the intersections with Oak Street and Pulford Avenue, there are a number of commercial accesses which were not included in the Vissim model. These accesses would result in friction to through traffic resulting in reduced speeds and increased trave times. As such, an appropriate segment for travel time comparison is from Erie Street South at Seacliff Drive to Pulford Avenue. Northbound and southbound travel times were estimated utilizing googles Distance Matrix API which is a service that provides accurate travel distance and time for a matrix of origin and destinations.

Based on the FHWA guidelines, a summary of the comparison between modelled travel times and observed travel times (Distance Matrix API) was completed. The results are illustrated in **Table 2-13**. As shown, the modelled travel times meet the FHWA calibration criteria.

Table 2-1: Travel Time Comparison

From	TO	Route Length (m)	AM Peak Hour				PM Peak Hour			
			Observed Travel Time - Distance Matrix API (s)	Modelled Times (s)	% Difference	FHWA Threshold	Observed Travel Time - Distance Matrix API (s)	Modelled Times (s)	% Difference	FHWA Threshold
Seacliff Drive	Pulford Avenue	774	97	87	89%	OK	110	107	97%	OK
Pulford Avenue	Seacliff Drive	773	93	92	99%	OK	103	105	102%	OK
		Total:	190	179	94%	OK	213	212	99%	OK

APPENDIX E – VISSIM ANALYSIS REPORTS

McINTOSH PERRY

EXISTING CONDITIONS

McINTOSH PERRY

AM Peak Hour - Node Results

SimRun	TimeINt	Movement	Vehs(ALL)	LOS(ALL)	VehDelay(ALL)	QLenMax
1		1: Eries St @ Seacliff Dr - 2: NBL@38.2 - 16: Seacliff Dr - WB@43.6	73	B	12.1	26
1	900-4500	1: Eries St @ Seacliff Dr - 3: SBL@31.3 - 11: Seacliff Dr - EB@43.3	132	B	14.0	39
1	900-4500	1: Eries St @ Seacliff Dr - 6: SBT@29.9 - 8: Erie St - SB@6.5	166	B	19.1	68
1	900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 8: Erie St - SB@6.5	63	B	17.4	123
1	900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 11: Seacliff Dr - EB@43.3	175	C	27.3	123
1	900-4500	1: Eries St @ Seacliff Dr - 14: WBL@52.2 - 8: Erie St - SB@6.5	23	C	29.2	25
1	900-4500	1: Eries St @ Seacliff Dr - 15: WBT@50.8 - 16: Seacliff Dr - WB@43.6	135	D	39.5	139
1	900-4500	1: Eries St @ Seacliff Dr - 66: EBL@80.5 - 4: Erie Street - NB@3.2	98	C	28.1	64
1	900-4500	1: Eries St @ Seacliff Dr - 67: NBTR@21.7 - 4: Erie Street - NB@3.2	171	B	18.0	74
1	900-4500	1: Eries St @ Seacliff Dr - 133: SBR@29.4 - 16: Seacliff Dr - WB@43.6	106	A	6.6	33
1	900-4500	1: Eries St @ Seacliff Dr - 10012: WBR@0.5 - 4: Erie Street - NB@3.2	218	A	6.7	46
1	900-4500	1: Eries St @ Seacliff Dr - 10018: NBR@4.2 - 10018: NBR@29.9	18	A	6.7	79
1	900-4500	1: Eries St @ Seacliff Dr	1378	B	18.8	139
1	900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6 - 22: RIO Can - IN@4.0	49	A	2.6	33
1	900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6 - 23: Erie St - NB@26.9	430	A	3.1	32
1	900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 22: RIO Can - IN@4.0	0	A		7
1	900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 23: Erie St - NB@26.9	7	D	39.5	7
1	900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 20: Erie St - SB@31.3	24	D	36.9	24
1	900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 23: Erie St - NB@26.9	69	A	8.8	24
1	900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 24: BMO - IN@3.4	0	A		24
1	900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6 - 20: Erie St - SB@31.3	379	A	3.6	45
1	900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6 - 24: BMO - IN@3.4	13	A	4.7	47
1	900-4500	2: Eries St @ BMO/Rio Can - 68: SBL@30.1 - 22: RIO Can - IN@4.0	59	A	4.3	20
1	900-4500	2: Eries St @ BMO/Rio Can - 69: NBL@14.6 - 24: BMO - IN@3.4	11	A	2.3	6
1	900-4500	2: Eries St @ BMO/Rio Can - 10025: EBR@1.2 - 20: Erie St - SB@31.3	1	B	11.5	6
1	900-4500	2: Eries St @ BMO/Rio Can	1042	A	4.7	47
1	900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3 - 26: Parkdale Plaza - IN@26.0	0	A		0
1	900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 28@25.6	0	A		20
1	900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 30: Erie St - NB@15.4	72	A	7.4	20
1	900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 32: Erie St - SB@13.8	0	A		20
1	900-4500	3: Erie St @ Parkdale Ave - 29: NBTR@15.8 - 30: Erie St - NB@15.4	482	A	0.3	0
1	900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9 - 28@25.6	36	A	0.7	0
1	900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9 - 32: Erie St - SB@13.8	447	A	0.3	0
1	900-4500	3: Erie St @ Parkdale Ave - 70: SBL@44.1 - 26: Parkdale Plaza - IN@26.0	210	A	3.6	26
1	900-4500	3: Erie St @ Parkdale Ave - 10042: NBR@7.2 - 26: Parkdale Plaza - IN@26.0	9	A	1.3	6
1	900-4500	3: Erie St @ Parkdale Ave - 10044: EBR@1.1 - 10044: EBR@10.7	4	A	1.9	6
1	900-4500	3: Erie St @ Parkdale Ave - 10047: EBL@2.1 - 30: Erie St - NB@15.4	24	A	1.9	6
1	900-4500	3: Erie St @ Parkdale Ave - 10111@1.4 - 28@25.6	13	A	2.9	12
1	900-4500	3: Erie St @ Parkdale Ave	1297	A	1.3	26
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 35: EBT@30.1	9	D	44.4	47
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 38: Erie St - SB@24.7	39	A	7.5	48
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 39: Erie St - NB@25.0	73	D	52.6	47
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 36: WBT@27.9	11	D	35.9	52
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 38: Erie St - SB@24.7	42	D	53.2	52
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 39: Erie St - NB@25.0	53	B	17.8	53
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4 - 38: Erie St - SB@24.7	612	A	7.5	42
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4 - 10057: SBR@15.5	2	A	1.2	43
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.0 - 39: Erie St - NB@25.0	503	A	7.7	59
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.0 - 10055: NBR@17.3	52	A	5.8	61

1 900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 72: NBL@41.1 - 36: WBT@27.9	25	B	10.6	14
1 900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 73: SBL@48.3 - 35: EBT@30.1	43	A	5.2	13
1 900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza	1464	B	11.9	61
1 900-4500	5: Erie St @ Pulford Ave - 41: NBTR@50.0 - 49: Erie St - NB@29.3	500	A	6.2	79
1 900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 48: Erie St - SB@28.1	97	C	29.1	65
1 900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 49: Erie St - NB@29.3	53	B	12.7	66
1 900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 50: Pulford Ave - WB@30.6	51	C	32.1	65
1 900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 46: EBT@31.8	35	D	41.7	26
1 900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 49: Erie St - NB@29.3	38	C	31.2	26
1 900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2 - 48: Erie St - SB@28.1	443	A	5.2	40
1 900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2 - 10073: SBR@13.4	13	A	2.8	40
1 900-4500	5: Erie St @ Pulford Ave - 74: NBL@49.9 - 10076: NBL@25.0	52	A	8.1	13
1 900-4500	5: Erie St @ Pulford Ave - 75: SBL@85.1 - 46: EBT@31.8	57	D	38.8	29
1 900-4500	5: Erie St @ Pulford Ave - 10075: EBR@0.2 - 48: Erie St - SB@28.1	119	B	12.0	26
1 900-4500	5: Erie St @ Pulford Ave - 10077: NBR@1.7 - 10077: NBR@19.8	77	A	6.7	79
1 900-4500	5: Erie St @ Pulford Ave	1535	B	11.6	79
1 900-4500	6: Eries St @ Oak St - 51: NBL@46.2 - 10079: NBL@36.9	111	C	27.4	46
1 900-4500	6: Eries St @ Oak St - 52: WBL@98.9 - 61: Erie St - SB@40.6	153	D	39.7	61
1 900-4500	6: Eries St @ Oak St - 56: NBTR@62.5 - 63: Erie St - NB@2.7	279	C	22.7	156
1 900-4500	6: Eries St @ Oak St - 56: NBTR@62.5 - 10090: NBR@23.5	212	A	8.7	158
1 900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 57: EBT@37.6	206	C	34.2	60
1 900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 10094: EBR@26.0	82	A	4.0	64
1 900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 60: Oak St - WB@40.8	305	C	32.5	55
1 900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 10091: WBR@25.3	59	B	12.6	56
1 900-4500	6: Eries St @ Oak St - 62: SBTR@38.5 - 61: Erie St - SB@40.6	393	B	10.2	62
1 900-4500	6: Eries St @ Oak St - 76: SBL@38.1 - 57: EBT@37.6	48	B	13.4	21
1 900-4500	6: Eries St @ Oak St - 77: EBL@45.2 - 63: Erie St - NB@2.7	58	C	25.8	20
1 900-4500	6: Eries St @ Oak St - 10092: SBR@3.3 - 10092: SBR@27.0	105	A	4.6	64
1 900-4500	6: Eries St @ Oak St	2011	C	20.9	158
1 900-4500	7: Erie St @ Coronation St - 4: Erie Street - NB@98.4 - 4: Erie Street - NB@125.4	484	A	0.4	0
1 900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.6 - 20: Erie St - SB@113.6	401	A	0.2	0
1 900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.6 - 143: Coronation Ave EB@8.0	2	A	0.7	0
1 900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 4: Erie Street - NB@125.4	6	B	12.0	17
1 900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 20: Erie St - SB@113.6	2	A	6.3	13
1 900-4500	7: Erie St @ Coronation St - 145: NBL@11.4 - 143: Coronation Ave EB@8.0	0	A		0
1 900-4500	7: Erie St @ Coronation St	895	A	0.4	17
1 900-4500	8: Erie St @ Countess St - 49: Erie St - NB@328.0 - 49: Erie St - NB@348.6	588	A	0.1	0
1 900-4500	8: Erie St @ Countess St - 49: Erie St - NB@328.0 - 148: Countess Street WB@4.9	4	A	0.5	0
1 900-4500	8: Erie St @ Countess St - 61: Erie St - SB@520.9 - 61: Erie St - SB@541.6	507	A	0.1	14
1 900-4500	8: Erie St @ Countess St - 61: Erie St - SB@520.9 - 148: Countess Street WB@4.9	41	A	2.8	19
1 900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 49: Erie St - NB@348.6	11	A	6.3	13
1 900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 61: Erie St - SB@541.6	5	A	7.3	11
1 900-4500	8: Erie St @ Countess St	1156	A	0.3	19

PM Peak Hour - Node Results

SimRun	TimeINt	Movement	Vehs(ALL)		LOS(ALL)	VehDelay(ALL)	QLenMax(ALL)
1	900-4500	1: Eries St @ Seacliff Dr - 2: NBL@38.2 - 16: Seacliff Dr - WB@43.6		118	B	13.9	28
1	900-4500	1: Eries St @ Seacliff Dr - 3: SBL@31.3 - 11: Seacliff Dr - EB@43.3		246	B	19.5	67
1	900-4500	1: Eries St @ Seacliff Dr - 6: SBT@29.9 - 8: Erie St - SB@6.5		185	C	25.0	66
1	900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 8: Erie St - SB@6.5		61	C	22.8	156
1	900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 11: Seacliff Dr - EB@43.3		286	C	29.5	155
1	900-4500	1: Eries St @ Seacliff Dr - 14: WBL@52.2 - 8: Erie St - SB@6.5		23	C	26.6	25
1	900-4500	1: Eries St @ Seacliff Dr - 15: WBT@50.8 - 16: Seacliff Dr - WB@43.6		259	C	30.5	115
1	900-4500	1: Eries St @ Seacliff Dr - 66: EBL@80.5 - 4: Erie Street - NB@3.2		134	C	27.3	54
1	900-4500	1: Eries St @ Seacliff Dr - 67: NBTR@21.7 - 4: Erie Street - NB@3.2		160	B	19.8	61
1	900-4500	1: Eries St @ Seacliff Dr - 133: SBR@29.4 - 16: Seacliff Dr - WB@43.6		208	A	9.9	67
1	900-4500	1: Eries St @ Seacliff Dr - 10012: WBR@0.5 - 4: Erie Street - NB@3.2		250	A	8.7	51
1	900-4500	1: Eries St @ Seacliff Dr - 10018: NBR@4.2 - 10018: NBR@29.9		28	B	11.5	66
1	900-4500	1: Eries St @ Seacliff Dr		1958	C	20.8	156
1	900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6 - 22: RIO Can - IN@4.0		85	B	13.0	76
1	900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6 - 23: Erie St - NB@26.9		458	B	16.3	75
1	900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 22: RIO Can - IN@4.0		1	C	30.9	7
1	900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 23: Erie St - NB@26.9		9	B	16.4	7
1	900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 20: Erie St - SB@31.3		118	C	21.5	59
1	900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 23: Erie St - NB@26.9		160	A	6.0	59
1	900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 24: BMO - IN@3.4		2	B	10.7	59
1	900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6 - 20: Erie St - SB@31.3		512	A	5.7	39
1	900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6 - 24: BMO - IN@3.4		20	A	5.4	41
1	900-4500	2: Eries St @ BMO/Rio Can - 68: SBL@30.1 - 22: RIO Can - IN@4.0		79	A	8.0	20
1	900-4500	2: Eries St @ BMO/Rio Can - 69: NBL@14.6 - 24: BMO - IN@3.4		4	B	11.3	6
1	900-4500	2: Eries St @ BMO/Rio Can - 10025: EBR@1.2 - 20: Erie St - SB@31.3		13	A	5.8	6
1	900-4500	2: Eries St @ BMO/Rio Can		1461	B	11.0	76
1	900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3 - 26: Parkdale Plaza - IN@26.0		0	A		0
1	900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 28@25.6		0	A		32
1	900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 30: Erie St - NB@15.4		135	A	8.6	31
1	900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 32: Erie St - SB@13.8		5	A	3.3	31
1	900-4500	3: Erie St @ Parkdale Ave - 29: NBTR@15.8 - 30: Erie St - NB@15.4		611	A	0.4	31
1	900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9 - 28@25.6		10	A	0.4	0
1	900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9 - 32: Erie St - SB@13.8		589	A	0.5	0
1	900-4500	3: Erie St @ Parkdale Ave - 70: SBL@44.1 - 26: Parkdale Plaza - IN@26.0		183	A	5.9	37
1	900-4500	3: Erie St @ Parkdale Ave - 10042: NBR@7.2 - 26: Parkdale Plaza - IN@26.0		9	A	1.4	34
1	900-4500	3: Erie St @ Parkdale Ave - 10044: EBR@1.1 - 10044: EBR@10.7		14	A	1.8	12
1	900-4500	3: Erie St @ Parkdale Ave - 10047: EBL@2.1 - 30: Erie St - NB@15.4		8	A	1.3	5
1	900-4500	3: Erie St @ Parkdale Ave - 10111: NBL@1.4 - 28@25.6		9	A	2.2	6
1	900-4500	3: Erie St @ Parkdale Ave		1573	A	1.8	37
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 35: EBT@30.1		23	D	36.9	34
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 38: Erie St - SB@24.7		38	A	6.8	36
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 39: Erie St - NB@25.0		65	D	45.0	34
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 36: WBT@27.9		11	D	40.5	34
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 38: Erie St - SB@24.7		45	D	40.4	34
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 39: Erie St - NB@25.0		39	B	19.3	35
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4 - 38: Erie St - SB@24.7		698	A	5.3	55
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4 - 10057: SBR@15.5		1	A	2.5	56
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.0 - 39: Erie St - NB@25.0		643	A	10.0	95
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.0 - 10055: NBR@17.3		56	A	6.4	96

1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 72: NBL@41.1 - 36: WBT@27.9	51	A	8.0	12
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 73: SBL@48.3 - 35: EBT@30.1	44	A	4.6	13
1	900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza	1714	B	10.6	96
1	900-4500	5: Erie St @ Pulford Ave - 41: NBTR@50.0 - 49: Erie St - NB@29.3	603	B	13.0	87
1	900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 48: Erie St - SB@28.1	97	D	35.8	91
1	900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 49: Erie St - NB@29.3	57	B	13.0	92
1	900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 50: Pulford Ave - WB@30.6	65	C	28.8	91
1	900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 46: EBT@31.8	54	C	27.0	33
1	900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 49: Erie St - NB@29.3	53	C	28.4	33
1	900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2 - 48: Erie St - SB@28.1	509	A	6.2	41
1	900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2 - 10073: SBR@13.4	17	A	3.8	42
1	900-4500	5: Erie St @ Pulford Ave - 74: NBL@49.9 - 10076: NBL@25.0	65	B	12.3	26
1	900-4500	5: Erie St @ Pulford Ave - 75: SBL@85.1 - 46: EBT@31.8	76	D	38.3	27
1	900-4500	5: Erie St @ Pulford Ave - 10075: EBR@0.2 - 48: Erie St - SB@28.1	139	A	9.4	33
1	900-4500	5: Erie St @ Pulford Ave - 10077: NBR@1.7 - 10077: NBR@19.8	73	B	10.5	87
1	900-4500	5: Erie St @ Pulford Ave	1808	B	14.3	92
1	900-4500	6: Eries St @ Oak St - 51: NBL@46.2 - 10079: NBL@36.9	96	C	33.6	44
1	900-4500	6: Eries St @ Oak St - 52: WBL@98.9 - 61: Erie St - SB@40.6	180	D	47.9	69
1	900-4500	6: Eries St @ Oak St - 56: NBTR@62.5 - 63: Erie St - NB@2.7	359	C	30.6	159
1	900-4500	6: Eries St @ Oak St - 56: NBTR@62.5 - 10090: NBR@23.5	252	B	15.6	162
1	900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 57: EBT@37.6	251	D	36.5	74
1	900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 10094: EBR@26.0	87	A	5.1	78
1	900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 60: Oak St - WB@40.8	221	C	33.0	69
1	900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 10091: WBR@25.3	116	B	13.7	70
1	900-4500	6: Eries St @ Oak St - 62: SBTR@38.5 - 61: Erie St - SB@40.6	447	B	11.6	87
1	900-4500	6: Eries St @ Oak St - 76: SBL@38.1 - 57: EBT@37.6	148	B	13.1	28
1	900-4500	6: Eries St @ Oak St - 77: EBL@45.2 - 63: Erie St - NB@2.7	94	C	25.1	33
1	900-4500	6: Eries St @ Oak St - 10092: SBR@3.3 - 10092: SBR@27.0	83	A	5.0	89
1	900-4500	6: Eries St @ Oak St	2334	C	23.6	162
1	900-4500	7: Erie St @ Coronation St - 4: Erie Street - NB@98.4 - 4: Erie Street - NB@125.4	542	A	0.5	0
1	900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.6 - 20: Erie St - SB@113.6	639	A	0.4	0
1	900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.6 - 143: Coronation Ave EB@8.0	4	A	0.6	0
1	900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 4: Erie Street - NB@125.4	1	B	14.8	11
1	900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 20: Erie St - SB@113.6	4	A	6.2	7
1	900-4500	7: Erie St @ Coronation St - 145: NBL@11.4 - 143: Coronation Ave EB@8.0	1	A	0.5	0
1	900-4500	7: Erie St @ Coronation St	1191	A	0.5	11
1	900-4500	8: Erie St @ Countess St - 49: Erie St - NB@328.0 - 49: Erie St - NB@348.6	704	A	0.4	0
1	900-4500	8: Erie St @ Countess St - 49: Erie St - NB@328.0 - 148: Countess Street WB@4.9	9	A	0.9	0
1	900-4500	8: Erie St @ Countess St - 61: Erie St - SB@520.9 - 61: Erie St - SB@541.6	592	A	0.2	27
1	900-4500	8: Erie St @ Countess St - 61: Erie St - SB@520.9 - 148: Countess Street WB@4.9	48	A	3.5	32
1	900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 49: Erie St - NB@348.6	9	A	4.7	18
1	900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 61: Erie St - SB@541.6	10	B	11.7	16
1	900-4500	8: Erie St @ Countess St	1372	A	0.5	32

FUTURE CONDITIONS – DO NOTHING

McINTOSH PERRY

Future Do Nothing (2030) - AM Peak Hour

Node Results

TIMEINT	MOVEMENT	VEHS(ALL)	LOS(ALL)	VEHDELAY(ALL)	QLENMAX
900-4500	1-2: NBL@38.2-16: Seacliff Dr-WB@43.6	84	B	15.8	26
900-4500	1-3: SBL@31.3-11: Seacliff Dr-EB@43.3	157	C	23.6	83
900-4500	1-6: SBT@29.9-8: Erie St-SB@6.5	202	C	22.1	119
900-4500	1-12: EBTR@79.1-8: Erie St-SB@6.5	74	C	21.4	222
900-4500	1-12: EBTR@79.1-11: Seacliff Dr-EB@43.3	250	C	31.5	222
900-4500	1-14: WBL@52.2-8: Erie St-SB@6.5	23	B	18.0	25
900-4500	1-15: WBT@50.8-16: Seacliff Dr-WB@43.6	182	C	30.9	95
900-4500	1-66: EBL@80.5-4: Erie Street-NB@3.2	127	C	30.0	60
900-4500	1-67: NBTR@21.7-4: Erie Street-NB@3.2	213	C	20.5	106
900-4500	1-133: SBR@29.4-16: Seacliff Dr-WB@43.6	133	A	8.7	35
900-4500	1-10012: WBR@0.5-4: Erie Street-NB@3.2	269	A	9.8	66
900-4500	1-10018: NBR@4.2-10018: NBR@29.9	21	A	6.4	111
900-4500	1: Eries St @ Seacliff Dr	1735	C	21.4	222
900-4500	2-17: NBT@20.6-22: RIO Can-IN@4.0	66	A	4.2	54
900-4500	2-17: NBT@20.6-23: Erie St-NB@26.9	540	A	4.7	53
900-4500	2-18: EBLTR@91.3-22: RIO Can-IN@4.0	0	A		14
900-4500	2-18: EBLTR@91.3-23: Erie St-NB@26.9	11	D	41.8	14
900-4500	2-19: WBLTR@81.6-20: Erie St-SB@31.3	29	D	35.9	63
900-4500	2-19: WBLTR@81.6-23: Erie St-NB@26.9	79	A	8.5	63
900-4500	2-19: WBLTR@81.6-24: BMO-IN@3.4	0	A		63
900-4500	2-21: SBTR@37.6-20: Erie St-SB@31.3	461	A	4.9	39
900-4500	2-21: SBTR@37.6-24: BMO-IN@3.4	17	A	3.8	41
900-4500	2-68: SBL@30.1-22: RIO Can-IN@4.0	75	A	5.6	21
900-4500	2-69: NBL@14.6-24: BMO-IN@3.4	11	A	5.5	7
900-4500	2-10025: EBR@1.2-20: Erie St-SB@31.3	2	A	3.3	14
900-4500	2: Eries St @ BMO/Rio Can	1291	A	6.0	63
900-4500	3-25: EBLTR@172.3-26: Parkdale Plaza-IN@26.0	0	A		41
900-4500	3-27: WBLTR@68.6-28@25.6	0	A		25
900-4500	3-27: WBLTR@68.6-30: Erie St-NB@15.4	83	A	8.2	25
900-4500	3-27: WBLTR@68.6-32: Erie St-SB@13.8	1	B	12.0	25
900-4500	3-29: NBTR@15.8-30: Erie St-NB@15.4	602	A	0.4	14
900-4500	3-31: SBTR@51.9-28@25.6	48	A	1.4	19
900-4500	3-31: SBTR@51.9-32: Erie St-SB@13.8	555	A	0.9	15
900-4500	3-70: SBL@44.1-26: Parkdale Plaza-IN@26.0	248	A	6.9	72
900-4500	3-10042: NBR@7.2-26: Parkdale Plaza-IN@26.0	10	A	1.7	17
900-4500	3-10044: EBR@1.1-10044: EBR@10.7	3	A	3.7	39
900-4500	3-10047: EBL@2.1-30: Erie St-NB@15.4	30	A	3.5	39
900-4500	3-10111@1.4-28@25.6	18	A	1.9	6
900-4500	3: Erie St @ Parkdale Ave	1598	A	2.1	72
900-4500	4-33: EBLTR@43.0-35: EBT@30.1	16	D	46.1	49
900-4500	4-33: EBLTR@43.0-38: Erie St-SB@24.7	52	A	7.4	50
900-4500	4-33: EBLTR@43.0-39: Erie St-NB@25.0	88	D	35.0	49
900-4500	4-34: WBLTR@49.7-36: WBT@27.9	19	D	36.1	62
900-4500	4-34: WBLTR@49.7-38: Erie St-SB@24.7	52	D	37.9	62
900-4500	4-34: WBLTR@49.7-39: Erie St-NB@25.0	66	B	19.7	63

900-4500	4-37: SBTR@50.4-38: Erie St-SB@24.7	749	A	9.3	82
900-4500	4-37: SBTR@50.4-10057: SBR@15.5	0	A		84
900-4500	4-40: NBTR@58.0-39: Erie St-NB@25.0	618	B	10.7	80
900-4500	4-40: NBTR@58.0-10055: NBR@17.3	65	B	11.6	81
900-4500	4-72: NBL@41.1-36: WBT@27.9	29	A	9.2	9
900-4500	4-73: SBL@48.3-35: EBT@30.1	56	B	11.5	20
900-4500	4: 4: Erie St @ Erie Plaza/Diprimo's Plaza	1810	B	12.9	84
900-4500	5-41: NBTR@50.0-49: Erie St-NB@29.3	612	A	9.2	92
900-4500	5-43: WBLTR@41.9-48: Erie St-SB@28.1	109	C	33.6	75
900-4500	5-43: WBLTR@41.9-49: Erie St-NB@29.3	59	B	14.6	76
900-4500	5-43: WBLTR@41.9-50: Pulford Ave-WB@30.6	68	C	31.6	75
900-4500	5-45: EBLTR@39.7-46: EBT@31.8	44	C	30.6	38
900-4500	5-45: EBLTR@39.7-49: Erie St-NB@29.3	62	C	23.3	38
900-4500	5-47: SBTR@58.2-48: Erie St-SB@28.1	561	A	6.6	39
900-4500	5-47: SBTR@58.2-10073: SBR@13.4	20	A	9.9	40
900-4500	5-74: NBL@49.9-10076: NBL@25.0	56	B	10.6	18
900-4500	5-75: SBL@85.1-46: EBT@31.8	65	D	38.4	49
900-4500	5-10075: EBR@0.2-48: Erie St-SB@28.1	137	B	11.4	38
900-4500	5-10077: NBR@1.7-10077: NBR@19.8	103	A	8.3	91
900-4500	5: Erie St @ Pulford Ave	1896	B	12.9	92
900-4500	6-51: NBL@46.2-10079: NBL@36.9	126	D	52.5	201
900-4500	6-52: WBL@98.9-61: Erie St-SB@40.6	199	E	72.1	116
900-4500	6-56: NBTR@62.5-63: Erie St-NB@2.7	363	C	34.8	178
900-4500	6-56: NBTR@62.5-10090: NBR@23.5	254	B	15.4	180
900-4500	6-58: EBTR@65.0-57: EBT@37.6	307	D	36.2	118
900-4500	6-58: EBTR@65.0-10094: EBR@26.0	105	A	4.6	121
900-4500	6-59: WBTR@111.2-60: Oak St-WB@40.8	418	C	29.2	59
900-4500	6-59: WBTR@111.2-10091: WBR@25.3	68	B	16.1	60
900-4500	6-62: SBTR@38.5-61: Erie St-SB@40.6	486	B	11.2	99
900-4500	6-76: SBL@38.1-57: EBT@37.6	59	B	17.8	20
900-4500	6-77: EBL@45.2-63: Erie St-NB@2.7	108	C	29.6	46
900-4500	6-10092: SBR@3.3-10092: SBR@27.0	148	A	7.3	101
900-4500	6: Eries St @ Oak St	2641	C	27.7	201
900-4500	7-4: Erie Street-NB@98.4-4: Erie Street-NB@125.4	609	A	0.4	0
900-4500	7-20: Erie St-SB@86.6-20: Erie St-SB@113.6	490	A	0.4	0
900-4500	7-20: Erie St-SB@86.6-143: Coronation Ave EB@8.0	2	A	0.6	0
900-4500	7-142: Coronation Ave EBLTR@98.6-4: Erie Street-NB@125.4	10	A	9.1	11
900-4500	7-142: Coronation Ave EBLTR@98.6-20: Erie St-SB@113.6	3	A	5.9	7
900-4500	7-145: NBL@11.4-143: Coronation Ave EB@8.0	0	A		0
900-4500	7: Erie St @ Coronation St	1114	A	0.5	11
900-4500	8-49: Erie St-NB@328.0-49: Erie St-NB@348.6	732	A	0.1	0
900-4500	8-49: Erie St-NB@328.0-148: Countess Street WB@4.9	7	A	0.5	0
900-4500	8-61: Erie St-SB@520.9-61: Erie St-SB@541.6	641	A	0.2	33
900-4500	8-61: Erie St-SB@520.9-148: Countess Street WB@4.9	53	A	6.1	39
900-4500	8-146: Countess Street WBLTR@146.0-49: Erie St-NB@348.6	13	A	4.6	12
900-4500	8-146: Countess Street WBLTR@146.0-61: Erie St-SB@541.6	7	A	7.9	10
900-4500	8: Erie St @ Countess St	1453	A	0.4	39

Future Do Nothing (2030) - PM Peak Hour

Node Results

TIMEINT	MOVEMENT	VEHS(ALL)	LOS(ALL)	VEHDELAY(ALL)	QLENMAX
900-4500	1-2: NBL@38.2-16: Seacliff Dr-WB@43.6	147	B	19.0	67
900-4500	1-3: SBL@31.3-11: Seacliff Dr-EB@43.3	306	D	39.8	133
900-4500	1-6: SBT@29.9-8: Erie St-SB@6.5	245	C	33.1	126
900-4500	1-12: EBTR@79.1-8: Erie St-SB@6.5	90	C	28.6	201
900-4500	1-12: EBTR@79.1-11: Seacliff Dr-EB@43.3	383	C	32.6	200
900-4500	1-14: WBL@52.2-8: Erie St-SB@6.5	29	C	33.8	25
900-4500	1-15: WBT@50.8-16: Seacliff Dr-WB@43.6	380	D	36.1	504
900-4500	1-66: EBL@80.5-4: Erie Street-NB@3.2	179	D	50.9	182
900-4500	1-67: NBTR@21.7-4: Erie Street-NB@3.2	206	C	27.2	99
900-4500	1-133: SBR@29.4-16: Seacliff Dr-WB@43.6	256	B	17.2	127
900-4500	1-10012: WBR@0.5-4: Erie Street-NB@3.2	306	B	14.6	72
900-4500	1-10018: NBR@4.2-10018: NBR@29.9	37	B	16.8	105
900-4500	1: Eries St @ Seacliff Dr	2564	C	30.0	504
900-4500	2-17: NBT@20.6-22: RIO Can-IN@4.0	99	B	10.1	69
900-4500	2-17: NBT@20.6-23: Erie St-NB@26.9	579	B	12.9	68
900-4500	2-18: EBLTR@91.3-22: RIO Can-IN@4.0	0	A		7
900-4500	2-18: EBLTR@91.3-23: Erie St-NB@26.9	9	B	17.8	7
900-4500	2-19: WBLTR@81.6-20: Erie St-SB@31.3	132	C	24.0	51
900-4500	2-19: WBLTR@81.6-23: Erie St-NB@26.9	195	A	7.7	52
900-4500	2-19: WBLTR@81.6-24: BMO-IN@3.4	2	D	38.5	51
900-4500	2-21: SBTR@37.6-20: Erie St-SB@31.3	659	A	4.6	54
900-4500	2-21: SBTR@37.6-24: BMO-IN@3.4	20	A	5.5	56
900-4500	2-68: SBL@30.1-22: RIO Can-IN@4.0	85	A	7.2	27
900-4500	2-69: NBL@14.6-24: BMO-IN@3.4	9	A	8.1	6
900-4500	2-10025: EBR@1.2-20: Erie St-SB@31.3	17	A	5.5	6
900-4500	2: Eries St @ BMO/Rio Can	1806	A	9.6	69
900-4500	3-25: EBLTR@172.3-26: Parkdale Plaza-IN@26.0	0	A		0
900-4500	3-27: WBLTR@68.6-28@25.6	1	B	10.2	36
900-4500	3-27: WBLTR@68.6-30: Erie St-NB@15.4	166	A	10.0	36
900-4500	3-27: WBLTR@68.6-32: Erie St-SB@13.8	6	A	2.2	36
900-4500	3-29: NBTR@15.8-30: Erie St-NB@15.4	757	A	0.4	11
900-4500	3-31: SBTR@51.9-28@25.6	18	A	1.1	0
900-4500	3-31: SBTR@51.9-32: Erie St-SB@13.8	743	A	0.8	0
900-4500	3-70: SBL@44.1-26: Parkdale Plaza-IN@26.0	230	B	10.2	50
900-4500	3-10042: NBR@7.2-26: Parkdale Plaza-IN@26.0	10	A	1.5	12
900-4500	3-10044: EBR@1.1-10044: EBR@10.7	15	A	3.7	12
900-4500	3-10047: EBL@2.1-30: Erie St-NB@15.4	10	A	3.2	6
900-4500	3-10111@1.4-28@25.6	15	A	2.6	6
900-4500	3: Erie St @ Parkdale Ave	1971	A	2.6	50
900-4500	4-33: EBLTR@43.0-35: EBT@30.1	25	D	40.1	48
900-4500	4-33: EBLTR@43.0-38: Erie St-SB@24.7	49	A	8.2	50
900-4500	4-33: EBLTR@43.0-39: Erie St-NB@25.0	75	D	45.6	48
900-4500	4-34: WBLTR@49.7-36: WBT@27.9	12	D	47.7	42
900-4500	4-34: WBLTR@49.7-38: Erie St-SB@24.7	52	D	38.4	42
900-4500	4-34: WBLTR@49.7-39: Erie St-NB@25.0	56	B	17.9	43

900-4500	4-37: SBTR@50.4-38: Erie St-SB@24.7	893	A	6.8	54
900-4500	4-37: SBTR@50.4-10057: SBR@15.5	3	A	8.7	55
900-4500	4-40: NBTR@58.0-39: Erie St-NB@25.0	797	B	11.1	93
900-4500	4-40: NBTR@58.0-10055: NBR@17.3	73	B	10.8	94
900-4500	4-72: NBL@41.1-36: WBT@27.9	62	B	11.4	20
900-4500	4-73: SBL@48.3-35: EBT@30.1	62	A	6.7	12
900-4500	4: 4: Erie St @ Erie Plaza/Diprimo's Plaza	2159	B	11.7	94
900-4500	5-41: NBTR@50.0-49: Erie St-NB@29.3	743	B	19.0	114
900-4500	5-43: WBLTR@41.9-48: Erie St-SB@28.1	137	C	30.3	68
900-4500	5-43: WBLTR@41.9-49: Erie St-NB@29.3	66	B	12.0	69
900-4500	5-43: WBLTR@41.9-50: Pulford Ave-WB@30.6	81	C	28.5	68
900-4500	5-45: EBLTR@39.7-46: EBT@31.8	68	C	25.9	41
900-4500	5-45: EBLTR@39.7-49: Erie St-NB@29.3	82	C	27.4	41
900-4500	5-47: SBTR@58.2-48: Erie St-SB@28.1	653	A	9.1	55
900-4500	5-47: SBTR@58.2-10073: SBR@13.4	33	A	4.9	55
900-4500	5-74: NBL@49.9-10076: NBL@25.0	93	C	20.2	34
900-4500	5-75: SBL@85.1-46: EBT@31.8	93	D	35.3	39
900-4500	5-10075: EBR@0.2-48: Erie St-SB@28.1	172	B	11.2	41
900-4500	5-10077: NBR@1.7-10077: NBR@19.8	86	B	14.6	114
900-4500	5: Erie St @ Pulford Ave	2307	B	17.3	114
900-4500	6-51: NBL@46.2-10079: NBL@36.9	113	E	69.8	235
900-4500	6-52: WBL@98.9-61: Erie St-SB@40.6	201	F	119.2	114
900-4500	6-56: NBTR@62.5-63: Erie St-NB@2.7	460	D	48.9	277
900-4500	6-56: NBTR@62.5-10090: NBR@23.5	315	C	28.2	280
900-4500	6-58: EBTR@65.0-57: EBT@37.6	357	D	36.0	130
900-4500	6-58: EBTR@65.0-10094: EBR@26.0	132	A	5.5	133
900-4500	6-59: WBTR@111.2-60: Oak St-WB@40.8	354	C	26.3	54
900-4500	6-59: WBTR@111.2-10091: WBR@25.3	157	B	15.3	55
900-4500	6-62: SBTR@38.5-61: Erie St-SB@40.6	578	B	13.2	116
900-4500	6-76: SBL@38.1-57: EBT@37.6	163	C	26.3	42
900-4500	6-77: EBL@45.2-63: Erie St-NB@2.7	130	D	41.8	63
900-4500	6-10092: SBR@3.3-10092: SBR@27.0	141	A	9.3	118
900-4500	6: Eries St @ Oak St	3101	C	34.6	280
900-4500	7-4: Erie Street-NB@98.4-4: Erie Street-NB@125.4	688	A	0.5	0
900-4500	7-20: Erie St-SB@86.6-20: Erie St-SB@113.6	803	A	1.7	29
900-4500	7-20: Erie St-SB@86.6-143: Coronation Ave EB@8.0	4	A	0.6	33
900-4500	7-142: Coronation Ave EBLTR@98.6-4: Erie Street-NB@125.4	1	C	19.9	11
900-4500	7-142: Coronation Ave EBLTR@98.6-20: Erie St-SB@113.6	5	A	7.0	7
900-4500	7-145: NBL@11.4-143: Coronation Ave EB@8.0	1	A	5.6	10
900-4500	7: Erie St @ Coronation St	1502	A	1.2	33
900-4500	8-49: Erie St-NB@328.0-49: Erie St-NB@348.6	875	A	0.4	0
900-4500	8-49: Erie St-NB@328.0-148: Countess Street WB@4.9	18	A	1.0	0
900-4500	8-61: Erie St-SB@520.9-61: Erie St-SB@541.6	763	A	0.3	21
900-4500	8-61: Erie St-SB@520.9-148: Countess Street WB@4.9	56	A	5.3	26
900-4500	8-146: Countess Street WBLTR@146.0-49: Erie St-NB@348.6	9	A	5.9	18
900-4500	8-146: Countess Street WBLTR@146.0-61: Erie St-SB@541.6	14	A	8.9	16
900-4500	8: Erie St @ Countess St	1735	A	0.6	26

FUTURE CONDITIONS – ROAD DIET

McINTOSH PERRY

Future Road Diet (2030) - AM Peak Hour

Node Results

TIMEINT	MOVEMENT	VEHS(ALL)	LOS(ALL)	VEHDELAY(ALL)	QLENMAX
900-4500	1: Eries St @ Seacliff Dr - 2: NBL@38.2 - 16: Seacliff Dr - WB@43.6	85	C	29.8	60
900-4500	1: Eries St @ Seacliff Dr - 3: SBL@31.3 - 11: Seacliff Dr - EB@43.3	159	C	25.8	88
900-4500	1: Eries St @ Seacliff Dr - 6: SBT@29.9 - 8: Erie St - SB@6.7	200	B	19.8	65
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 8: Erie St - SB@6.7	74	B	17.8	158
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 11: Seacliff Dr - EB@43.3	249	C	24.9	158
900-4500	1: Eries St @ Seacliff Dr - 14: WBL@52.2 - 8: Erie St - SB@6.7	23	B	14.7	13
900-4500	1: Eries St @ Seacliff Dr - 15: WBT@50.8 - 16: Seacliff Dr - WB@43.6	183	C	23.3	58
900-4500	1: Eries St @ Seacliff Dr - 66: EBL@80.5 - 4: Erie Street - NB@2.7	127	C	28.5	52
900-4500	1: Eries St @ Seacliff Dr - 67: NBTR@21.7 - 4: Erie Street - NB@2.7	213	D	41.4	143
900-4500	1: Eries St @ Seacliff Dr - 171: SBR@20.8 - 16: Seacliff Dr - WB@43.6	131	C	21.2	53
900-4500	1: Eries St @ Seacliff Dr - 10012: WBR@0.5 - 4: Erie Street - NB@2.7	269	B	12.0	63
900-4500	1: Eries St @ Seacliff Dr - 10018: NBR@4.2 - 10018: NBR@29.9	22	C	27.8	149
900-4500	1: Eries St @ Seacliff Dr	1735	C	24.1	158
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@21.3 - 22: RIO Can - IN@4.0	66	B	17.1	97
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@21.3 - 23: Erie St - NB@26.7	540	C	23.0	97
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 22: RIO Can - IN@4.0	0	A		14
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 23: Erie St - NB@26.7	10	D	51.1	14
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 20: Erie St - SB@31.0	27	D	37.3	74
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 23: Erie St - NB@26.7	78	C	27.3	75
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 24: BMO - IN@3.4	0	A		74
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@36.5 - 20: Erie St - SB@31.0	464	A	1.7	33
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@36.5 - 24: BMO - IN@3.4	14	A	1.3	34
900-4500	2: Eries St @ BMO/Rio Can - 68: SBL@30.2 - 22: RIO Can - IN@4.0	79	A	6.4	16
900-4500	2: Eries St @ BMO/Rio Can - 69: NBL@14.6 - 24: BMO - IN@3.4	11	B	14.9	6
900-4500	2: Eries St @ BMO/Rio Can - 157@180.3 - 158@2.4	2	A	0.0	0
900-4500	2: Eries St @ BMO/Rio Can - 164@52.1 - 165@4.6	7	A	3.4	4
900-4500	2: Eries St @ BMO/Rio Can - 10025: EBR@1.2 - 20: Erie St - SB@31.0	2	A	8.2	14
900-4500	2: Eries St @ BMO/Rio Can	1300	B	14.4	97
900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3 - 26: Parkdale Plaza - IN@26.0	0	A		32
900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3 - 30: Erie St - NB@13.0	31	E	35.4	32
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 28@25.6	0	A		39
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 30: Erie St - NB@13.0	83	D	25.7	38
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 10181@19.1	1	A	9.9	38
900-4500	3: Erie St @ Parkdale Ave - 29: NBTR@13.4 - 30: Erie St - NB@13.0	594	C	20.3	95
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.8 - 28@25.6	48	A	1.3	19
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.8 - 32: Erie St - SB@13.7	555	A	1.1	14
900-4500	3: Erie St @ Parkdale Ave - 70: SBL@42.1 - 26: Parkdale Plaza - IN@26.0	245	D	26.7	149
900-4500	3: Erie St @ Parkdale Ave - 10042: NBR@7.3 - 26: Parkdale Plaza - IN@26.0	10	B	10.2	98
900-4500	3: Erie St @ Parkdale Ave - 10044: EBR@1.1 - 10044: EBR@14.0	3	A	3.3	32
900-4500	3: Erie St @ Parkdale Ave - 10111@1.4 - 28@25.6	18	A	8.7	6
900-4500	3: Erie St @ Parkdale Ave - 10188@1.5 - 10188@19.8	7	A	0.0	0
900-4500	3: Erie St @ Parkdale Ave - 10189@4.9 - 10189@23.2	2	A	0.0	0
900-4500	3: Erie St @ Parkdale Ave	1597	B	14.3	149
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 35: EBT@30.1	16	D	37.5	51
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 38: Erie St - SB@2	52	A	9.3	53
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 39: Erie St - NB@	87	D	42.6	51

900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 36: WBT@27.9	19	C	25.6	39
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 38: Erie St - SB@	52	D	39.8	39
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 39: Erie St - NB@	65	C	20.6	41
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@48.3 - 38: Erie St - SB@2	747	B	14.1	145
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@48.3 - 10057: SBR@17.9	0	A		147
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.2 - 39: Erie St - NB@2	606	C	34.0	139
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.2 - 10055: NBR@20.1	64	C	27.8	142
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 72: NBL@41.1 - 36: WBT@27.9	29	C	23.0	13
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 73: SBL@48.2 - 35: EBT@30.1	56	B	15.3	13
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 159@112.2 - 160@0.4	2	B	14.9	4
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 167@110.1 - 10191@26.2	7	A	2.1	4
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza	1802	C	24.0	147
900-4500	5: Erie St @ Pulford Ave - 41: NBTR@49.8 - 49: Erie St - NB@29.3	600	B	15.4	143
900-4500	5: Erie St @ Pulford Ave - 41: NBTR@49.8 - 10077: NBR@21.3	99	B	14.3	146
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 48: Erie St - SB@28.3	107	C	33.5	81
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 49: Erie St - NB@29.3	59	C	20.6	82
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 50: Pulford Ave - WB@30.6	68	D	36.1	81
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 46: EBT@31.8	43	C	32.2	46
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 49: Erie St - NB@29.3	62	D	37.2	46
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.7 - 48: Erie St - SB@28.3	560	B	13.1	161
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.7 - 10073: SBR@16.7	20	B	13.9	161
900-4500	5: Erie St @ Pulford Ave - 74: NBL@49.9 - 10076: NBL@25.0	54	C	24.6	31
900-4500	5: Erie St @ Pulford Ave - 75: SBL@83.9 - 46: EBT@31.8	65	C	35.0	40
900-4500	5: Erie St @ Pulford Ave - 160@109.1 - 10192@30.9	2	A	0.0	0
900-4500	5: Erie St @ Pulford Ave - 168@801.5 - 167@1.7	7	A	3.0	4
900-4500	5: Erie St @ Pulford Ave - 10075: EBR@0.2 - 48: Erie St - SB@28.3	137	B	16.3	46
900-4500	5: Erie St @ Pulford Ave	1883	B	18.6	161
900-4500	6: Eries St @ Oak St - 51: NBL@46.0 - 10079: NBL@36.9	126	E	64.3	132
900-4500	6: Eries St @ Oak St - 52: WBL@98.9 - 61: Erie St - SB@41.6	198	D	36.1	86
900-4500	6: Eries St @ Oak St - 56: NBTR@57.7 - 63: Erie St - NB@2.7	360	C	22.3	171
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 57: EBT@37.6	305	C	31.8	110
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 61: Erie St - SB@41.6	106	A	6.8	113
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 60: Oak St - WB@40.8	418	C	24.9	48
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 10091: WBR@25.3	68	B	13.7	49
900-4500	6: Eries St @ Oak St - 62: SBTR@39.0 - 61: Erie St - SB@41.6	484	B	16.5	120
900-4500	6: Eries St @ Oak St - 62: SBTR@39.0 - 10092: SBR@24.1	149	A	6.6	123
900-4500	6: Eries St @ Oak St - 76: SBL@38.1 - 57: EBT@37.6	60	B	17.4	13
900-4500	6: Eries St @ Oak St - 77: EBL@45.2 - 63: Erie St - NB@2.7	110	B	19.6	28
900-4500	6: Eries St @ Oak St - 173: NBR@51.2 - 10090: NBR@22.9	249	A	9.1	55
900-4500	6: Eries St @ Oak St	2633	C	22.6	171
900-4500	7: Erie St @ Coronation St - 4: Erie Street - NB@98.0 - 4: Erie Street - NB@12	609	C	22.4	143
900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.4 - 20: Erie St - SB@113.4	490	A	0.2	0
900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.4 - 143: Coronation Ave EB@	2	A	0.5	0
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 4: Erie Street	10	C	21.5	14
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 20: Erie St - S	3	B	12.7	14
900-4500	7: Erie St @ Coronation St - 145: NBL@11.4 - 143: Coronation Ave EB@8.0	0	A		0
900-4500	7: Erie St @ Coronation St - 157@97.8 - 157@124.7	2	A	0.0	0
900-4500	7: Erie St @ Coronation St - 165@60.0 - 166@4.7	7	A	0.0	0
900-4500	7: Erie St @ Coronation St	1123	B	12.4	143

900-4500	8: Erie St @ Countess St - 49: Erie St - NB@327.9 - 49: Erie St - NB@348.6	718	A	0.5	0
900-4500	8: Erie St @ Countess St - 49: Erie St - NB@327.9 - 148: Countess Street WB@	7	A	0.8	0
900-4500	8: Erie St @ Countess St - 61: Erie St - SB@522.0 - 61: Erie St - SB@542.6	641	A	0.6	105
900-4500	8: Erie St @ Countess St - 61: Erie St - SB@522.0 - 148: Countess Street WB@	12	A	5.1	113
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 49: Erie St - N	13	B	10.2	14
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 61: Erie St - S	7	C	15.6	11
900-4500	8: Erie St @ Countess St - 161@298.9 - 162@1.4	2	A	0.0	0
900-4500	8: Erie St @ Countess St - 168@481.9 - 168@502.6	7	A	0.0	0
900-4500	8: Erie St @ Countess St	1407	A	0.7	113

Future Road Diet (2030) - PM Peak Hour

Node Results

TIMEINT	MOVEMENT	VEHS(ALL)	LOS(ALL)	VEHDELAY(ALL)	QLENMAX
900-4500	1: Eries St @ Seacliff Dr - 2: NBL@38.2 - 16: Seacliff Dr - WB@43.6	118	E	74.4	110
900-4500	1: Eries St @ Seacliff Dr - 3: SBL@31.3 - 11: Seacliff Dr - EB@43.3	280	D	52.2	130
900-4500	1: Eries St @ Seacliff Dr - 6: SBT@29.9 - 8: Erie St - SB@6.7	223	C	32.8	129
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 8: Erie St - SB@6.7	57	B	16.9	151
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1 - 11: Seacliff Dr - EB@43.3	257	C	26.5	151
900-4500	1: Eries St @ Seacliff Dr - 14: WBL@52.2 - 8: Erie St - SB@6.7	22	D	42.7	19
900-4500	1: Eries St @ Seacliff Dr - 15: WBT@50.8 - 16: Seacliff Dr - WB@43.6	269	C	34.2	510
900-4500	1: Eries St @ Seacliff Dr - 66: EBL@80.5 - 4: Erie Street - NB@2.7	114	F	222.1	269
900-4500	1: Eries St @ Seacliff Dr - 67: NBTR@21.7 - 4: Erie Street - NB@2.7	158	F	155.2	150
900-4500	1: Eries St @ Seacliff Dr - 171: SBR@20.8 - 16: Seacliff Dr - WB@43.6	241	D	48.5	129
900-4500	1: Eries St @ Seacliff Dr - 10012: WBR@0.5 - 4: Erie Street - NB@2.7	214	F	121.2	510
900-4500	1: Eries St @ Seacliff Dr - 10018: NBR@4.2 - 10018: NBR@29.9	27	F	112.9	155
900-4500	1: Eries St @ Seacliff Dr	1980	E	70.3	510
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@21.3 - 22: RIO Can - IN@4.0	76	D	40.5	97
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@21.3 - 23: Erie St - NB@26.7	391	D	48.4	97
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 22: RIO Can - IN@4.0	0	A		7
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3 - 23: Erie St - NB@26.7	9	D	45.2	7
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 20: Erie St - SB@31.0	132	D	49.7	77
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 23: Erie St - NB@26.7	194	D	36.0	78
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6 - 24: BMO - IN@3.4	2	E	59.4	77
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@36.5 - 20: Erie St - SB@31.0	604	A	9.9	79
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@36.5 - 24: BMO - IN@3.4	9	A	2.3	80
900-4500	2: Eries St @ BMO/Rio Can - 68: SBL@30.2 - 22: RIO Can - IN@4.0	86	B	12.8	34
900-4500	2: Eries St @ BMO/Rio Can - 69: NBL@14.6 - 24: BMO - IN@3.4	4	D	41.8	0
900-4500	2: Eries St @ BMO/Rio Can - 157@180.3 - 158@2.4	14	A	6.8	4
900-4500	2: Eries St @ BMO/Rio Can - 164@52.1 - 165@4.6	15	B	10.8	4
900-4500	2: Eries St @ BMO/Rio Can - 10025: EBR@1.2 - 20: Erie St - SB@31.0	17	B	17.8	7
900-4500	2: Eries St @ BMO/Rio Can	1553	C	28.3	97
900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3 - 26: Parkdale Plaza - IN@26.0	0	A		19
900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3 - 30: Erie St - NB@13.0	10	E	45.2	19
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 28@25.6	1	B	12.7	65
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 30: Erie St - NB@13.0	163	F	63.2	65
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6 - 10181@19.1	6	A	9.8	65
900-4500	3: Erie St @ Parkdale Ave - 29: NBTR@13.4 - 30: Erie St - NB@13.0	575	D	27.5	95
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.8 - 28@25.6	18	A	4.7	149
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.8 - 32: Erie St - SB@13.7	677	A	4.7	144
900-4500	3: Erie St @ Parkdale Ave - 70: SBL@42.1 - 26: Parkdale Plaza - IN@26.0	200	D	31.9	138
900-4500	3: Erie St @ Parkdale Ave - 10042: NBR@7.3 - 26: Parkdale Plaza - IN@26.0	7	C	17.2	98
900-4500	3: Erie St @ Parkdale Ave - 10044: EBR@1.1 - 10044: EBR@14.0	15	A	5.4	19
900-4500	3: Erie St @ Parkdale Ave - 10111@1.4 - 28@25.6	9	C	21.1	6
900-4500	3: Erie St @ Parkdale Ave - 10188@1.5 - 10188@19.8	15	A	0.0	0
900-4500	3: Erie St @ Parkdale Ave - 10189@4.9 - 10189@23.2	14	A	0.3	0
900-4500	3: Erie St @ Parkdale Ave	1710	C	21.5	149
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 35: EBT@30.1	26	D	44.7	41
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 38: Erie St - SB@2	49	B	11.0	43

900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0 - 39: Erie St - NB@	76	D	36.5	41
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 36: WBT@27.9	12	C	34.0	56
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 38: Erie St - SB@	50	C	29.2	56
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7 - 39: Erie St - NB@	53	B	18.4	57
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@48.3 - 38: Erie St - SB@2	805	C	27.5	150
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@48.3 - 10057: SBR@17.9	2	B	11.9	151
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.2 - 39: Erie St - NB@2	635	C	34.4	139
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.2 - 10055: NBR@20.1	56	C	29.6	142
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 72: NBL@41.1 - 36: WBT@27.9	51	C	34.8	22
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 73: SBL@48.2 - 35: EBT@30.1	53	C	22.5	33
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 159@112.2 - 160@0.4	15	B	12.6	4
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 167@110.1 - 10191@26.2	15	A	6.6	4
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza	1898	C	29.6	151
900-4500	5: Erie St @ Pulford Ave - 41: NBTR@49.8 - 49: Erie St - NB@29.3	619	B	14.9	147
900-4500	5: Erie St @ Pulford Ave - 41: NBTR@49.8 - 10077: NBR@21.3	74	A	9.6	150
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 48: Erie St - SB@28.3	137	D	49.0	91
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 49: Erie St - NB@29.3	66	B	17.6	92
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9 - 50: Pulford Ave - WB@30.6	81	C	27.5	91
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 46: EBT@31.8	68	C	34.0	67
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7 - 49: Erie St - NB@29.3	82	C	28.5	67
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.7 - 48: Erie St - SB@28.3	556	E	59.0	328
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.7 - 10073: SBR@16.7	29	E	56.6	329
900-4500	5: Erie St @ Pulford Ave - 74: NBL@49.9 - 10076: NBL@25.0	69	C	27.2	41
900-4500	5: Erie St @ Pulford Ave - 75: SBL@83.9 - 46: EBT@31.8	80	C	34.0	34
900-4500	5: Erie St @ Pulford Ave - 160@109.1 - 10192@30.9	15	A	3.5	4
900-4500	5: Erie St @ Pulford Ave - 168@801.5 - 167@1.7	15	A	7.7	4
900-4500	5: Erie St @ Pulford Ave - 10075: EBR@0.2 - 48: Erie St - SB@28.3	171	C	27.3	67
900-4500	5: Erie St @ Pulford Ave	2062	C	33.3	329
900-4500	6: Eries St @ Oak St - 51: NBL@46.0 - 10079: NBL@36.9	98	E	59.2	170
900-4500	6: Eries St @ Oak St - 52: WBL@98.9 - 61: Erie St - SB@41.6	197	D	37.8	71
900-4500	6: Eries St @ Oak St - 56: NBTR@57.7 - 63: Erie St - NB@2.7	397	C	28.4	305
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 57: EBT@37.6	357	C	28.9	81
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0 - 61: Erie St - SB@41.6	131	B	10.3	85
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 60: Oak St - WB@40.8	353	C	22.1	45
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2 - 10091: WBR@25.3	157	B	11.5	46
900-4500	6: Eries St @ Oak St - 62: SBTR@39.0 - 61: Erie St - SB@41.6	523	C	33.9	126
900-4500	6: Eries St @ Oak St - 62: SBTR@39.0 - 10092: SBR@24.1	130	C	20.3	128
900-4500	6: Eries St @ Oak St - 76: SBL@38.1 - 57: EBT@37.6	150	C	33.4	35
900-4500	6: Eries St @ Oak St - 77: EBL@45.2 - 63: Erie St - NB@2.7	130	C	30.4	42
900-4500	6: Eries St @ Oak St - 173: NBR@51.2 - 10090: NBR@22.9	271	B	12.2	52
900-4500	6: Eries St @ Oak St	2894	C	27.1	305
900-4500	7: Erie St @ Coronation St - 4: Erie Street - NB@98.0 - 4: Erie Street - NB@12	476	F	68.2	145
900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.4 - 20: Erie St - SB@113.4	745	B	10.9	94
900-4500	7: Erie St @ Coronation St - 20: Erie St - SB@86.4 - 143: Coronation Ave EB@	4	B	11.7	98
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 4: Erie Street	1	C	23.2	14
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6 - 20: Erie St - S	5	C	18.4	14
900-4500	7: Erie St @ Coronation St - 145: NBL@11.4 - 143: Coronation Ave EB@8.0	1	F	74.4	0
900-4500	7: Erie St @ Coronation St - 157@97.8 - 157@124.7	14	A	0.0	0

900-4500	7: Erie St @ Coronation St - 165@60.0 - 166@4.7	15	A	0.0	0
900-4500	7: Erie St @ Coronation St	1261	D	32.4	145
900-4500	8: Erie St @ Countess St - 49: Erie St - NB@327.9 - 49: Erie St - NB@348.6	753	A	1.4	103
900-4500	8: Erie St @ Countess St - 49: Erie St - NB@327.9 - 148: Countess Street WB@	14	A	0.8	104
900-4500	8: Erie St @ Countess St - 61: Erie St - SB@522.0 - 61: Erie St - SB@542.6	677	E	37.4	503
900-4500	8: Erie St @ Countess St - 61: Erie St - SB@522.0 - 148: Countess Street WB@	15	F	50.8	505
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 49: Erie St - N	9	F	167.5	51
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0 - 61: Erie St - S	9	F	467.7	48
900-4500	8: Erie St @ Countess St - 161@298.9 - 162@1.4	15	A	0.0	0
900-4500	8: Erie St @ Countess St - 168@481.9 - 168@502.6	15	A	0.0	0
900-4500	8: Erie St @ Countess St	1507	C	21.8	505

FUTURE CONDITIONS – ULTIMATE

McINTOSH PERRY

Future (2030) - Ultimate Conditions - AM Peak

TIMEINT	MOVEMENT	Vehs (All)	LOS(ALL)	VEHDELAY(ALL)	QLENMAX
900-4500	1: Eries St @ Seacliff Dr - 2: NBL@38.2-16: Seacliff Dr-WB@43.6	84	B	19.6	33
900-4500	1: Eries St @ Seacliff Dr - 3: SBL@31.3-11: Seacliff Dr-EB@43.3	159	C	21.7	88
900-4500	1: Eries St @ Seacliff Dr - 6: SBT@29.9-8: Erie St-SB@6.5	206	C	20.8	65
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1-8: Erie St-SB@6.5	74	B	19.6	205
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1-11: Seacliff Dr-EB@43.3	249	C	27.1	205
900-4500	1: Eries St @ Seacliff Dr - 14: WBL@52.2-8: Erie St-SB@6.5	24	C	22.4	23
900-4500	1: Eries St @ Seacliff Dr - 15: WBT@50.8-16: Seacliff Dr-WB@43.6	196	C	25.2	87
900-4500	1: Eries St @ Seacliff Dr - 66: EBL@80.5-4: Erie Street-NB@3.2	127	C	21.0	52
900-4500	1: Eries St @ Seacliff Dr - 67: NBTR@21.7-4: Erie Street-NB@3.2	213	C	28.6	93
900-4500	1: Eries St @ Seacliff Dr - 133: SBR@29.4-16: Seacliff Dr-WB@43.6	123	A	7.0	63
900-4500	1: Eries St @ Seacliff Dr - 10012: WBR@0.5-4: Erie Street-NB@3.2	242	A	6.3	46
900-4500	1: Eries St @ Seacliff Dr - 10018: NBR@4.2-10018: NBR@29.9	22	C	20.2	98
900-4500	1: Eries St @ Seacliff Dr	1719	C	20.2	205
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6-22: RIO Can-IN@4.0	53	A	4.3	75
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6-23: Erie St-NB@26.9	526	A	3.2	74
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3-22: RIO Can-IN@4.0	0	A		14
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3-23: Erie St-NB@26.9	10	D	35.7	14
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6-20: Erie St-SB@31.3	27	D	42.9	73
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6-23: Erie St-NB@26.9	79	B	10.5	74
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6-24: BMO-IN@3.4	0	A		73
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6-20: Erie St-SB@31.3	461	A	1.2	19
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6-24: BMO-IN@3.4	17	A	1.5	21
900-4500	2: Eries St @ BMO/Rio Can - 68: SBL@30.1-22: RIO Can-IN@4.0	77	A	3.3	15
900-4500	2: Eries St @ BMO/Rio Can - 69: NBL@14.6-24: BMO-IN@3.4	13	A	6.4	7
900-4500	2: Eries St @ BMO/Rio Can - 10025: EBR@1.2-20: Erie St-SB@31.3	2	A	3.6	14
900-4500	2: Eries St @ BMO/Rio Can	1265	A	4.1	75
900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3-26: Parkdale Plaza-IN@26.0	0	A		32
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6-28@25.6	0	A		28
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6-30: Erie St-NB@15.4	69	A	9.2	27
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6-32: Erie St-SB@13.8	0	A		27
900-4500	3: Erie St @ Parkdale Ave - 29: NBTR@15.8-30: Erie St-NB@15.4	587	A	0.3	0
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9-28@25.6	47	A	1.4	13
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9-32: Erie St-SB@13.8	552	A	0.7	9
900-4500	3: Erie St @ Parkdale Ave - 70: SBL@44.1-26: Parkdale Plaza-IN@26.0	243	A	6.1	63
900-4500	3: Erie St @ Parkdale Ave - 10042: NBR@7.2-26: Parkdale Plaza-IN@26.0	10	A	1.4	12
900-4500	3: Erie St @ Parkdale Ave - 10044: EBR@1.1-10044: EBR@10.7	3	A	3.0	30
900-4500	3: Erie St @ Parkdale Ave - 10047: EBL@2.1-30: Erie St-NB@15.4	31	A	4.7	30
900-4500	3: Erie St @ Parkdale Ave - 10111@1.4-28@25.6	18	A	1.9	19
900-4500	3: Erie St @ Parkdale Ave	1560	A	1.9	63
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0-35: EBT@30.1	16	D	43.2	49
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0-38: Erie St-SB@24.7	52	A	5.8	50
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0-39: Erie St-NB@25.0	89	D	40.5	49
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7-36: WBT@27.9	13	D	39.3	61
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7-38: Erie St-SB@24.7	44	D	37.6	61
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7-39: Erie St-NB@25.0	68	C	24.6	63
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4-38: Erie St-SB@24.7	750	B	13.7	99
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4-10057: SBR@15.5	0	A		100
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.0-39: Erie St-NB@25.0	612	B	12.2	96
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.0-10055: NBR@17.3	44	A	5.5	97
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 72: NBL@41.1-36: WBT@27.9	29	B	10.6	7
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 73: SBL@48.3-35: EBT@30.1	55	B	15.4	26
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza	1772	B	15.6	100
900-4500	5: Erie St @ Pulford Ave - 41: NBTR@50.0-49: Erie St-NB@29.3	613	B	15.7	115

900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9-48: Erie St-SB@28.1	108	D	36.3	103
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9-49: Erie St-NB@29.3	59	C	26.2	104
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9-50: Pulford Ave-WB@30.6	68	D	51.1	103
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7-46: EBT@31.8	45	E	58.5	51
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7-49: Erie St-NB@29.3	62	D	46.1	51
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2-48: Erie St-SB@28.1	559	B	12.9	62
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2-10073: SBR@13.4	20	A	7.8	63
900-4500	5: Erie St @ Pulford Ave - 74: NBL@49.9-10076: NBL@25.0	56	B	11.3	32
900-4500	5: Erie St @ Pulford Ave - 75: SBL@85.1-46: EBT@31.8	64	B	12.8	17
900-4500	5: Erie St @ Pulford Ave - 10075: EBR@0.2-48: Erie St-SB@28.1	138	C	23.5	51
900-4500	5: Erie St @ Pulford Ave - 10077: NBR@1.7-10077: NBR@19.8	105	B	13.0	115
900-4500	5: Erie St @ Pulford Ave	1897	B	19.7	115
900-4500	6: Eries St @ Oak St - 51: NBL@46.2-10079: NBL@36.9	124	C	22.9	41
900-4500	6: Eries St @ Oak St - 52: WBL@98.9-61: Erie St-SB@40.6	199	F	89.9	142
900-4500	6: Eries St @ Oak St - 56: NBTR@62.5-63: Erie St-NB@2.7	360	C	20.6	152
900-4500	6: Eries St @ Oak St - 56: NBTR@62.5-10090: NBR@23.5	248	B	12.7	154
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0-57: EBT@37.6	311	C	33.5	89
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0-10094: EBR@26.0	106	A	5.1	93
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2-60: Oak St-WB@40.8	422	C	28.5	61
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2-10091: WBR@25.3	68	B	16.4	62
900-4500	6: Eries St @ Oak St - 62: SBTR@38.5-61: Erie St-SB@40.6	480	B	17.2	96
900-4500	6: Eries St @ Oak St - 76: SBL@38.1-57: EBT@37.6	58	B	16.2	25
900-4500	6: Eries St @ Oak St - 77: EBL@45.2-63: Erie St-NB@2.7	110	C	26.8	28
900-4500	6: Eries St @ Oak St - 10092: SBR@3.3-10092: SBR@27.0	148	B	10.3	98
900-4500	6: Eries St @ Oak St	2634	C	26.2	154
900-4500	7: Erie St @ Coronation St - 4: Erie Street-NB@98.4-4: Erie Street-NB@125.4	582	A	0.5	0
900-4500	7: Erie St @ Coronation St - 20: Erie St-SB@86.6-20: Erie St-SB@113.6	487	A	0.2	0
900-4500	7: Erie St @ Coronation St - 20: Erie St-SB@86.6-143: Coronation Ave EB@8.0	2	A	0.9	0
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6-4: Erie Street-NB@125.4	10	A	9.4	11
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6-20: Erie St-SB@113.6	3	A	9.7	7
900-4500	7: Erie St @ Coronation St - 145: NBL@11.4-143: Coronation Ave EB@8.0	0	A		0
900-4500	7: Erie St @ Coronation St	1084	A	0.4	11
900-4500	8: Erie St @ Countess St - 49: Erie St-NB@328.0-49: Erie St-NB@348.6	719	A	0.2	0
900-4500	8: Erie St @ Countess St - 49: Erie St-NB@328.0-148: Countess Street WB@4.9	7	A	0.8	0
900-4500	8: Erie St @ Countess St - 61: Erie St-SB@520.9-61: Erie St-SB@541.6	638	A	0.3	15
900-4500	8: Erie St @ Countess St - 61: Erie St-SB@520.9-148: Countess Street WB@4.9	48	A	4.4	20
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0-49: Erie St-NB@348.6	13	A	6.5	12
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0-61: Erie St-SB@541.6	7	C	17.5	10
900-4500	8: Erie St @ Countess St	1432	A	0.5	20

Future (2030) - Ultimate Conditions - PM Peak

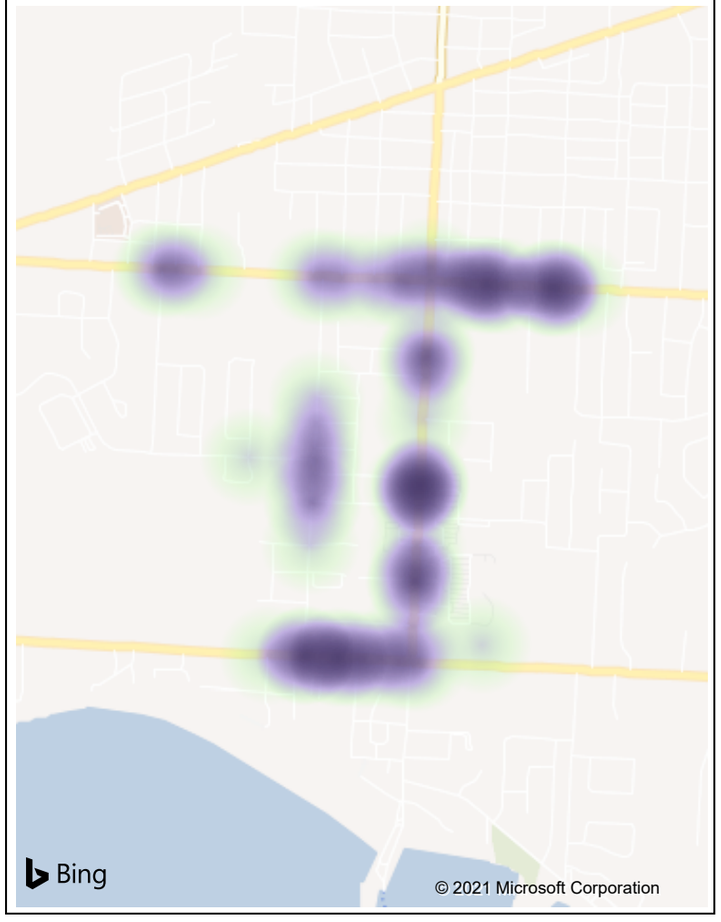
TIMEINT	MOVEMENT	Vehs (All)	LOS(ALL)	VEHDELAY(ALL)	QLENMAX
900-4500	1: Eries St @ Seacliff Dr - 2: NBL@38.2-16: Seacliff Dr-WB@43.6	150	C	25.3	143
900-4500	1: Eries St @ Seacliff Dr - 3: SBL@31.3-11: Seacliff Dr-EB@43.3	311	D	40.7	128
900-4500	1: Eries St @ Seacliff Dr - 6: SBT@29.9-8: Erie St-SB@6.5	252	C	32.2	127
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1-8: Erie St-SB@6.5	89	C	23.4	202
900-4500	1: Eries St @ Seacliff Dr - 12: EBTR@79.1-11: Seacliff Dr-EB@43.3	384	C	25.4	202
900-4500	1: Eries St @ Seacliff Dr - 14: WBL@52.2-8: Erie St-SB@6.5	28	C	26.6	25
900-4500	1: Eries St @ Seacliff Dr - 15: WBT@50.8-16: Seacliff Dr-WB@43.6	405	C	33.0	435
900-4500	1: Eries St @ Seacliff Dr - 66: EBL@80.5-4: Erie Street-NB@3.2	179	C	30.6	78
900-4500	1: Eries St @ Seacliff Dr - 67: NBTR@21.7-4: Erie Street-NB@3.2	204	C	34.7	143
900-4500	1: Eries St @ Seacliff Dr - 133: SBR@29.4-16: Seacliff Dr-WB@43.6	227	B	16.2	121
900-4500	1: Eries St @ Seacliff Dr - 10012: WBR@0.5-4: Erie Street-NB@3.2	272	B	12.1	52
900-4500	1: Eries St @ Seacliff Dr - 10018: NBR@4.2-10018: NBR@29.9	37	C	28.6	125
900-4500	1: Eries St @ Seacliff Dr	2538	C	28.0	435
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6-22: RIO Can-IN@4.0	84	A	4.0	48
900-4500	2: Eries St @ BMO/Rio Can - 17: NBT@20.6-23: Erie St-NB@26.9	561	A	5.0	47
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3-22: RIO Can-IN@4.0	0	A		7
900-4500	2: Eries St @ BMO/Rio Can - 18: EBLTR@91.3-23: Erie St-NB@26.9	9	C	33.6	7
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6-20: Erie St-SB@31.3	132	D	37.7	77
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6-23: Erie St-NB@26.9	194	A	9.6	78
900-4500	2: Eries St @ BMO/Rio Can - 19: WBLTR@81.6-24: BMO-IN@3.4	2	D	45.2	77
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6-20: Erie St-SB@31.3	651	A	2.0	32
900-4500	2: Eries St @ BMO/Rio Can - 21: SBTR@37.6-24: BMO-IN@3.4	18	A	3.0	34
900-4500	2: Eries St @ BMO/Rio Can - 68: SBL@30.1-22: RIO Can-IN@4.0	81	A	3.9	21
900-4500	2: Eries St @ BMO/Rio Can - 69: NBL@14.6-24: BMO-IN@3.4	10	A	6.0	6
900-4500	2: Eries St @ BMO/Rio Can - 10025: EBR@1.2-20: Erie St-SB@31.3	17	A	5.8	6
900-4500	2: Eries St @ BMO/Rio Can	1759	A	6.9	78
900-4500	3: Erie St @ Parkdale Ave - 25: EBLTR@172.3-26: Parkdale Plaza-IN@26.0	0	A		0
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6-28@25.6	0	A		24
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6-30: Erie St-NB@15.4	108	A	8.0	23
900-4500	3: Erie St @ Parkdale Ave - 27: WBLTR@68.6-32: Erie St-SB@13.8	5	A	4.5	23
900-4500	3: Erie St @ Parkdale Ave - 29: NBTR@15.8-30: Erie St-NB@15.4	739	A	0.4	21
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9-28@25.6	20	A	1.1	0
900-4500	3: Erie St @ Parkdale Ave - 31: SBTR@51.9-32: Erie St-SB@13.8	732	A	0.7	0
900-4500	3: Erie St @ Parkdale Ave - 70: SBL@44.1-26: Parkdale Plaza-IN@26.0	224	A	8.6	72
900-4500	3: Erie St @ Parkdale Ave - 10042: NBR@7.2-26: Parkdale Plaza-IN@26.0	11	A	1.8	24
900-4500	3: Erie St @ Parkdale Ave - 10044: EBR@1.1-10044: EBR@10.7	15	A	1.6	12
900-4500	3: Erie St @ Parkdale Ave - 10047: EBL@2.1-30: Erie St-NB@15.4	10	A	1.9	5
900-4500	3: Erie St @ Parkdale Ave - 10111: NBL@1.4-28@25.6	15	A	8.6	12
900-4500	3: Erie St @ Parkdale Ave	1879	A	2.0	72
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0-35: EBT@30.1	26	D	48.0	41
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0-38: Erie St-SB@24.7	49	A	6.5	42
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 33: EBLTR@43.0-39: Erie St-NB@25.0	76	D	43.7	41
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7-36: WBT@27.9	12	D	46.6	61
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7-38: Erie St-SB@24.7	37	D	38.7	61
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 34: WBLTR@49.7-39: Erie St-NB@25.0	76	B	19.5	63
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4-38: Erie St-SB@24.7	888	B	12.1	127
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 37: SBTR@50.4-10057: SBR@15.5	3	B	14.6	128
900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 40: NBTR@58.0-39: Erie St-NB@25.0	758	B	11.5	103
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900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza - 72: NBL@41.1-36: WBT@27.9	60	B	12.1	14
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900-4500	4: Eries St @ Erie Plaza/Diprimo's Plaza	2086	B	14.3	128
900-4500	5: Erie St @ Pulford Ave - 41: NBTR@50.0-49: Erie St-NB@29.3	732	B	19.1	141

900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9-48: Erie St-SB@28.1	135	D	39.5	81
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9-49: Erie St-NB@29.3	83	C	23.5	82
900-4500	5: Erie St @ Pulford Ave - 43: WBLTR@41.9-50: Pulford Ave-WB@30.6	79	D	39.2	81
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7-46: EBT@31.8	66	D	53.7	108
900-4500	5: Erie St @ Pulford Ave - 45: EBLTR@39.7-49: Erie St-NB@29.3	80	D	42.6	108
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2-48: Erie St-SB@28.1	646	B	16.6	73
900-4500	5: Erie St @ Pulford Ave - 47: SBTR@58.2-10073: SBR@13.4	33	B	11.9	74
900-4500	5: Erie St @ Pulford Ave - 74: NBL@49.9-10076: NBL@25.0	94	B	14.3	41
900-4500	5: Erie St @ Pulford Ave - 75: SBL@85.1-46: EBT@31.8	93	B	14.1	26
900-4500	5: Erie St @ Pulford Ave - 10075: EBR@0.2-48: Erie St-SB@28.1	168	C	25.4	108
900-4500	5: Erie St @ Pulford Ave - 10077: NBR@1.7-10077: NBR@19.8	86	B	15.1	140
900-4500	5: Erie St @ Pulford Ave	2295	C	22.1	141
900-4500	6: Eries St @ Oak St - 51: NBL@46.2-10079: NBL@36.9	111	D	35.0	78
900-4500	6: Eries St @ Oak St - 52: WBL@98.9-61: Erie St-SB@40.6	200	D	38.8	83
900-4500	6: Eries St @ Oak St - 56: NBTR@62.5-63: Erie St-NB@2.7	458	C	34.8	213
900-4500	6: Eries St @ Oak St - 56: NBTR@62.5-10090: NBR@23.5	310	C	20.0	216
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0-57: EBT@37.6	355	C	29.3	111
900-4500	6: Eries St @ Oak St - 58: EBTR@65.0-10094: EBR@26.0	132	A	5.7	115
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2-60: Oak St-WB@40.8	356	C	22.9	64
900-4500	6: Eries St @ Oak St - 59: WBTR@111.2-10091: WBR@25.3	157	B	12.3	65
900-4500	6: Eries St @ Oak St - 62: SBTR@38.5-61: Erie St-SB@40.6	582	C	20.9	121
900-4500	6: Eries St @ Oak St - 76: SBL@38.1-57: EBT@37.6	164	D	35.0	120
900-4500	6: Eries St @ Oak St - 77: EBL@45.2-63: Erie St-NB@2.7	130	C	24.9	47
900-4500	6: Eries St @ Oak St - 10092: SBR@3.3-10092: SBR@27.0	142	B	12.9	123
900-4500	6: Eries St @ Oak St	3097	C	25.2	216
900-4500	7: Erie St @ Coronation St - 4: Erie Street-NB@98.4-4: Erie Street-NB@125.4	654	A	0.4	0
900-4500	7: Erie St @ Coronation St - 20: Erie St-SB@86.6-20: Erie St-SB@113.6	792	A	1.6	29
900-4500	7: Erie St @ Coronation St - 20: Erie St-SB@86.6-143: Coronation Ave EB@8.0	5	A	0.7	32
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6-4: Erie Street-NB@125.4	1	C	15.3	11
900-4500	7: Erie St @ Coronation St - 142: Coronation Ave EBLTR@98.6-20: Erie St-SB@113.6	5	A	7.5	7
900-4500	7: Erie St @ Coronation St - 145: NBL@11.4-143: Coronation Ave EB@8.0	1	A	0.9	0
900-4500	7: Erie St @ Coronation St	1458	A	1.1	32
900-4500	8: Erie St @ Countess St - 49: Erie St-NB@328.0-49: Erie St-NB@348.6	869	A	0.5	0
900-4500	8: Erie St @ Countess St - 49: Erie St-NB@328.0-148: Countess Street WB@4.9	18	A	0.7	0
900-4500	8: Erie St @ Countess St - 61: Erie St-SB@520.9-61: Erie St-SB@541.6	760	A	0.5	22
900-4500	8: Erie St @ Countess St - 61: Erie St-SB@520.9-148: Countess Street WB@4.9	52	A	8.4	27
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0-49: Erie St-NB@348.6	9	A	7.8	18
900-4500	8: Erie St @ Countess St - 146: Countess Street WBLTR@146.0-61: Erie St-SB@541.6	14	B	14.7	16
900-4500	8: Erie St @ Countess St	1722	A	0.9	27

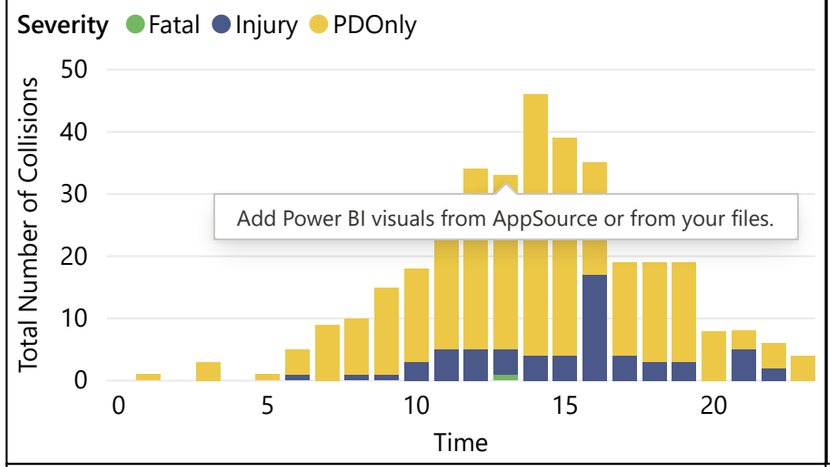
APPENDIX F – COLLISION SUMMARY ANALYSIS

McINTOSH PERRY

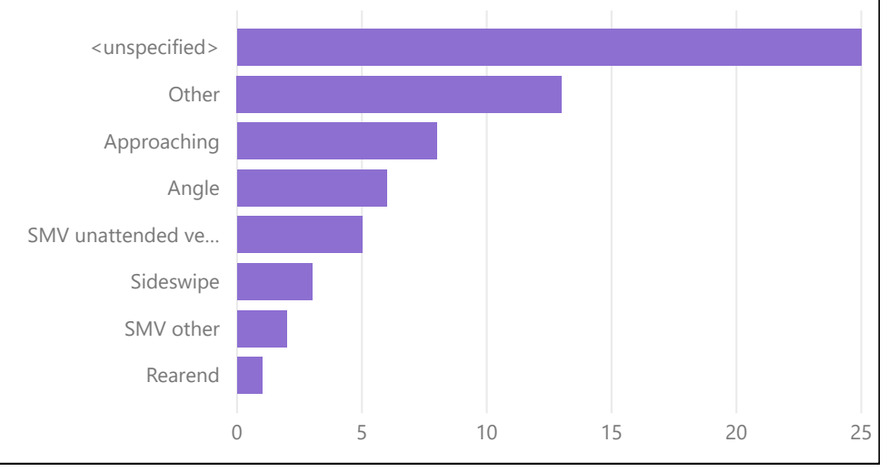
Study Area



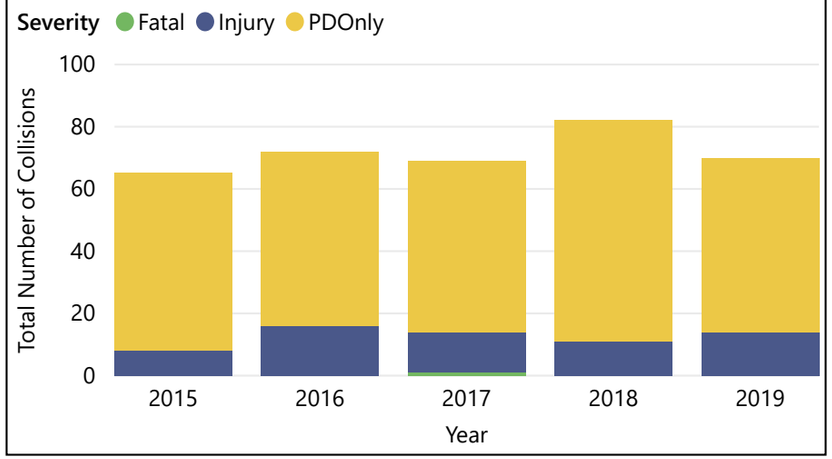
Collisions by Time of Day



Impact Type of Fatal and Injury Collisions



Collisions by Year



Location of Cyclist Collisions

Location	Total Collisions
Erie St and Countess St	1
Erie St and Coronation Ave	1
Erie St and Oak St	1
Erie St and Parkdale Ave	2
Erie St and Pulford Ave	1
Oak St and Sherk St	1
Total	**7**

Location of Pedestrian Collisions

Location	Total Collisions
148 Erie St and Oak St	1
Erie St and Countess St	1
Erie St and Oak St	3
Erie St and Parkdale Ave	1
Oak St and Westmoreland Ave	1
Parkdale Ave and Erie St	1
Pulford Ave and Erie St	1
Total	**9**

Over 5 Years

Total Collisions	Injury Collisions	Fatal Collisions
358	62	1

Pedestrian Collisions

9



Cyclist Collisions

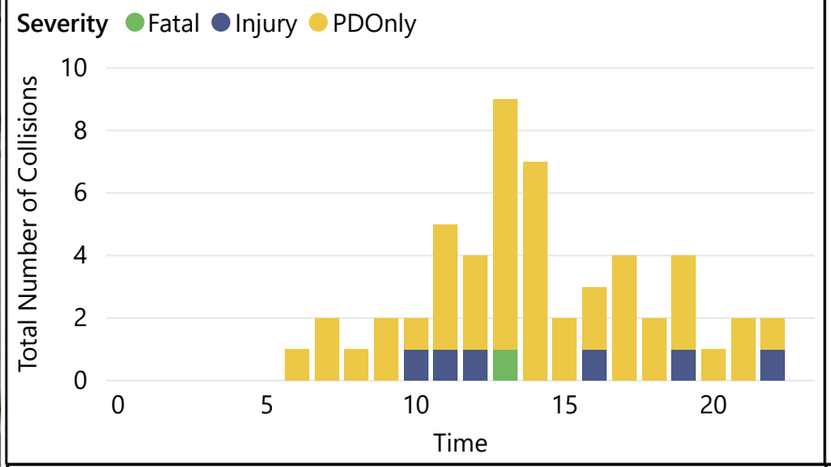
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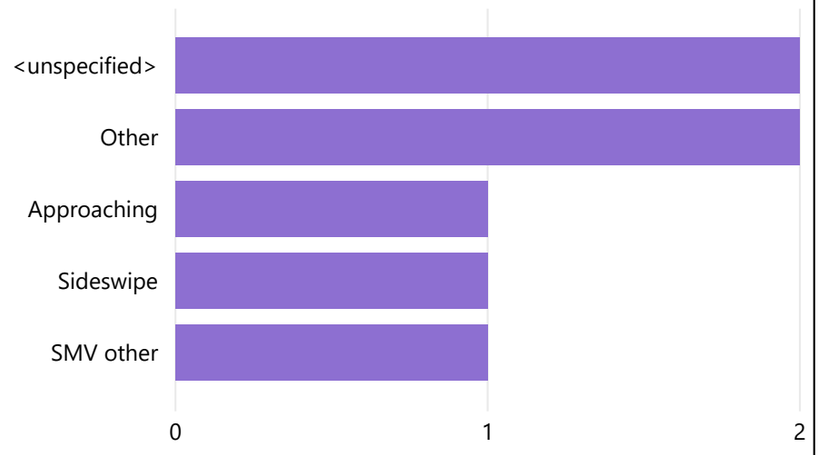
Erie St and Oak St



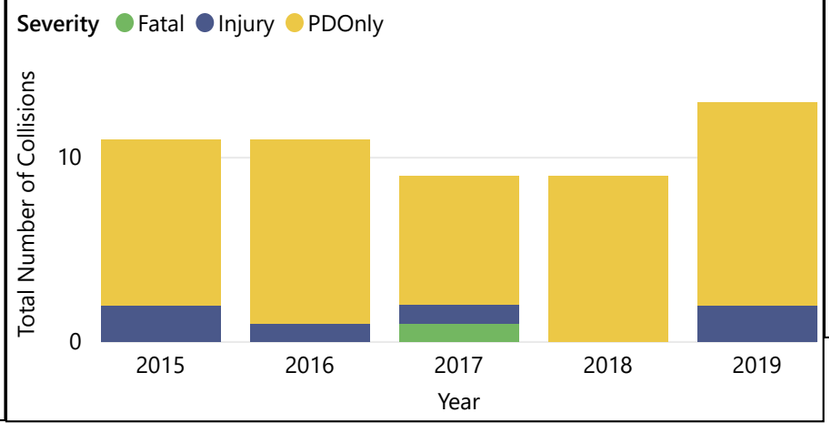
Collisions by Time of Day



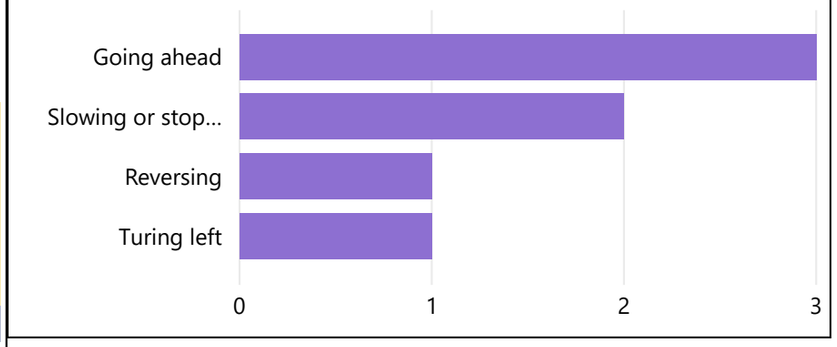
Impact Type of Fatal and Injury Collisions



Collisions by Year



Vehicle Maneuver of Fatal and Injury Collisions



Over 5 Years

Total Collisions	Injury Collisions
53	6

Pedestrian Collisions

3



Cyclist Collisions

1



Location of Cyclist Collisions

Location	Total Collisions
Erie St and Oak St	1
Total	**1**

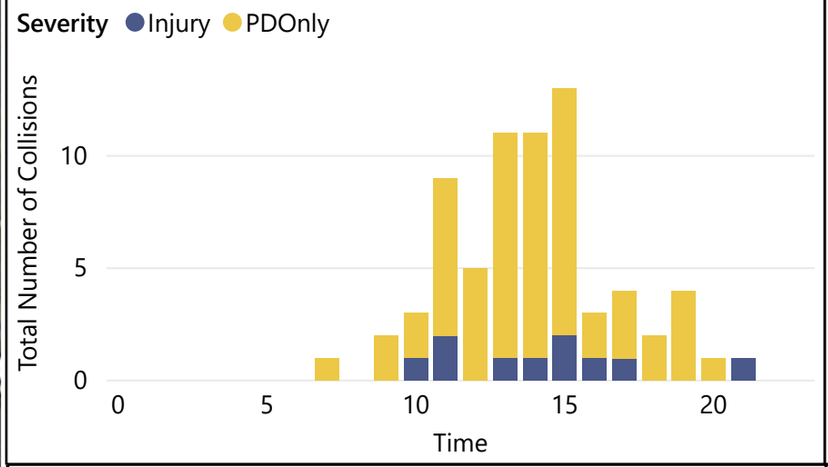
Location of Pedestrian Collisions

Location	Total Collisions
Erie St and Oak St	3
Total	**3**

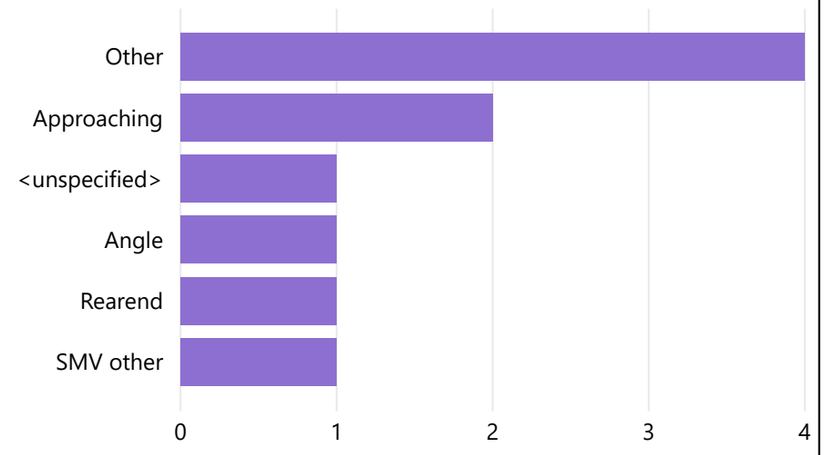
Erie St and Pulford Ave



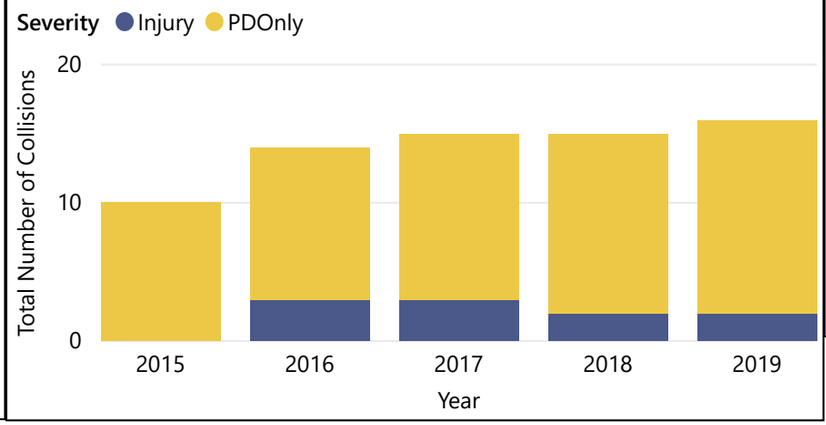
Collisions by Time of Day



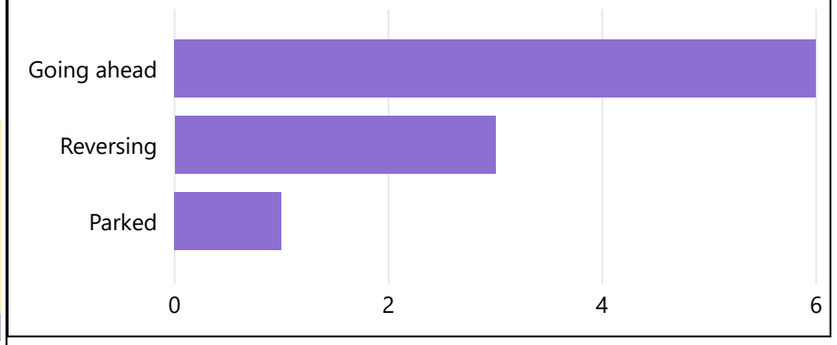
Impact Type of Fatal and Injury Collisions



Collisions by Year



Vehicle Maneuver of Fatal and Injury Collisions



Over 5 Years

Total Collisions	Injury Collisions
70	10

Pedestrian Collisions

1



Cyclist Collisions

1



Location	Total Collisions
Erie St and Pulford Ave	1
Total	**1**

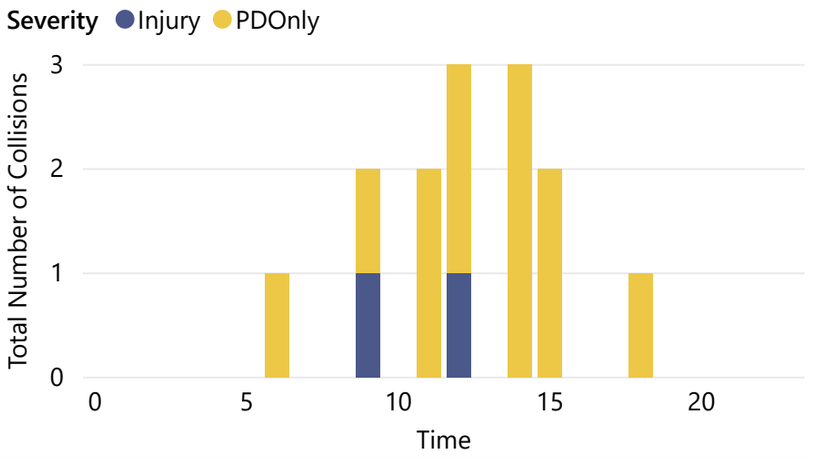
Location of Pedestrian Collisions

Location	Total Collisions
Erie St and Pulford Ave	1
Total	**1**

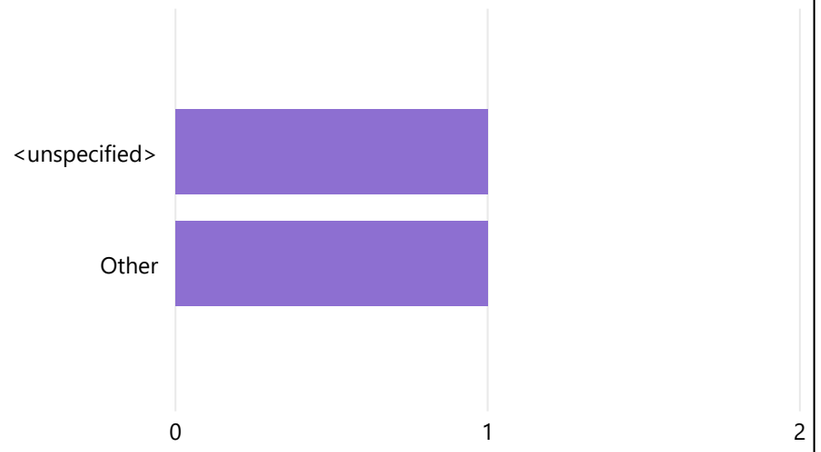
Erie St and Coronation Ave



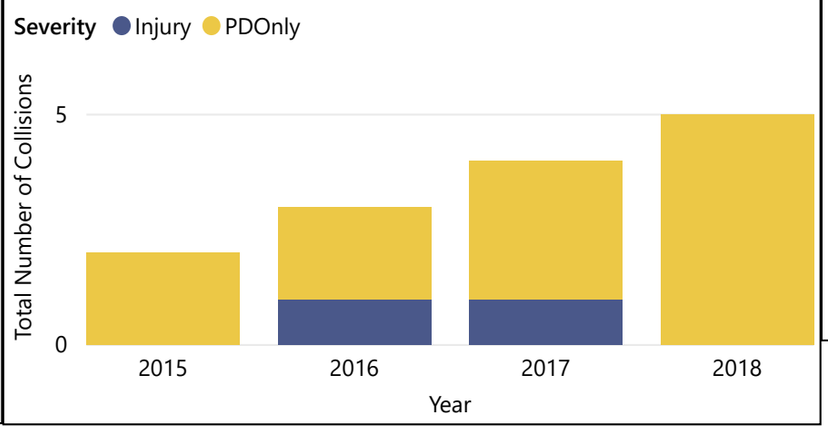
Collisions by Time of Day



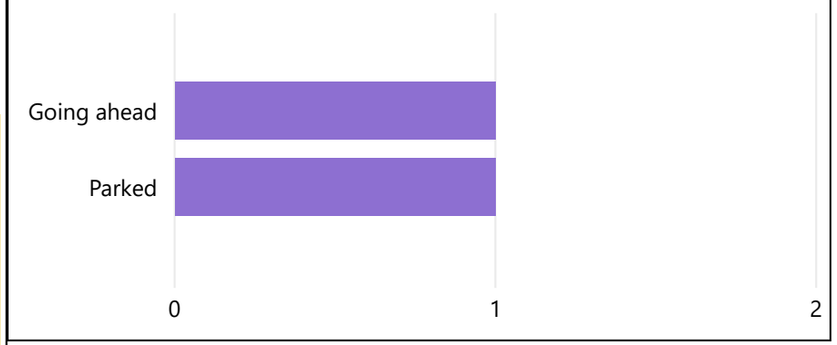
Impact Type of Fatal and Injury Collisions



Collisions by Year



Vehicle Maneuver of Fatal and Injury Collisions



Over 5 Years

Total Collisions	Injury Collisions
14	2

Cyclist Collisions

1

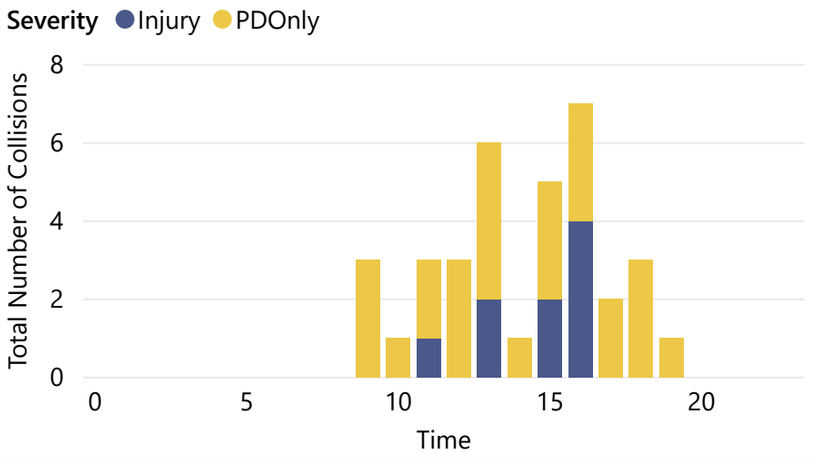


Location	Total Collisions
Erie St and Coronation Ave	1
Total	**1**

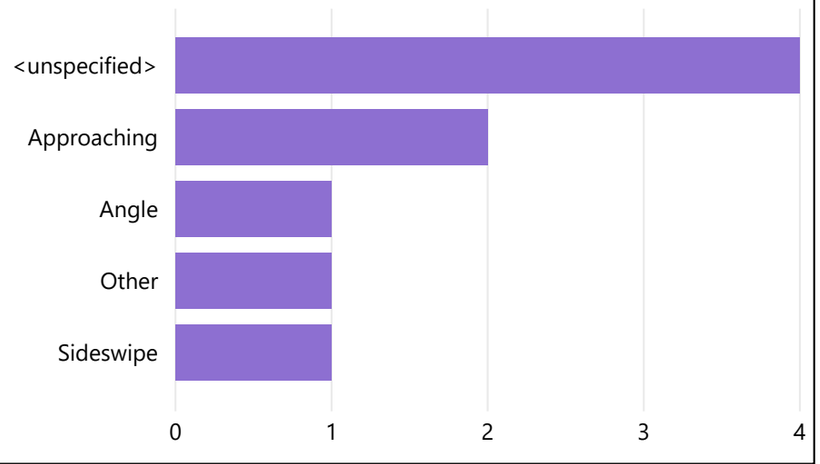
Erie St and Seacliff Dr



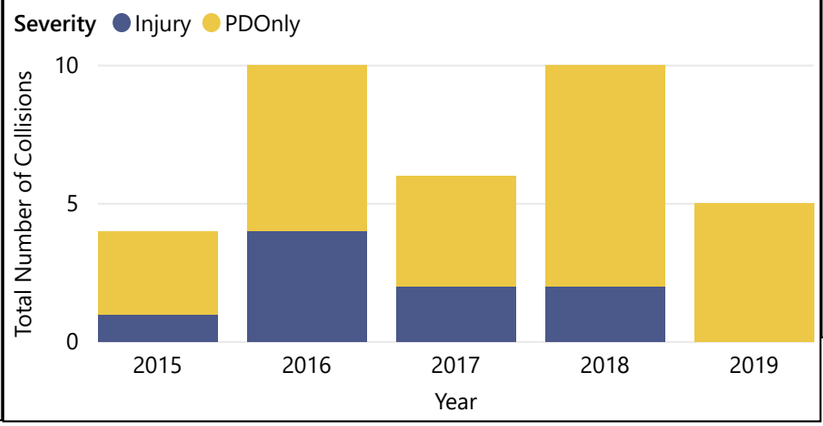
Collisions by Time of Day



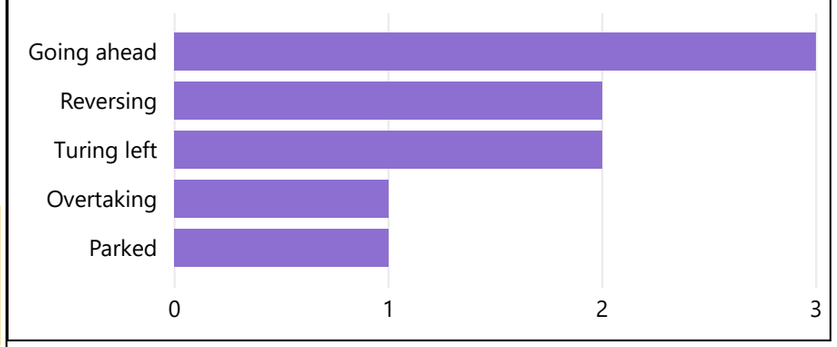
Impact Type of Fatal and Injury Collisions



Collisions by Year



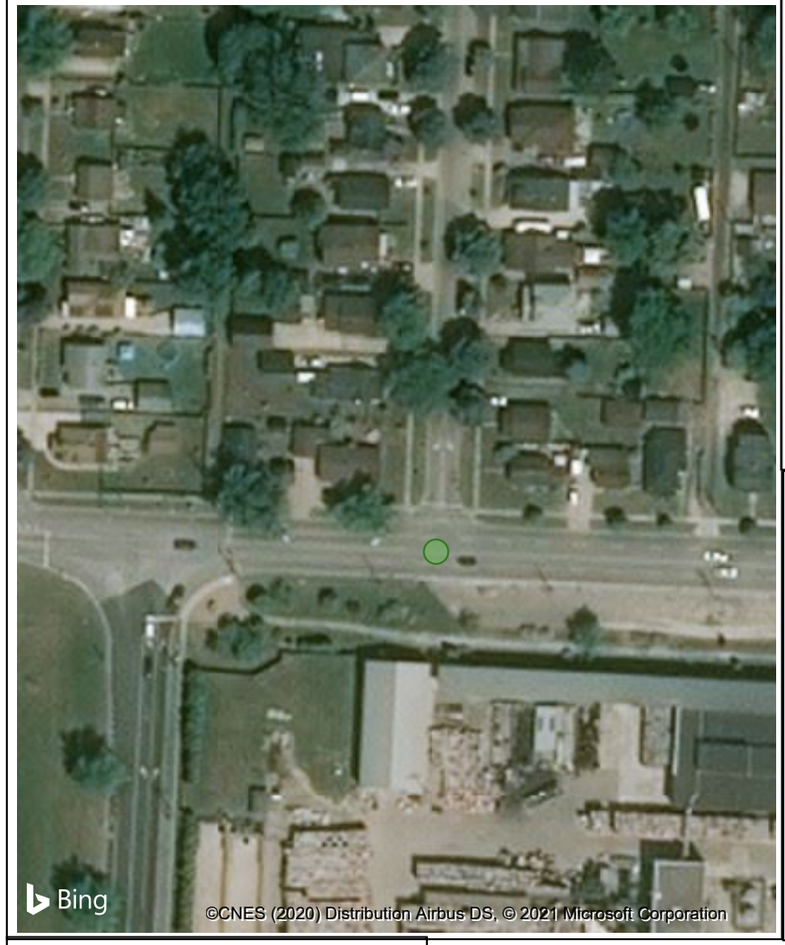
Vehicle Maneuver of Fatal and Injury Collisions



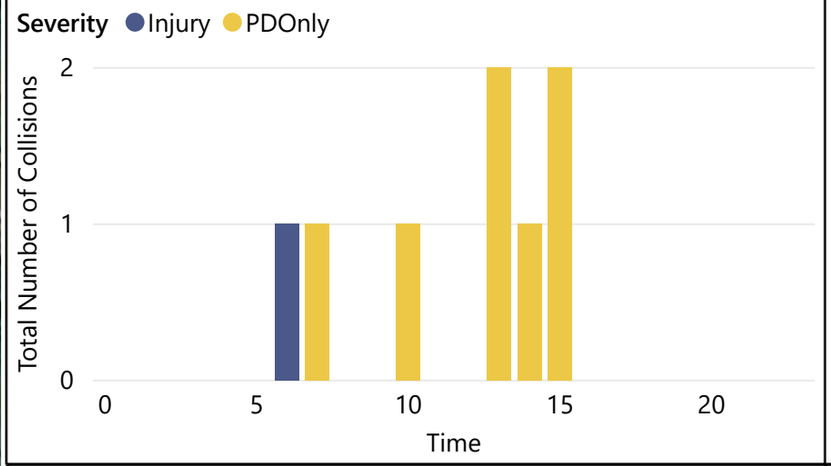
Over 5 Years

Total Collisions	Injury Collisions
35	9

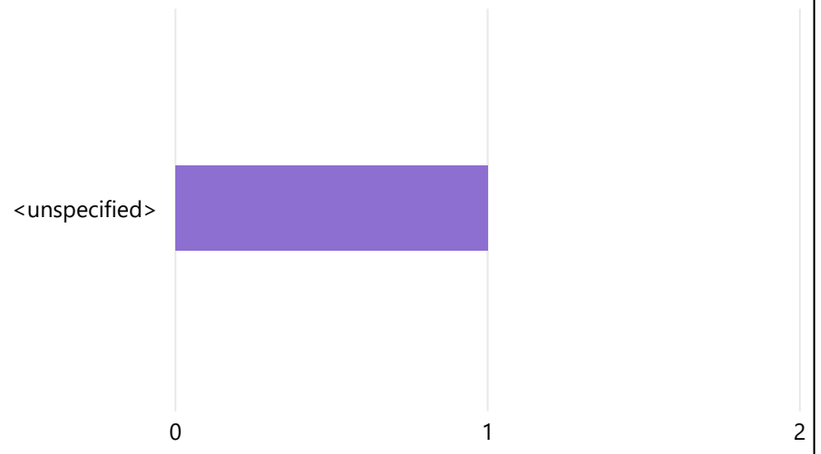
Erie St and Chestnut St



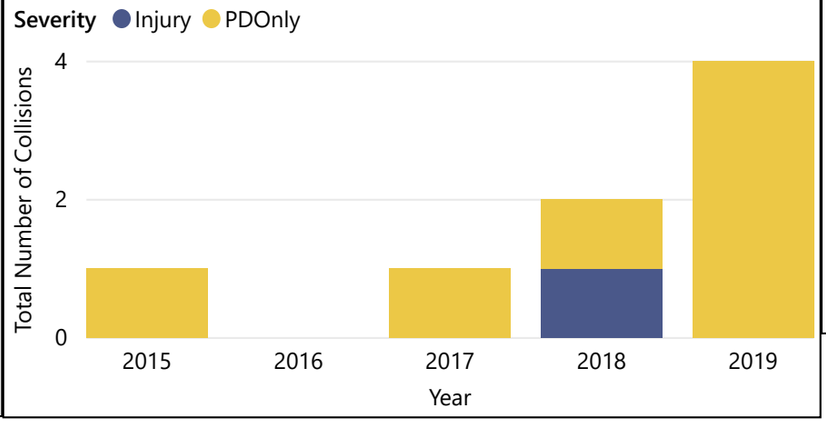
Collisions by Time of Day



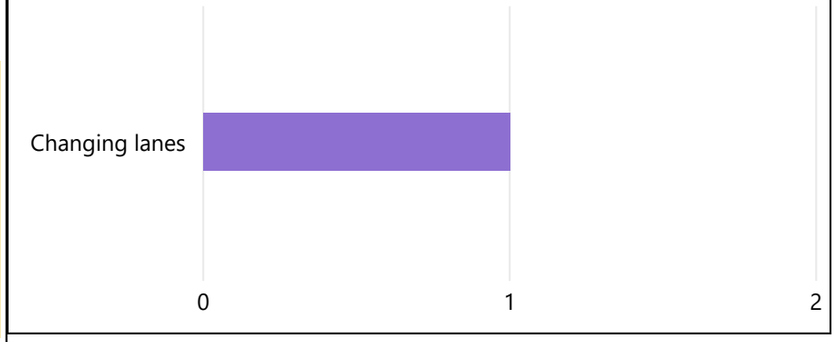
Impact Type of Fatal and Injury Collisions



Collisions by Year



Vehicle Maneuver of Fatal and Injury Collisions



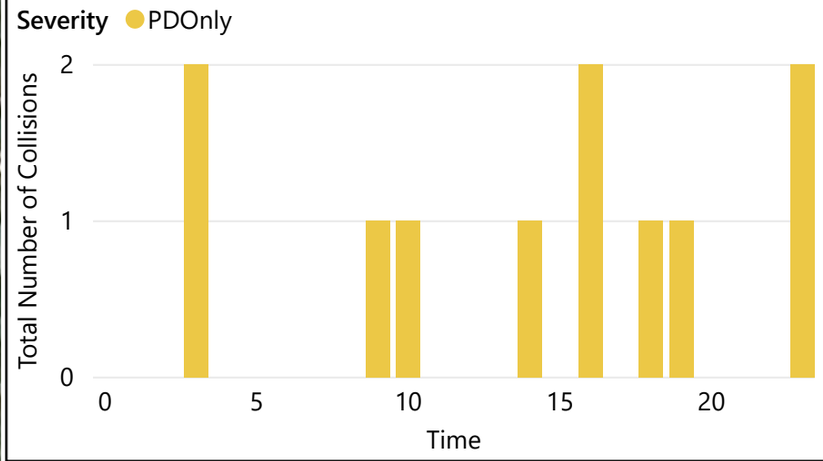
Over 5 Years

Total Collisions	Injury Collisions
8	1

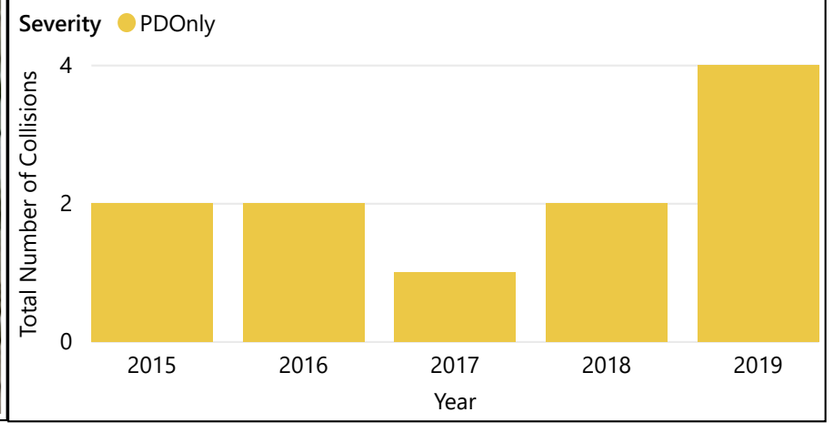
Oak St and Sherk St



Collisions by Time of Day



Collisions by Year



Over 5 Years

Total Collisions

11

Cyclist Collisions

1



Location of Cyclist Collisions

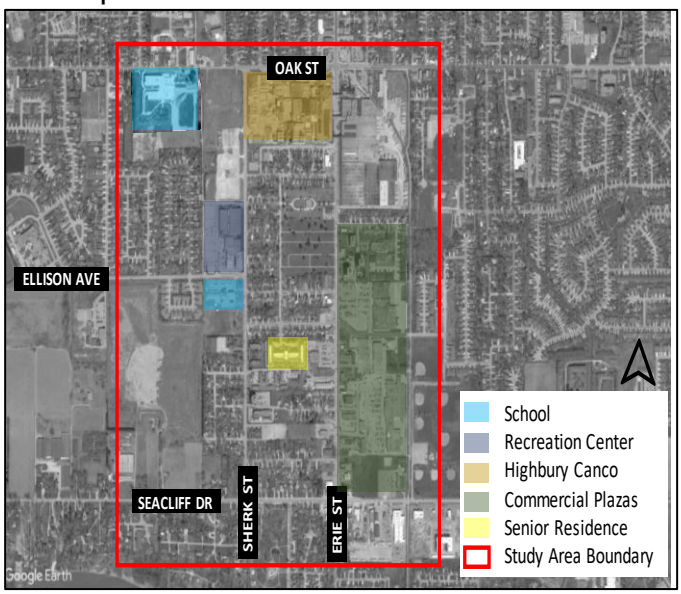
Location	Total Collisions
Oak St and Sherk St	1
Total	**1**

APPENDIX G – STUDY NOTICES

Traffic Study for Erie Street South, Oak Street, Sherk Street, and Seacliff Drive

Notice of Study Commencement

The Municipality of Leamington has retained McIntosh Perry Consulting Engineers to undertake a study to develop a long-range vision for the area generally bounded by Erie Street South, Oak Street, Sherk Street, and Seacliff Drive, as illustrated in the map below.



The study will involve:

- Identification of operational issues at key intersections and corridors within the study area.
- Address traffic concerns for all modes of travel, including pedestrian, cyclist, and transit.
- Address concerns relating to road user safety and crossings with special consideration for seniors, users with disabilities, and school children.
- Development of alternatives to improve active transportation network connectivity.
- Develop and evaluate alternatives to improve traffic operations within the study area.

There is an opportunity at any time during this study for interested persons to provide comments, questions, and concerns to the project team. Information collected for the study will be used in accordance with the Municipal Freedom of Information and Protection of Privacy Act. Except for personal information, all comments will become part of the public record and included in project documentation.

At this time, we are requesting input on local traffic conditions, road safety, and transportation facilities within the study area and any other feedback and concerns you may have. An initial Public Information Session will be held in the fall of 2020 intended to present an overview of the study and existing condition.

A second information session will be scheduled to present alternatives, evaluation, and. the study recommendations for public input.

Project updates will be made available on the Municipality's website: www.leamington.ca/projectsandstudies

For further information or to be added to the study mailing list, please contact the study team at:

Alex Del Brocco, C.E.T. Engineering Project Manager Municipality of Leamington 111 Erie Street North Leamington, ON, N8H 2Z9 Tel: 519.326.5761 ext. 1369 adelbrocco@leamington.ca	**Mehemed Delibasic, P.Eng.** Consultant Project Manager McIntosh Perry Consulting Engineers Limited 200 Town Centre Boulevard, Suite 203 Markham, ON, L3R 8G5 Tel: 647.463.2022 m.delibasic@mcintoshperry.com

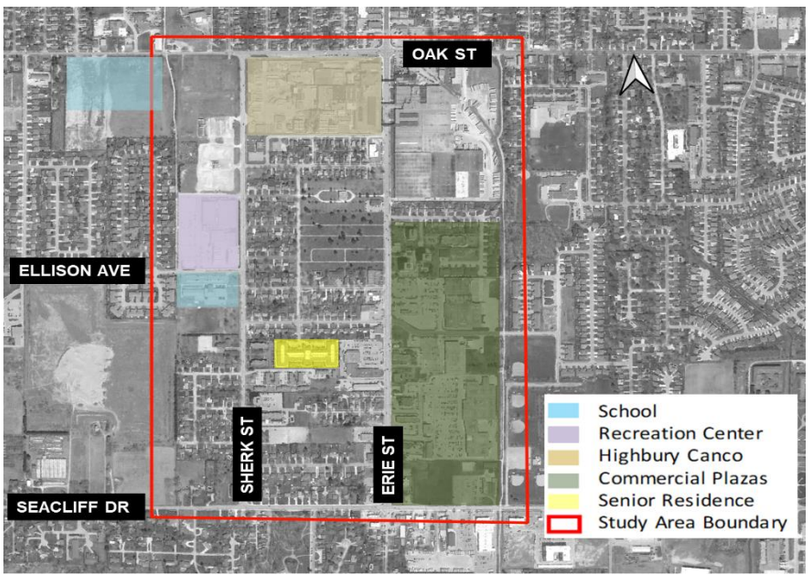
Erie Street South, Oak Street, Sherk Street and Seacliff Drive Traffic Study
Notice of Public Engagement Session

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The Study

The Municipality of Leamington is undertaking a Transportation Study to develop a long-range vision for the Traffic Study area – Erie Street South, Oak Street, Sherk Street and Seacliff Drive. The study area is bounded by Sherk Street to the west, Seacliff Drive to the south, Oak Street to the north, and the Leamington Trail to the east.



Study Purpose

The study team will review the current and projected traffic / transportation situation within the study area, identifying issues, opportunities and recommending practical solutions in keeping with local guiding principles.

This study will allow the Municipality of Leamington to:

- Improve access, connections and operations within the study area for all travel modes.
- Provide additional support for “multi-modal” transportation within the study area.
- Enhance safety for all road users

The Traffic Study for Erie Street South, Oak Street, Sherk Street and Seacliff Drive will assess traffic operations for the year 2020 and a 10-year horizon forecast to year 2030. The study will review options for connectivity of various travel modes and potential road network improvements.

Share Your Feedback

Collecting community feedback is considered a vital aspect for a successful completion of this study. Residents, business owners, workers or occasional visitors are cordially invited to share their traffic, cycling and walking concerns within the study area. Your experiences are important, and sharing of this information will help in understanding and assessing the issues faced by the community within this study area.

Public Engagement Session #1:

A key component of the study is the consultation with interested stakeholders (public and agencies) through public engagement sessions. This provides an opportunity for the project team to present to the public, its understanding of the existing conditions, issues and opportunities. It also provides an opportunity to obtain feedback from the public.

Due to COVID-19 and the physical distancing guidelines, the public engagement session will be conducted virtually. This will enable stakeholders to review presentation material in a safe space.

Virtual Public Engagement Session #1

January 13, 2021 to January 29, 2021

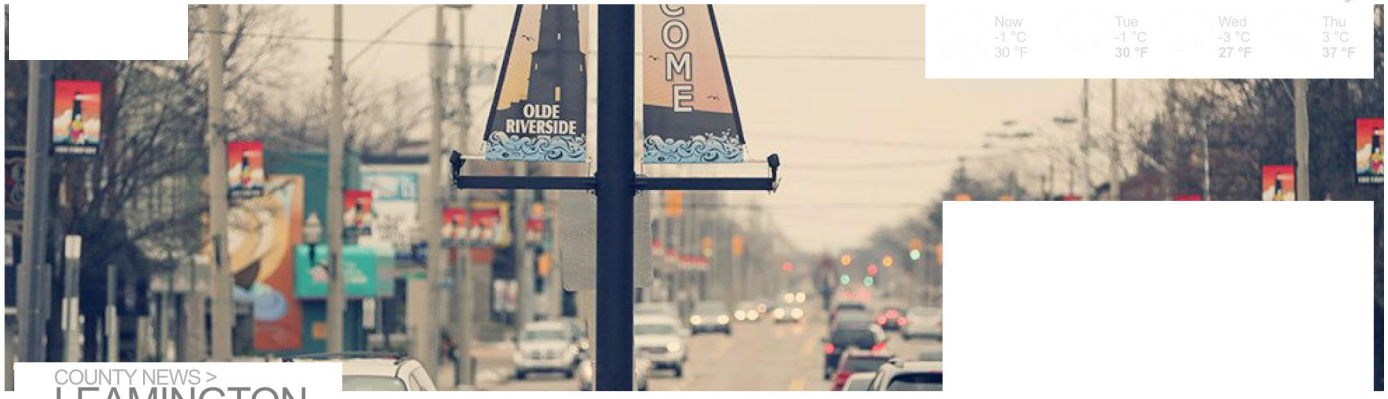
LeamingtonTrafficStudy.ca

Public consultation is an important part of this study and we will like to hear from you. If you would like more information about any aspect of the project, or wish to be added to the stakeholder mailing list, please contact the study project leads.

Comments or questions can also be directed to:

Alex Del Brocco, C.E.T.
Project Manager
Municipality of Leamington
Tel. 519-326-5761, ext. 1369

Mehemed Delibasic, P.Eng
Consultant Project Manager
McIntosh Perry Consulting Engineers Ltd.
Tel. 647-463-7993



WINDSOR'S TRAFFIC CAMERAS
COVID-19 NEWS & UPDATES
TAKEOUT & DELIVERY GUIDE
LOWEST GAS PRICES

TRENDING



#1 270 New Cases Of COVID-19 In Windsor Essex On Sunday



#2 1New Death, 35 New Cases Of COVID-19 In Windsor Essex On Monday



#3 COVID-19 Outbreak Declared At Emara Centre



#4 Buy Windsor Made – Even When You've Moved Away

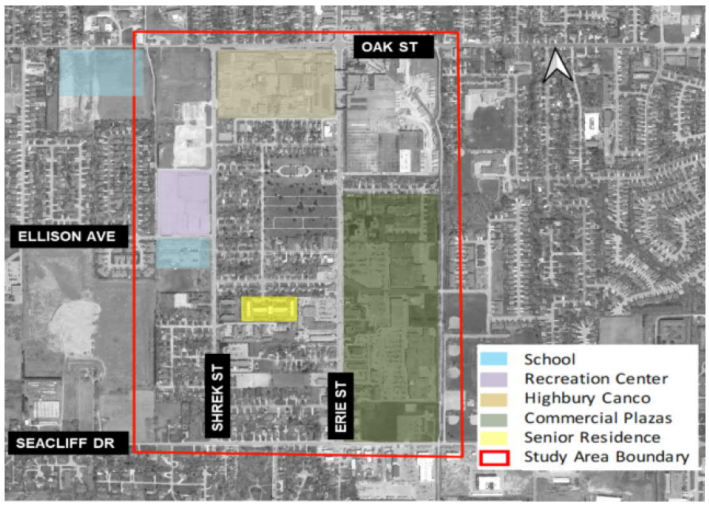


#5 7 New Deaths, 87 New Cases Of COVID-19 In Windsor Essex On Saturday



Leamington Holding Online Public Engagement Session For Erie Street South, Oak Street, Sherk Street And Seacliff Drive Traffic Study

windsoriteDOTca News Staff
Sunday January 17th, 2021
Posted at 8:32am
Leamington



Leamington is undertaking a Transportation Study to develop a long-range vision for Erie Street South, Oak Street, Sherk Street and Seacliff Drive and is looking for your feedback.

The study will review the current and projected traffic/transportation situation and will identify issues, opportunities and recommending practical solutions.

The end goal of the study is to improve access, connections and operations within the study area for all travel modes, provide additional support for "multi-modal" transportation within the study area and enhance safety for all road users.

A vital component of the study is the consultation with interested stakeholders (public and agencies) through public engagement sessions. Due to COVID-19 and the physical distancing guidelines, the public engagement session will be conducted virtually.

The first session runs until January 29th and can be accessed by visiting their website here.

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Holding Online Public Engagement Session For Erie Street South, Oak Street, Sherk Street And Seacliff Drive Traffic Study



#8 Police Will Not Ask You Where You Are Going During Stay At Home Order



#9 Windsor Man Charged After Home Invasion

EDITOR'S PICKS



LEAMINGTON HOLDING ONLINE PUBLIC ENGAGEMENT SESSION FOR ERIE STREET SOUTH, OAK STREET, SHERK STREET AND SEACLIFF DRIVE TRAFFIC STUDY



LASALLE RECEIVES BUDGET PRESENTATION AWARD FOR FIFTH YEAR



LOCAL TOURISM INNOVATORS AWARDED GRANTS AND MENTORSHIP



NEW CHIEF ADMINISTRATIVE OFFICER FOR THE COUNTY OF ESSEX



WINDSOR RECEIVES GAS TAX FUNDING



COMMENT WITH FACEBOOK

ATTENTION: Personal attacks, insults, trolling and threats will not be tolerated. See our Comment Policy.



SNOW ANGELS STILL NEEDED



LIBRARY SERVICES CONTINUE

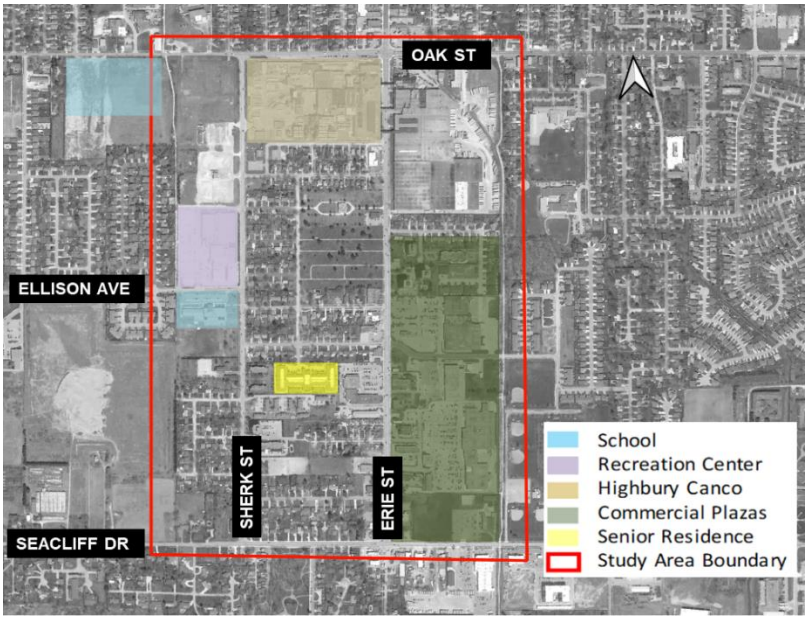
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Notice of Public Engagement Session
Erie Street South, Oak Street, Sherk Street and Seacliff Drive Traffic Study

The Study

The Municipality of Leamington is undertaking a Transportation Study to develop a long-range vision for the Traffic Study area – Erie Street South, Oak Street, Sherk Street and Seacliff Drive. The study area is bounded by Sherk Street to the west, Seacliff Drive to the south, Oak Street to the north, and the Leamington Trail to the east.



Study Purpose

The study team will review the current and projected traffic / transportation situation within the study area, identifying issues, opportunities and recommending practical solutions in keeping with local guiding principles.

This study will allow the Municipality of Leamington to:

- Improve access, connections and operations within the study area for all travel modes.
- Provide additional support for “multi-modal” transportation within the study area.
- Enhance safety for all road users

The Traffic Study for Erie Street South, Oak Street, Sherk Street and Seacliff Drive will assess traffic operations for the year 2020 and a 10-year horizon forecast to year 2030. The study will review options for connectivity of various travel modes and potential road network improvements.

Public Engagement Session #2:

Following the presentation of existing condition assessment in Session #1, the study has progressed to include assessment for the future 10-year horizon. In Session #2 the project team will present its findings for the study area for future conditions, exploring potential solutions and recommendations to address study area concerns and deficiencies. This engagement session is open to members of the public and all stakeholders feedback from the public to obtain feedback and seek input.

…cont’d

Information and Feedback for Session #2

This will be an opportunity for the public to review the results of future condition assessments and potential issues and opportunities for solutions. Residents, business owners, workers or occasional visitors are cordially invited to provide their input on proposed solutions for the development of recommendations to address study area needs.

Due to COVID-19 and physical distancing guidelines, the public engagement session will be conducted virtually. This will enable stakeholders to review presentation material in a safe space.

Virtual Public Engagement Session #2

August 16, 2021 to September 03, 2021

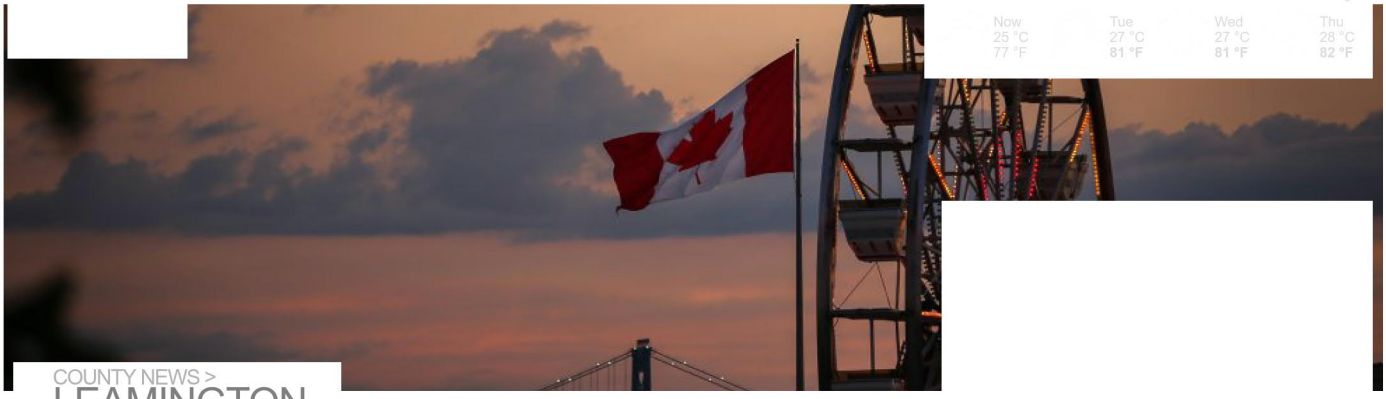
Visit: www.LeamingtonTrafficStudy.ca

Public consultation is an important part of this study and we would like to hear from you. If you require more information about any aspect of the project, or wish to be added to the stakeholder mailing list, please contact the study project leads.

Comments or questions can also be directed to:

Alex Del Brocco, C.E.T.
Project Manager
Municipality of Leamington
Tel. 519-326-5761, ext. 1369

Mehemed Delibasic, P.Eng
Consultant Project Manager
McIntosh Perry Consulting Engineers Ltd.
Tel. 647-463-7993



TRENDING



#1 Windsor Is Getting An IHOP Restaurant



#2 Health Unit COVID-19 Cases Update From The Weekend



#3 Police Looking For These Suspects



#4 Windsor Regional Now Posting Number Of Unvaccinated COVID-19 Patients In Hospital

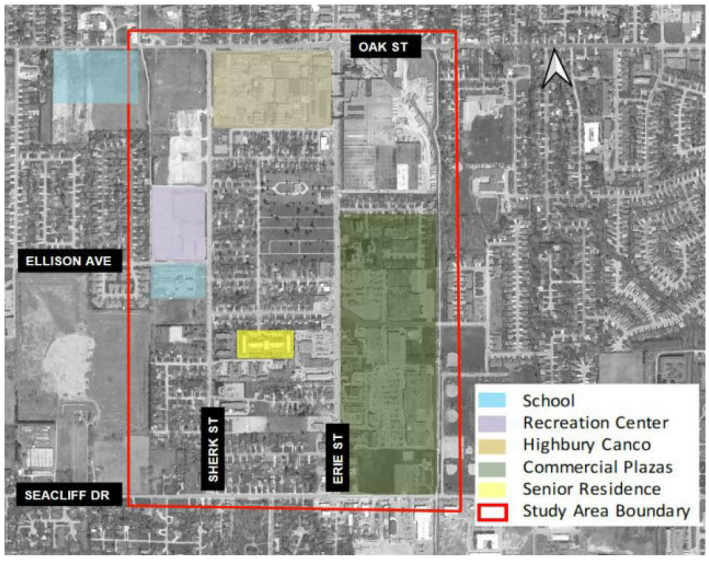


#5 44 New Cases Of COVID-19 In Windsor Essex On Tuesday



Leamington Conducting Traffic Study Of Erie, Oak, Sherk And Seacliff

windsoriteDOTca News Staff
Tuesday August 17th, 2021
Posted at 8:07am
Leamington



Leamington is undertaking a Transportation Study to develop a long-range vision for Erie Street South, Oak Street, Sherk Street and Seacliff Drive. The study area is bounded by Sherk Street to the west, Seacliff Drive to the south, Oak Street to the north, and the Leamington Trail to the east.

This study will look at improved access, connections and operations within the study area for all travel modes. It will also provide additional support for "multi-modal" transportation within the study area and enhance safety for all road users.

An online public engagement session is being held for the public to review the results of future condition assessments and potential issues and opportunities for solutions. Residents, business owners, workers or occasional visitors are cordially invited to provide their input on proposed solutions for the development of recommendations to address study area needs.

It will run until September 3rd online at LeamingtonTrafficStudy.ca.

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Announces Mandatory Vaccinations



#8 Windsor Residents Celebrate $150,000 Win With The Bigger Spin Instant Game



#9 Ontario Pausing Further Reopening, Announces 3rd Doses For Vulnerable People, Mandatory Vaccination Policies For High Risk Settings

EDITOR'S PICKS



University Of Windsor Seeks Perspective Of Black Alumni For Roundtable Discussion



Windsor Residents Celebrate $150,000 Win With The Bigger Spin Instant Game



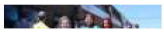
Windsor Resident Wins $100,000 With Instant Crossword Tripler



Windsor Is Getting An IHOP Restaurant



PHOTOS: Classics Roll Through For Power Cruise-In Night At The Walker Power Building



CHAPTER BOARD GAME CAFE IN WINDSOR PREMIUM OUTLETS



PHOTOS: WINDSOR EATS OUTDOOR FOOD HALL RETURNS TO LANSPEARY PARK



PHOTOS: SIXTH ANNUAL OUELLETTE CAR CRUISE MOTORS AROUND TOWN

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APPENDIX H – PUBLIC ENGAGEMENT PRESENTATIONS

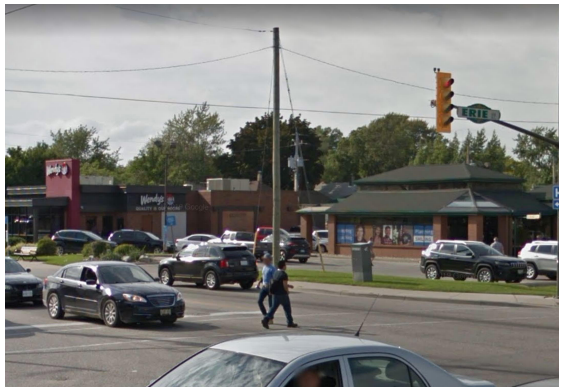
McINTOSH PERRY

Erie Street South, Oak Street, Sherk Street and Seacliff Drive Traffic Study

PUBLIC ENGAGEMENT SESSION #1









Municipality of Leamington
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January 2021

McINTOSH PERRY

PUBLIC ENGAGEMENT #1 OBJECTIVES



This is the first Public Engagement Session for the Erie Street South, Oak Street, Sherk Street and Seacliff Drive Traffic Study

The objective of this Public Engagement Session is to:

- Introduce the project and outline the study process
- Provide background information
- Present the understanding of the study area and existing conditions
- Seek input on the existing conditions within the study area
- Answer questions about the study

STUDY BACKGROUND

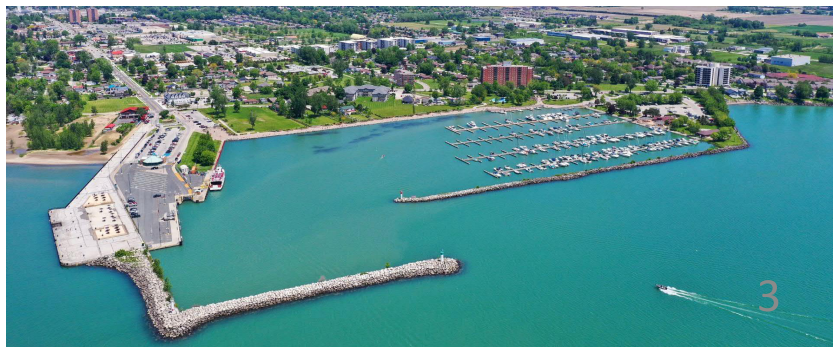


The Municipality of Leamington has commissioned this transportation study as a means of identifying improvements of transportation operations, via assessments of existing and future conditions.

Transportation related issues and opportunities will be identified, which will be used to develop recommendations for improvements that build on previously completed studies for Leamington and the wider area.



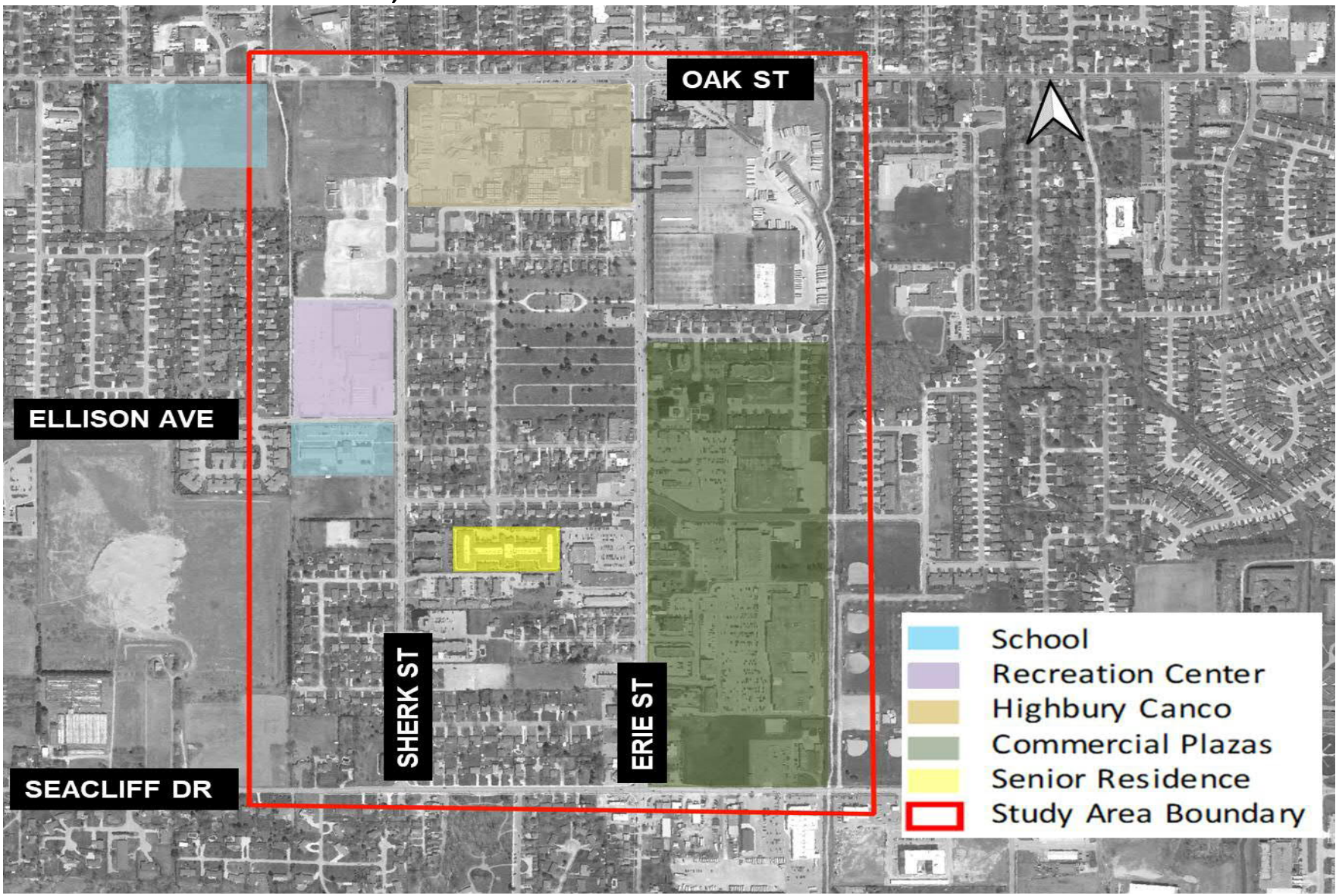




STUDY AREA



The study area is bounded by Oak Street to the north, Seacliff Drive to the south, Sherk Street to the west, and Erie Street to the east



STUDY SCOPE AND OBJECTIVES





- Traffic assessment of the study area will be completed for existing (2020) and a future 10-year (2030) horizon to identify transportation related issues and opportunities.



- The study will address area specific concerns identified by the Municipality to improve multi-modal connections within the study area to meet future needs.



- Collect input and feedback from the public and stakeholders during the study to address community concerns.



- Develop a long-range vision for the study area and recommend practical solutions based on future traffic patterns, potential development, cycling and pedestrian activity.

EXISTING OPERATIONS



Traffic assessment of the existing study network which consists of 16 intersections (7 signalized and 9 unsignalized) along four major roads Oak Street, Erie Street, Sherk Street and Seacliff Drive. Traffic volumes were obtained for morning (AM) and evening (PM) peak hour for the assessment of existing operating conditions.

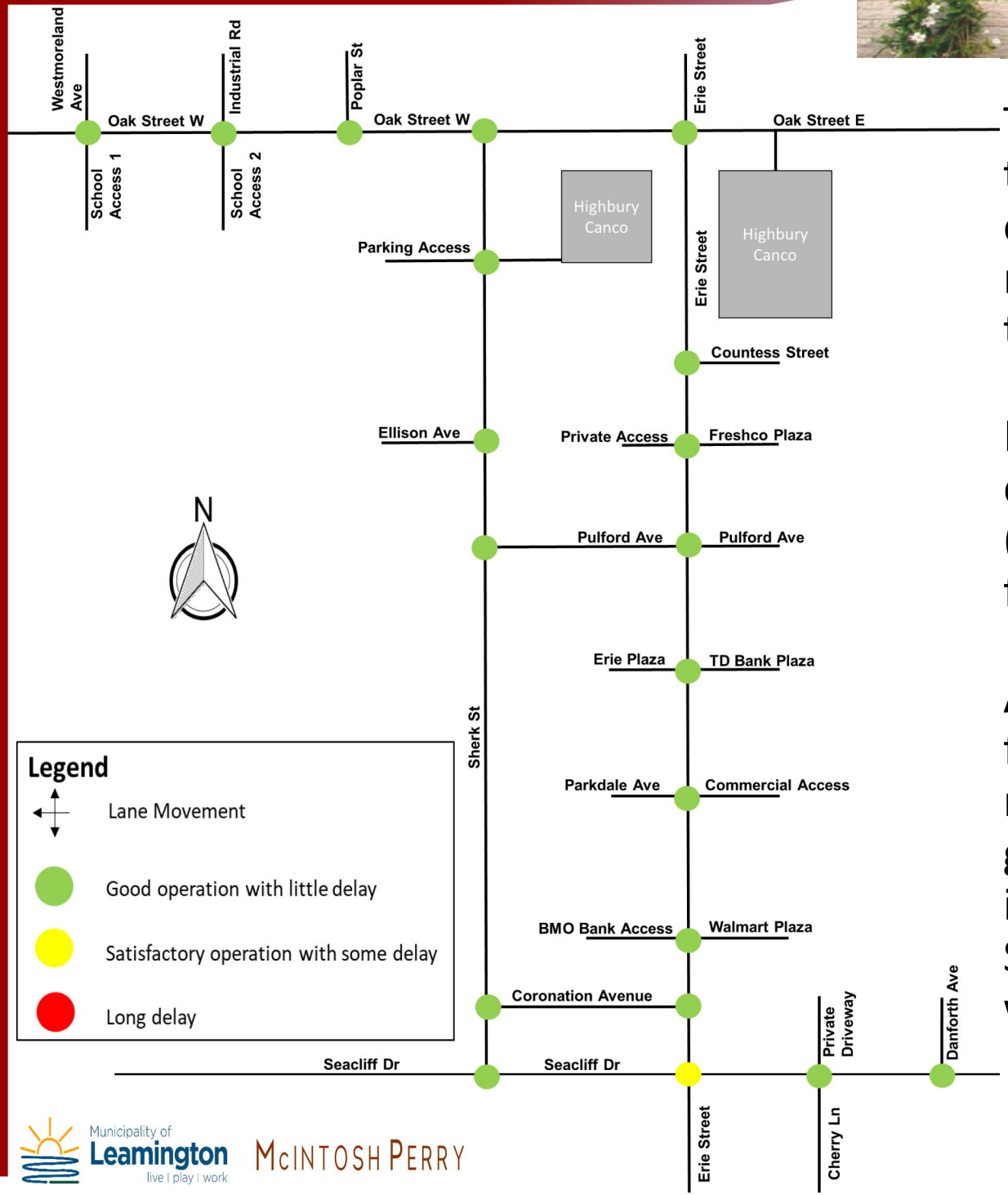
Active transportation will be reviewed to assess suitability of the existing network. Existing study area provisions include:

- Sidewalks along boundary roads (including multi-use paths in some locations)
- Bike lanes along Sherk Street and shared roadways in other locations
- Multi-Use trail along the east and west study area limits

Transit service for the study area is provided by regular and summer service routes. Regular service operates between 7:00 A.M. to 7:04 P.M. and the Summer Route service hours are between 7:20 A.M. to 7:23 PM.

Safety performance review will be conduct for the study area, reviewing collision analysis to identify collision patterns and hotspots, using historical collision data for the last five years.

EXISTING AM TRAFFIC ASSESSMENT



Traffic volumes representative of typical 2020 AM weekday conditions were used to assess network intersection operation for the morning period.

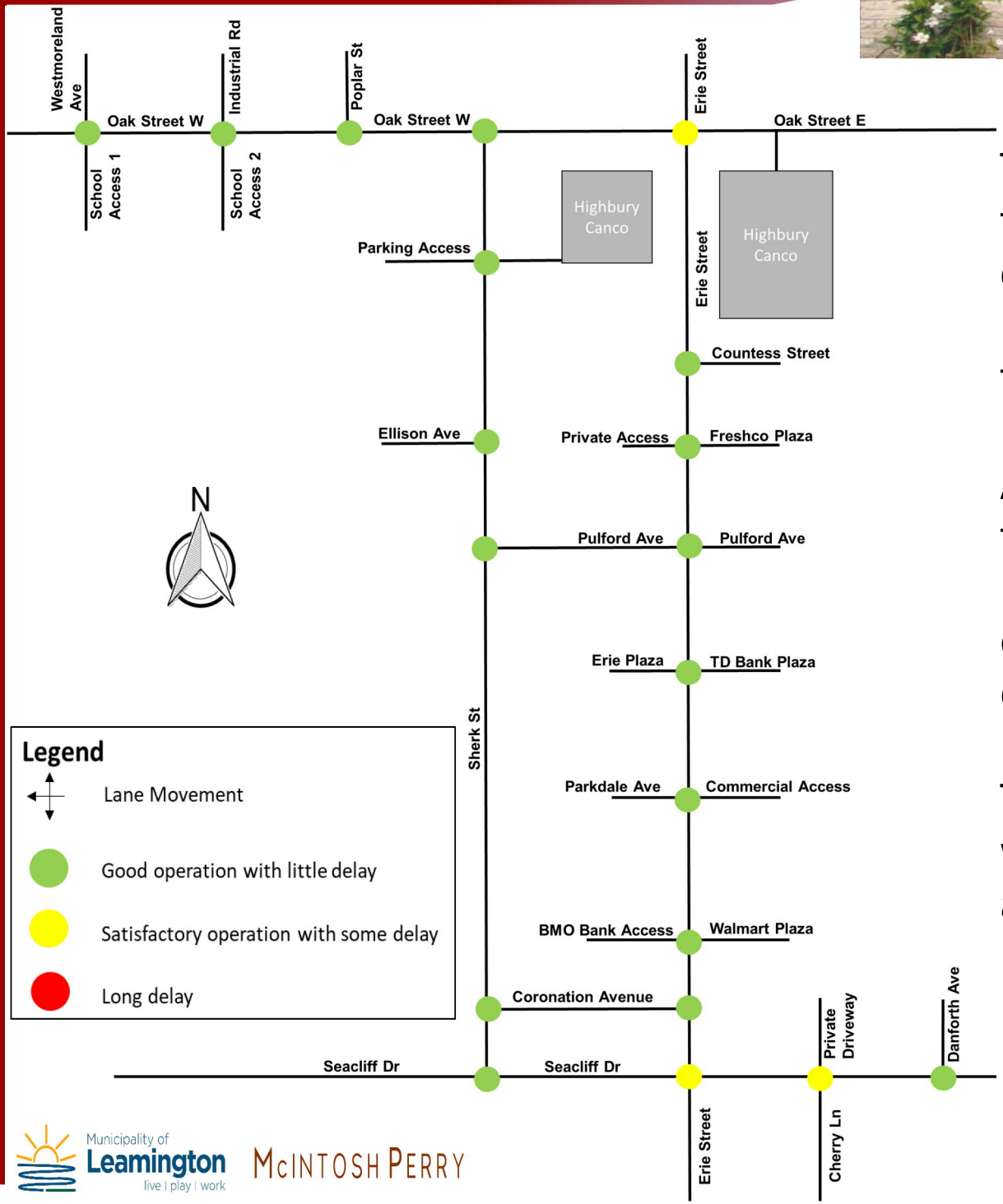
Intersection operation was defined in terms of level of service (LOS), a weighted average of delay for the entire intersection.

Assessment of study intersections for the AM peak period show that most intersections operate with good LOS and little delay. The intersection of Erie Street and Seacliff Drive however, operates with some delay.

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EXISTING PM TRAFFIC ASSESSMENT

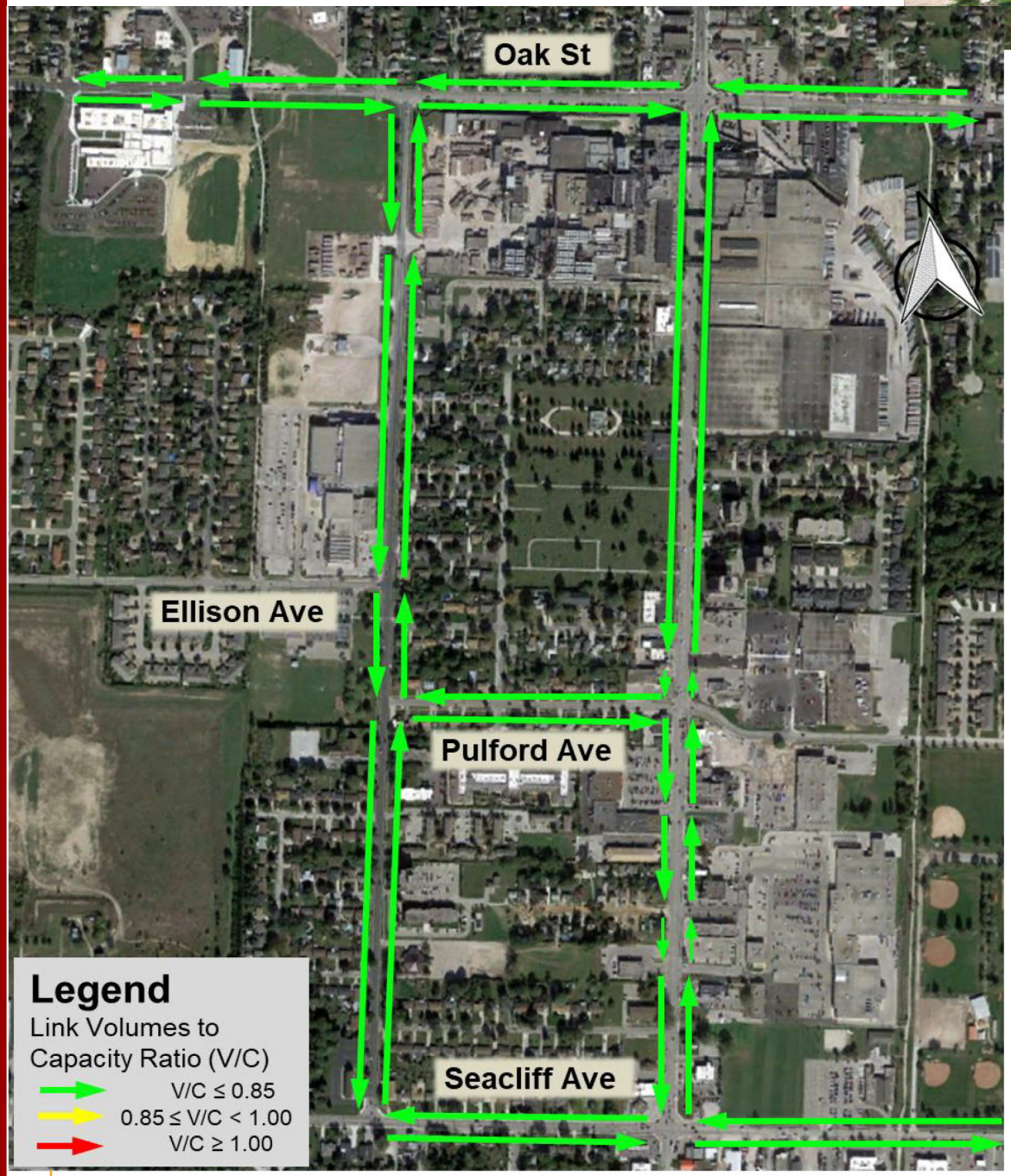


Traffic volumes representative of typical 2020 PM weekday conditions were used to assess network intersection operation for the evening periods.

Assessment of study intersections for the PM peak period show that most intersections continue to operate with good LOS and little delay.

Three of the study intersections will operate with satisfactory LOS and experience some delay.

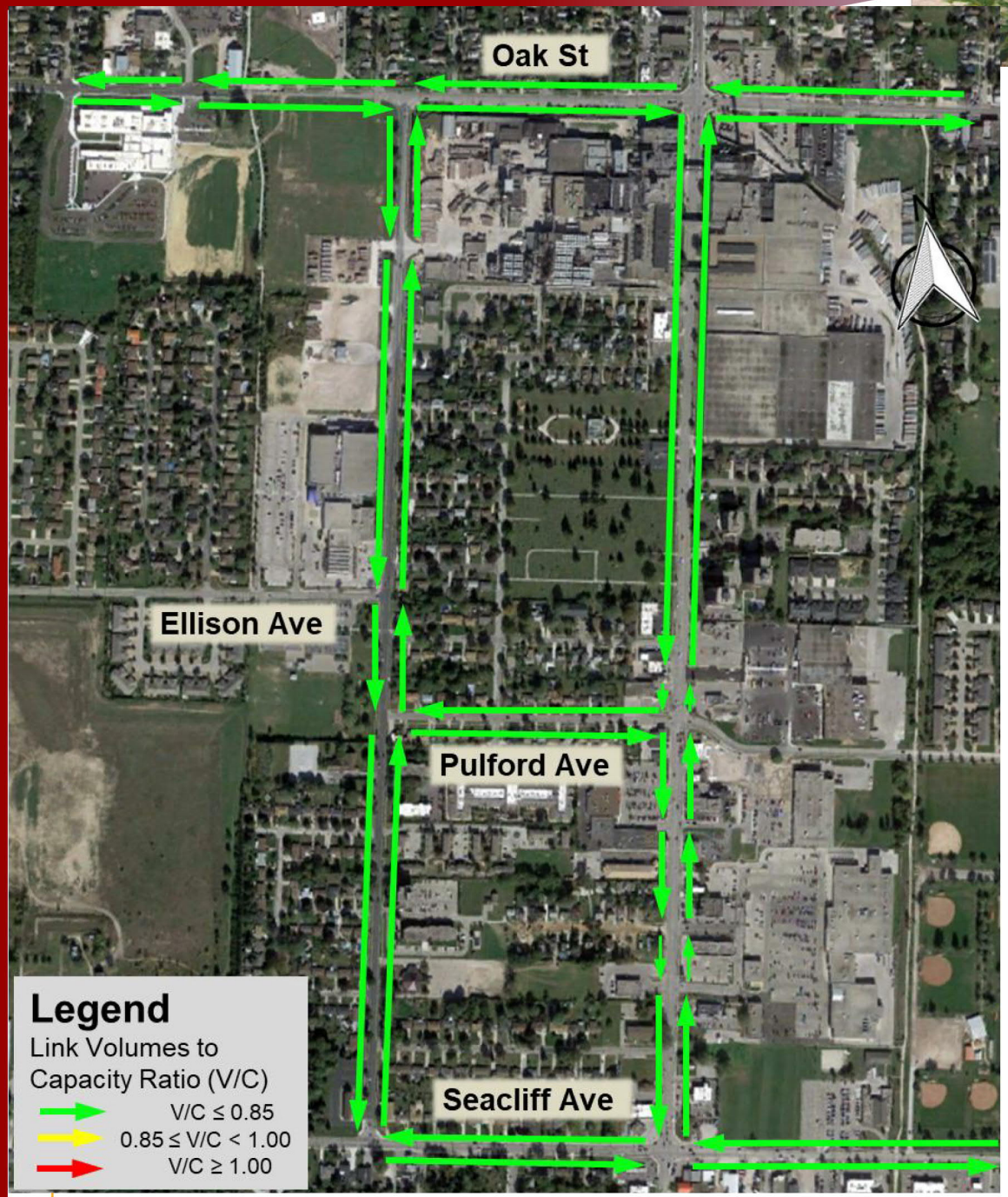
EXISTING AM NETWORK ANALYSIS



Traffic volumes for existing AM Peak hour conditions were used to conduct link analysis throughout the main study network.

- Link analysis assessment indicates that volume to capacity ratio along study corridors have significant available capacity.
- Analysis shows that there are no capacity constraints present at any point in the AM network

EXISTING PM NETWORK ANALYSIS



Traffic volumes for existing PM Peak hour conditions were used to conduct link analysis to assess through out the main study network.

- Link analysis assessment indicates that volume to capacity ratio along study corridors have significant available capacity.
- Analysis shows that there are no capacity constraints present at any point in the PM network.

EXISTING ACTIVE TRANSPORTATION

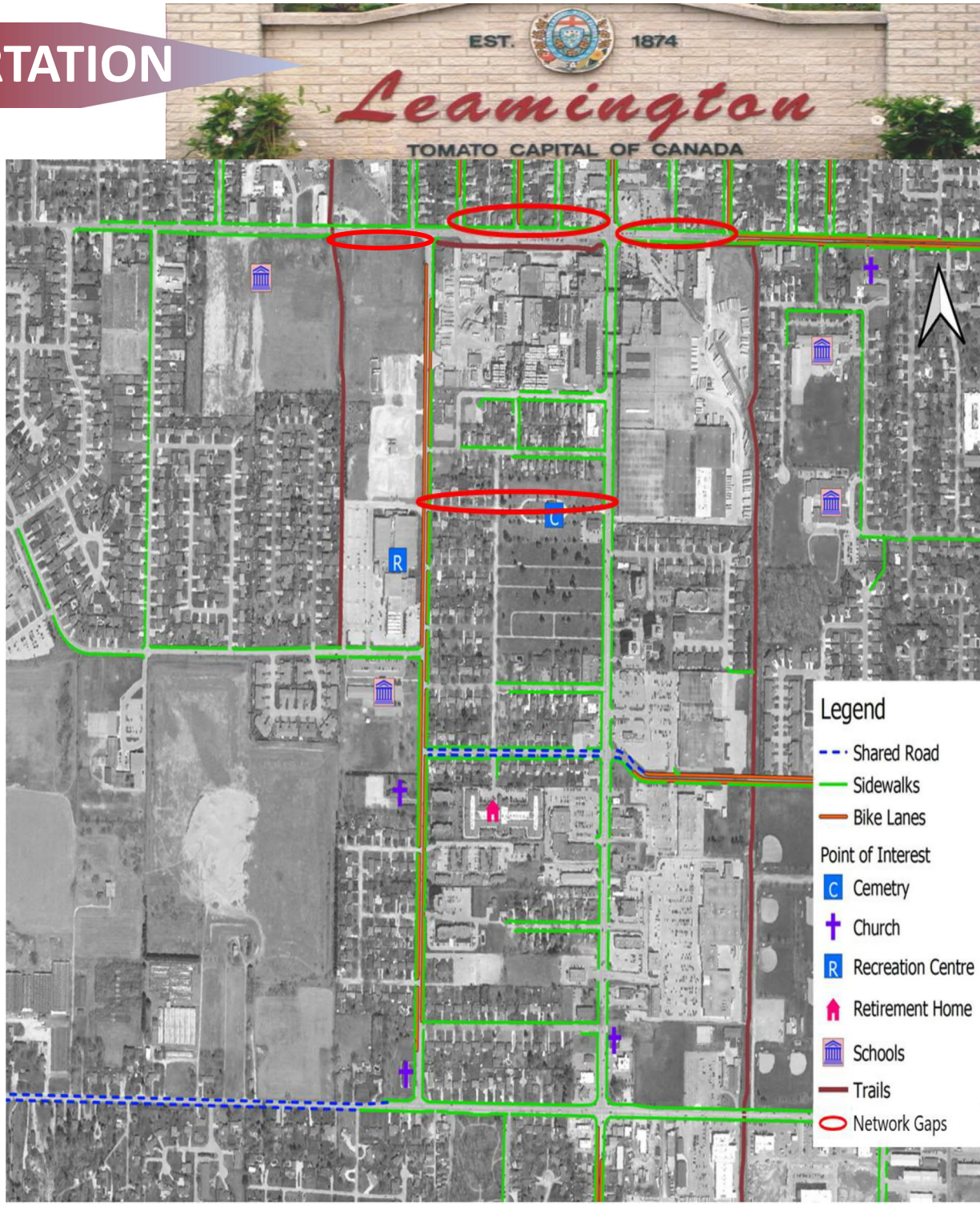
Active transportation (AT) facilities are available along major roads to facilitate non-auto movement through the study area, typically by walking or cycling.

The existing AT network consists of:

- Bicycle lanes
- Multi-use trails
- Sidewalks

Examination of existing connections in the AT network, confirm the presence of existing gaps that limit east – west connectivity.

Network improvements should be assessed to eliminated gaps and enhance overall connectivity.



EXISTING CYCLING TRENDS

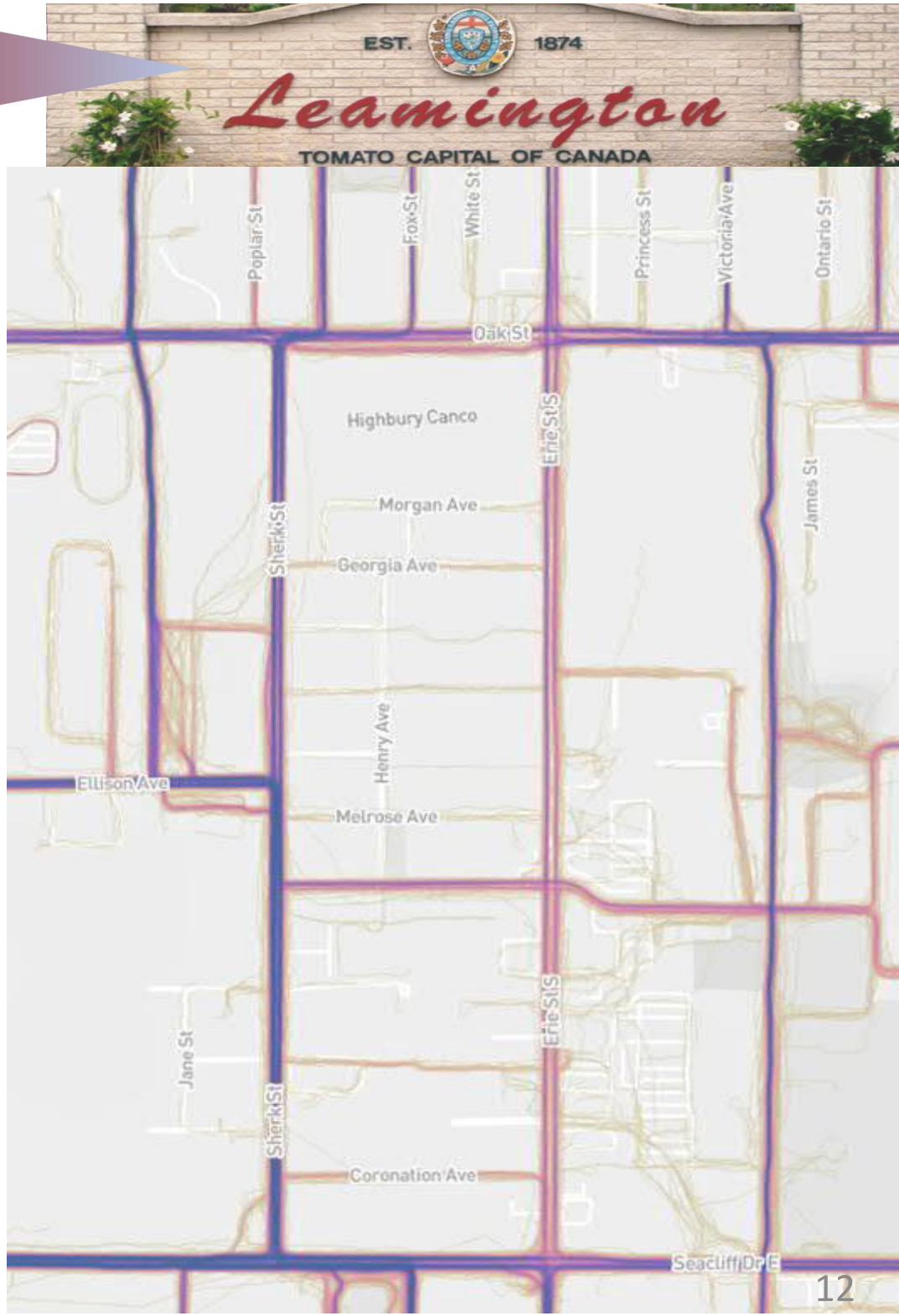
Cycling is a common travel mode in Leamington and is well used by the local international guest workers. Cycling is used as a means of transportation and for recreational purposes by residents and visitors alike.

Strava Heat mapping was used to identify the frequency of cycling activity in the study area.

Darker blue areas signify the highest levels of activity with lighter coloured areas identifying less traveled areas.

Heat mapping data show high levels of cycling along trails and main corridors which include:

- Oak Street
- Sherk Street
- Ellison Avenue
- Seacliff Drive



EXISTING PEDESTRIAN TRENDS

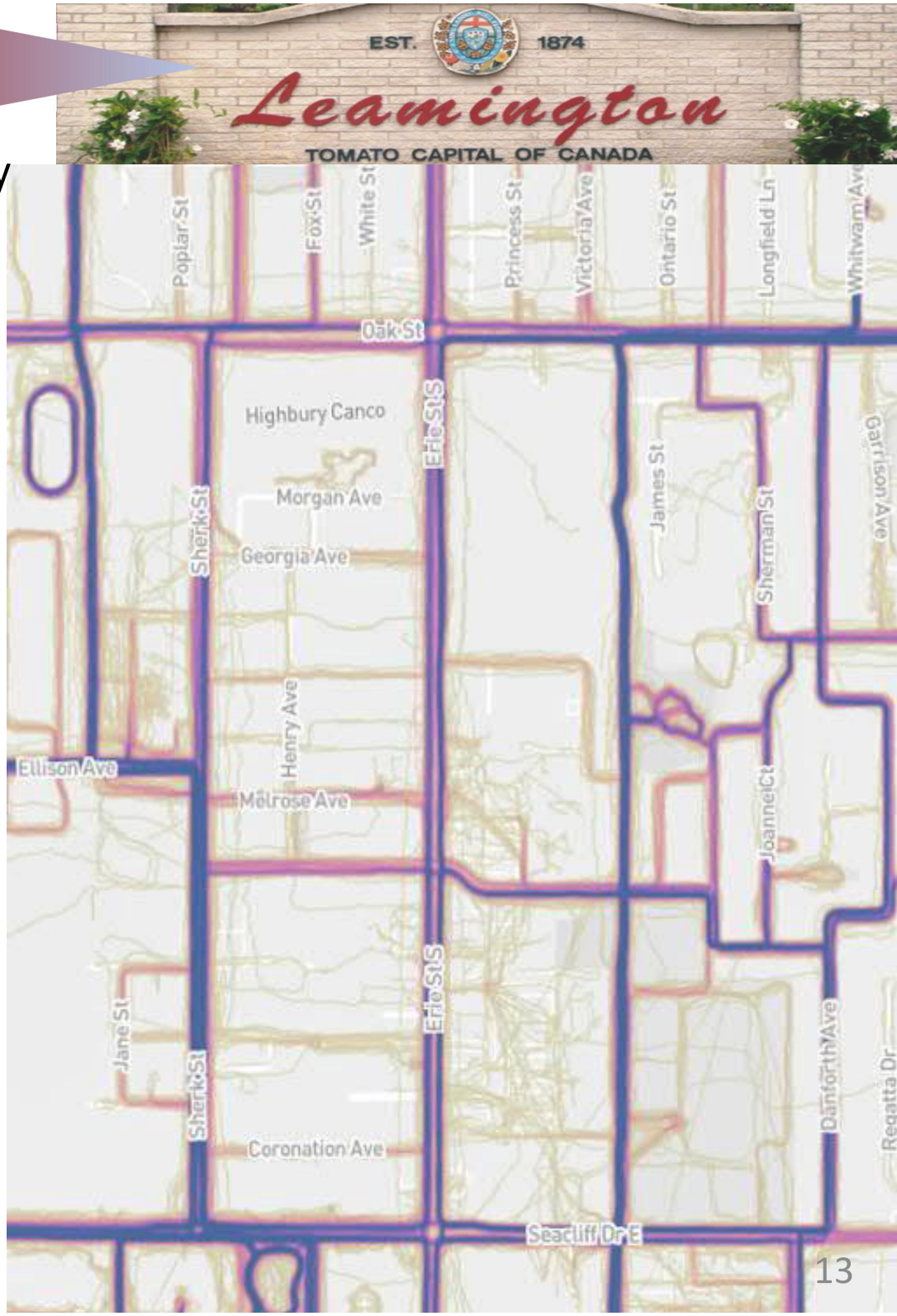
Pedestrian patterns show a high frequency among off-road areas and along main roadways that provide connections to off-road areas, in the study network.

Strava Heat mapping show high off-road pedestrian usage is along:

- East multi-use trail
- West multi-use trail
- Leamington District Secondary school track
- Seacliff Park

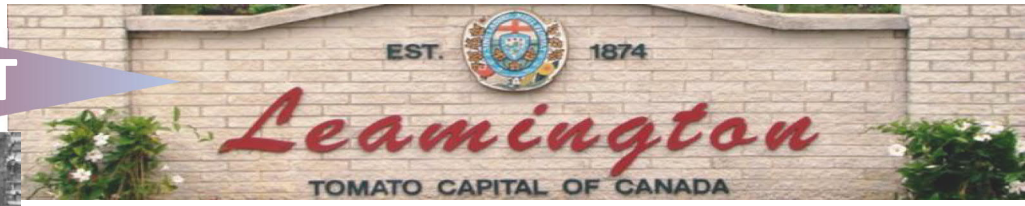
The highest pedestrian activity along the road network occurs on roadways that provide direct connection to off-road locations which include:

- Oak Street
- Sherk Street
- Ellison Avenue
- Seacliff Drive



AREA SPECIFIC LOCATION ASSESSMENT





A number of area specific locations have been identified for assessment and recommendations for improvements. Locations and conditions to be reviewed include:

1 Oak St W: Multi-use path review

2 Oak St E: Multi-use path review

3 Oak St E /Victoria Ave: AT connections

4 Oak St W/Chestnut Ave – Oak St W/Sherk St: Review AT connections and intersection turning movements

5 Oak St W/Fox St: Bicycle crossing

6 Erie St/Oak St: AT connections and intersection facilities review

7 Sherk St/ Highbury Access: Pedestrian crossing and intersection control review

8 Sherk St/William Ave/NFFRC Access: Review turning movements and bicycle crossing

9 Sherk St/Ellison Ave: Review traffic control and AT connections

10 Sherk St/Melrose Ave: Review of intersection for potential closure

AREA SPECIFIC LOCATION ASSESSMENT



11 Sherk St/Pulford Ave: Review traffic control and AT connections

12 Sherk St/Pulford Ave to Seacliff Dr: Pedestrian crossing review

13 Seacliff Dr/Sherk St: AT connections

14 Erie St: Cycling facilities and pedestrian crossing review

15 Erie St/Pulford Ave: Traffic signal timing review and AT connections

16 Pulford Ave/Canadian Tire/County Fair Mall Access: Assess pedestrian crossing requirements at this location

17 Pulford Ave: Cycling facilities review

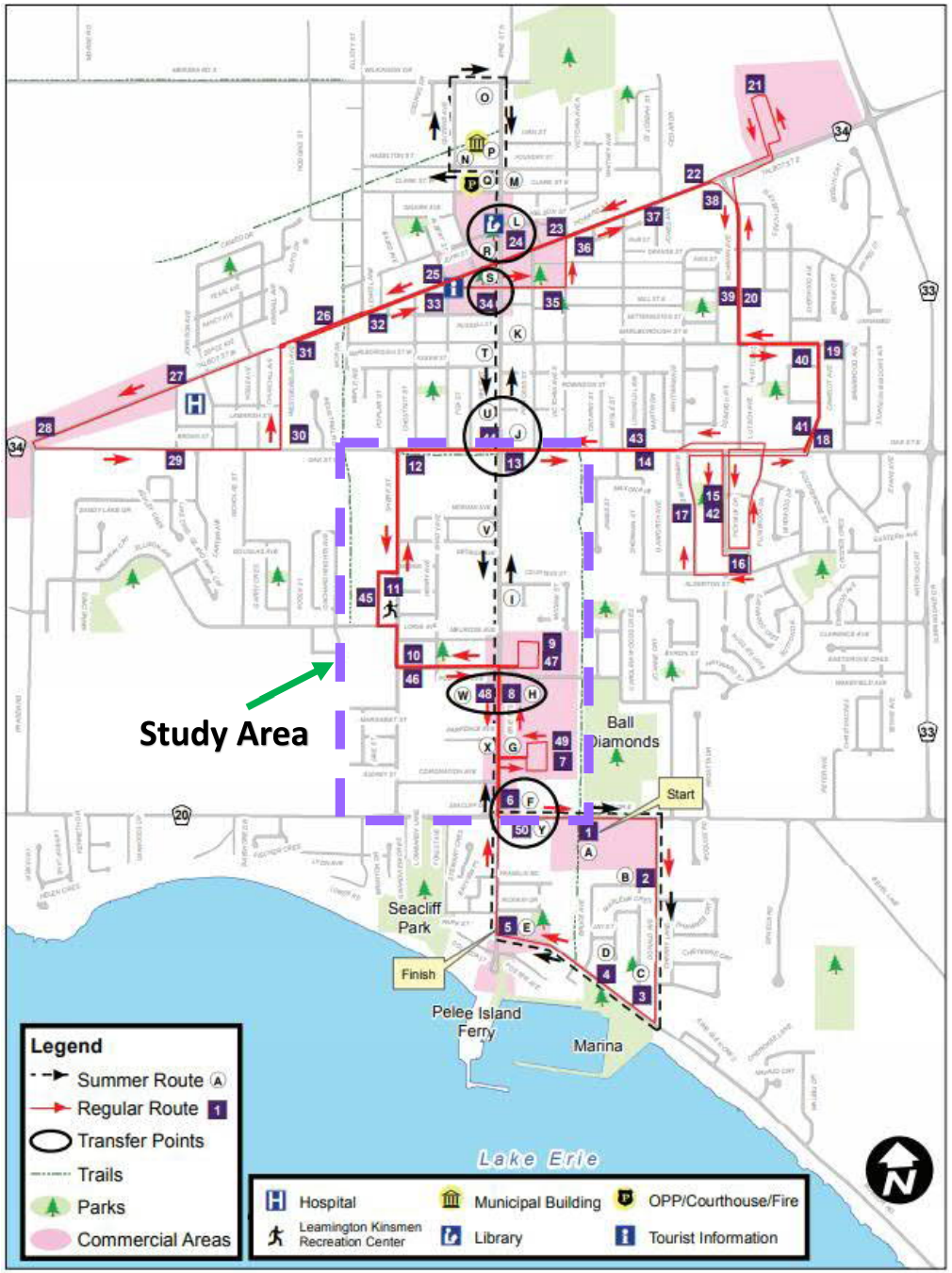
18 Erie St: Corridor review and road diet assessment

19 Erie St/Seacliff Dr: AT connections

20 16 Seacliff Dr E: Assess pedestrian crossing requirements at this location

21 Ellison Ave: Cycling facilities review

EXISTING TRANSIT SERVICE



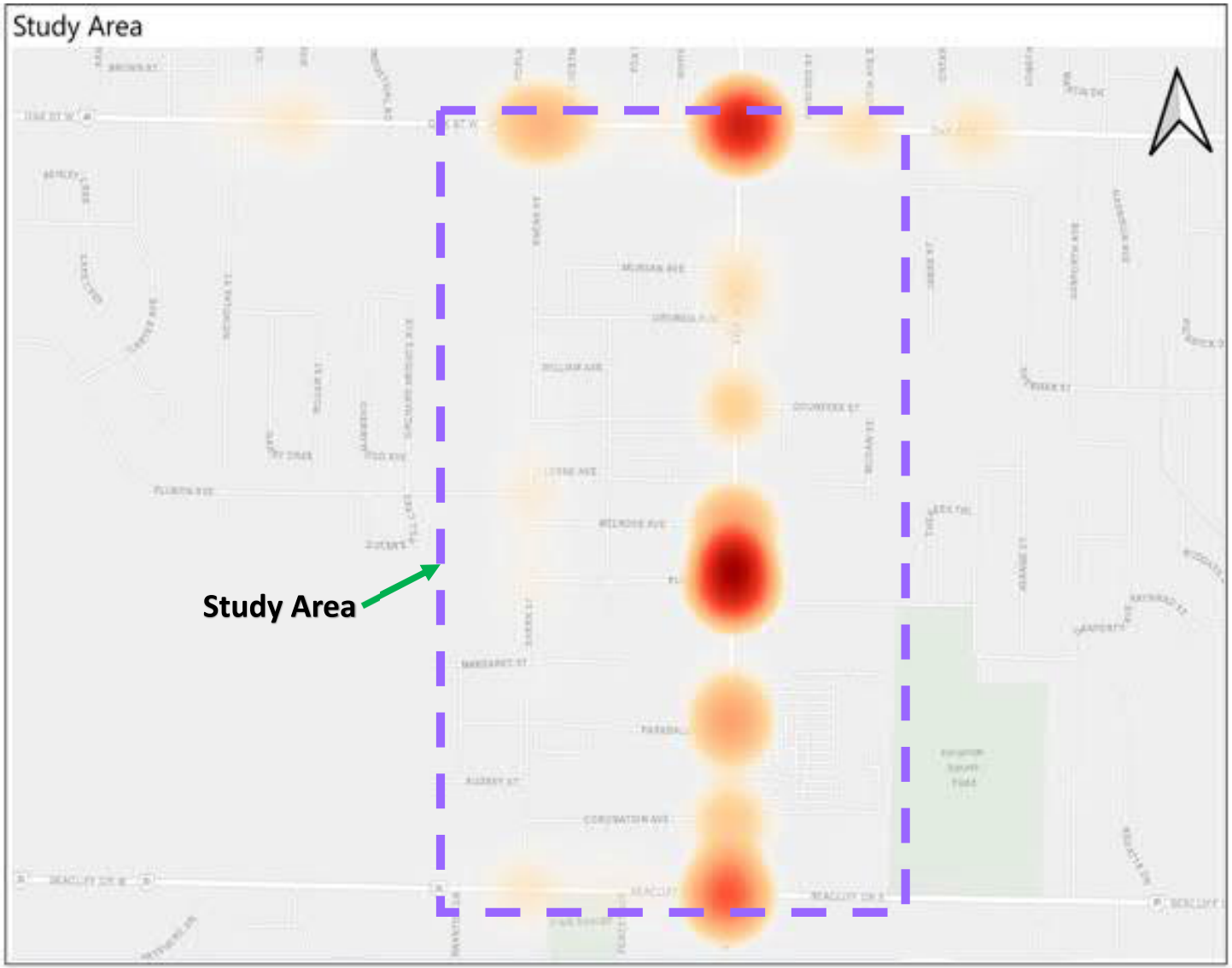
Regular Route

- Service operates Monday to Saturday 7:00 A.M. – 7:04 P.M.
- Not operational on holidays
- 15 bus stops in study area
- 1 hour headways
- Provides connection north of study area to Talbot Street East and south to Robson Road

Erie Summer Route

- Service operates Friday, Saturday and holidays 7:20 A.M. – 7:23 P.M.
- Service commences Friday before Victoria Day ends on Labour Day
- 9 bus stops in study area
- 30 minute headways
- Provides connection north of study area to Wilkinson Drive and south to Robson Road

SAFETY REVIEW – COLLISIONS



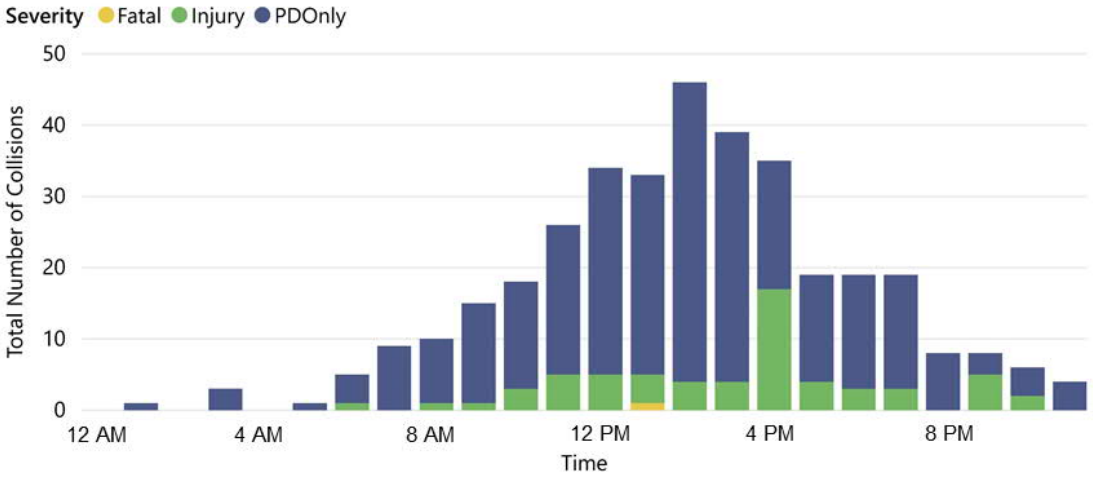
A heat map of the study area's collision history shows the high occurrence of collisions are along Oak Street and Erie Street. A total 358 collisions was recorded during five year analysis period.

Over 5 Years		
Total Collisions	Injury Collisions	Fatal Collisions
358	62	1

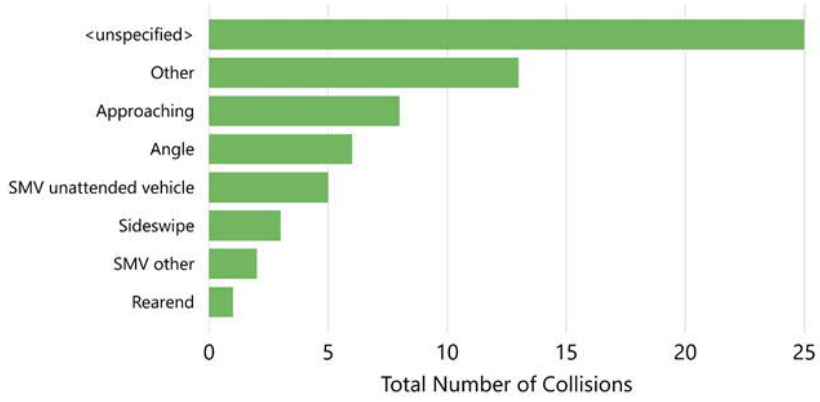
COLLISION TYPES



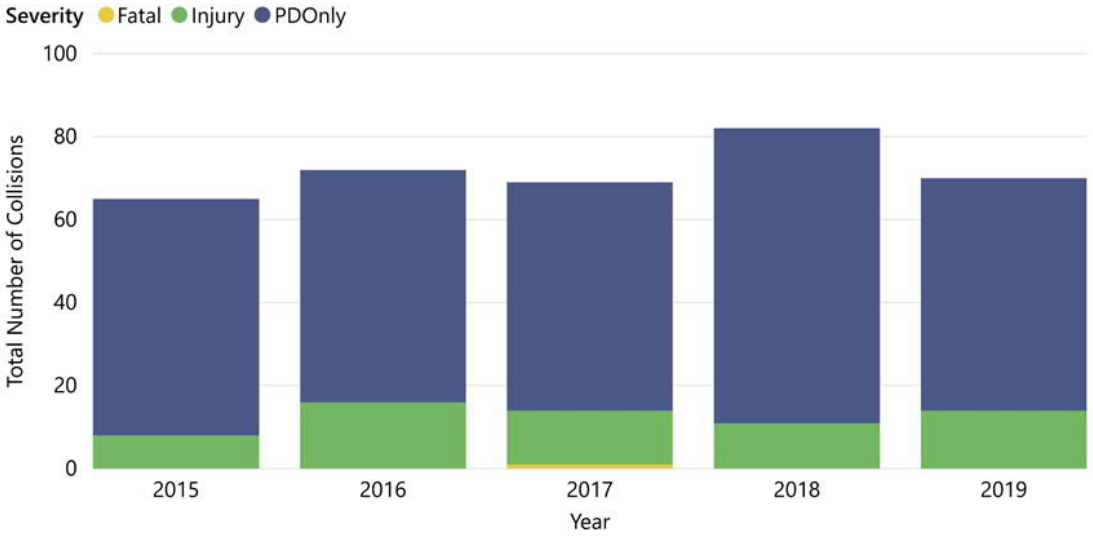
Collisions by Time of Day



Impact Type of Fatal and Injury Collisions



Collisions by Year



Over 5 Years		
Total Collisions	**Injury Collisions**	**Fatal Collisions**
358	62	1

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PEDESTRIAN AND CYCLIST COLLISIONS



Cyclist Collisions

7



Location of Cyclist Collisions

COUNTESS ST and ERIE ST S	1
ERIE ST S and CORONATION AV S	1
ERIE ST S and OAK ST E	1
ERIE ST S and PARKDALE AV	2
ERIE ST S and PULFORD AV	1
OAK ST W and SHERK ST	1
Total	**7**

Pedestrian Collisions

9

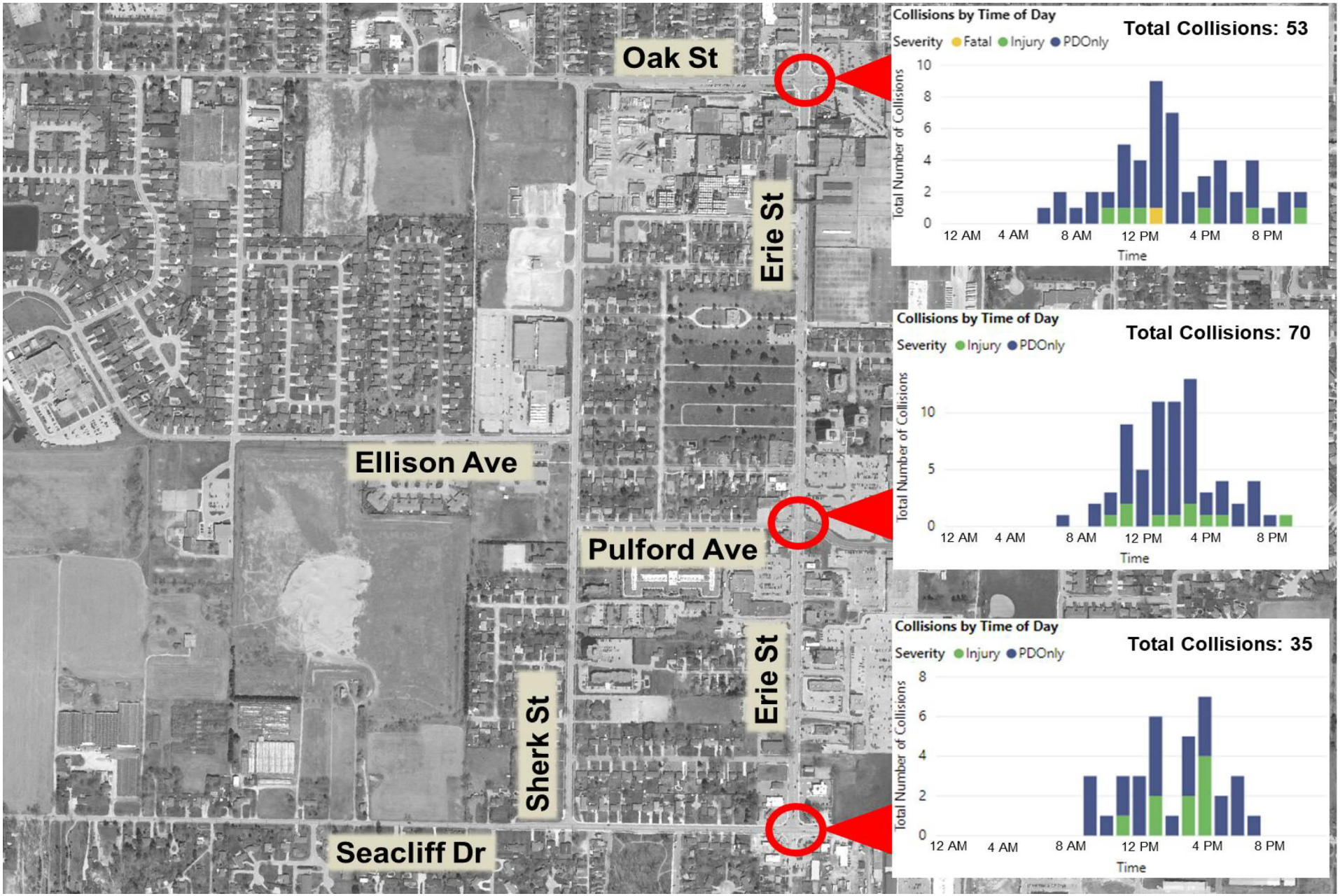


Location of Pedestrian Collisions

148 ERIE ST S and OAK ST E	1
ERIE ST S and COUNTESS ST	1
ERIE ST S and OAK ST E	2
ERIE ST S and OAK ST W	1
ERIE ST S and PARKDALE AV	1
OAK ST W and WESTMORELAND AV	1
PARKDALE and ERIE ST S	1
PULFORD AV and ERIE ST S	1
Total	**9**

HIGHEST COLLISION LOCATIONS





POTENTIAL OPTIONS FOR IMPROVEMENT





Intersection alternatives

Inter-parcel connections

Intersection control

Multi-use trails

Bike lanes

Road diet

Crossings (pedestrian and cyclist)







NEXT STEPS



Following this Public Engagement Session, the project team will:

- Review and consider feedback following the comment period
- Develop traffic for future conditions and complete future conditions analysis
- Review and complete analysis for area specific locations and provide study recommendations
- Public Engagement Session #2 (Spring 2021)

All project updates will be available via the project website:
https://www.leamington.ca/en/our-community/projectsandstudies.aspx

Please use this link to provide feedback to the project team during the comment period **January 13 to January 29** or contact one of the project team members directly. We would greatly appreciate receiving any comments or questions that you may have. Thank you.

Alex Del Brocco, C.E.T.
Engineering Project Manager
Municipality of Leamington
519-326-5761, ext. 1369

Mehemed Delibasic, P.Eng.
Consultant Project Manager
McIntosh Perry Consulting Engineers Ltd.
647-463-7993

Erie Street South, Oak Street, Sherk Street and Seacliff Drive Traffic Study

PUBLIC ENGAGEMENT SESSION #2







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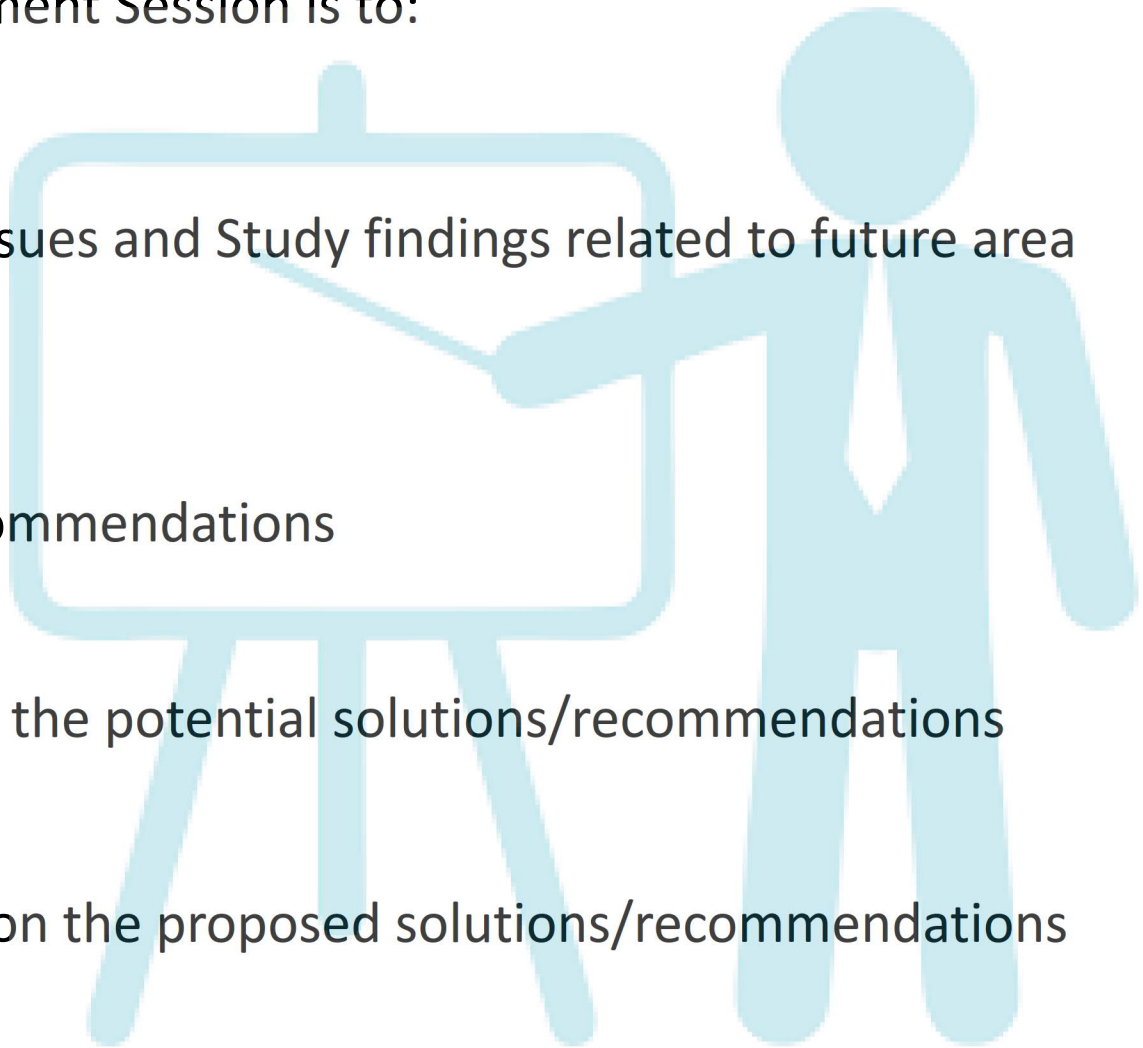
August 2021

McINTOSH PERRY

PURPOSE OF SESSION

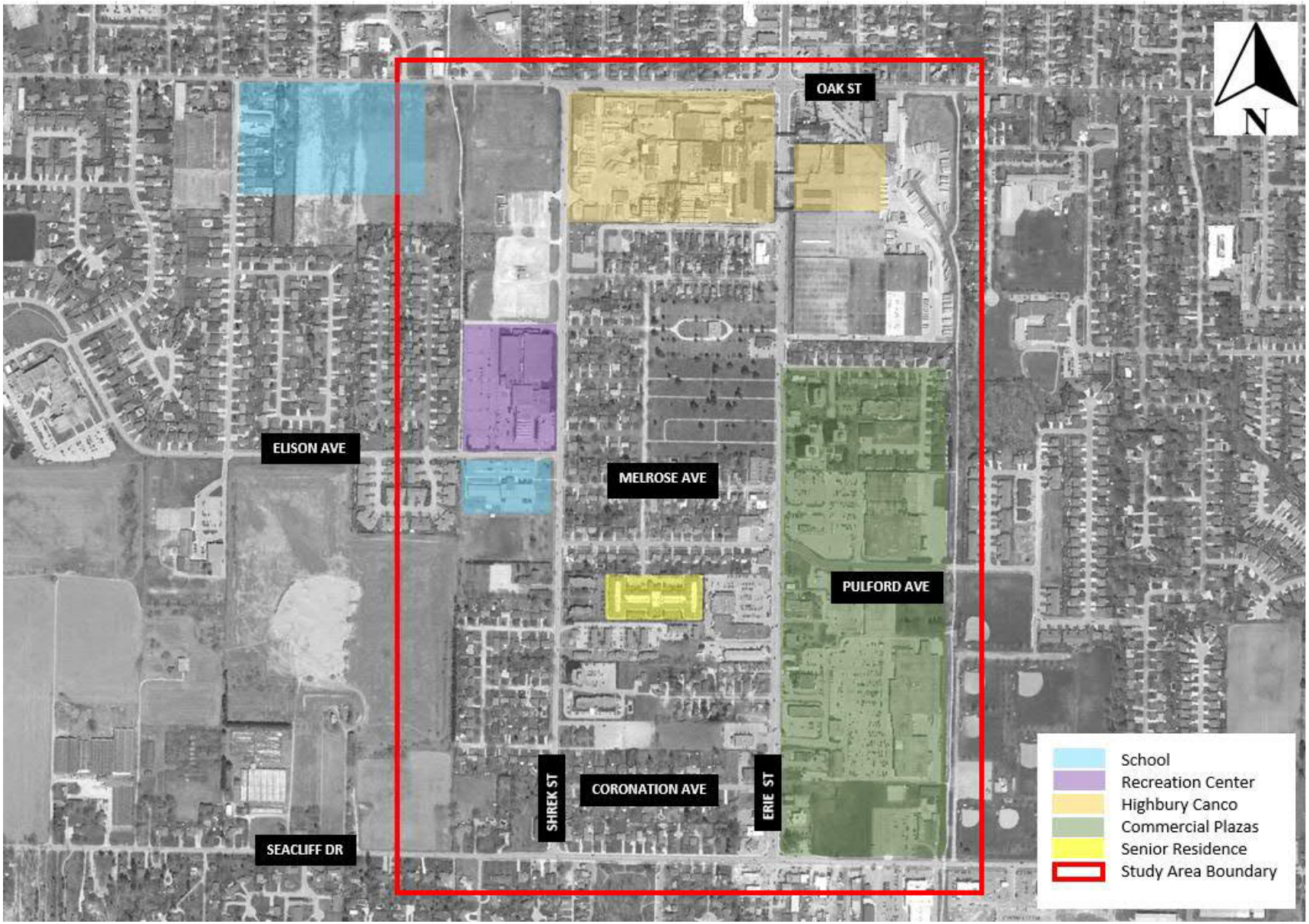
The purpose of this Public Engagement Session is to:

- Provide an update on existing issues and Study findings related to future area demands and opportunities
- Present potential solutions/recommendations
- Gather input from the public on the potential solutions/recommendations
- Open communication for input on the proposed solutions/recommendations



STUDY AREA

The study area is bounded by Oak Street to the north, Seacliff Drive to the south, Sherk Street to the west, and Erie Street to the east



STUDY BACKGROUND



The Municipality of Leamington has commissioned this transportation study as a means of identifying improvements of transportation operations, via assessments of existing and future conditions.

Transportation related issues and opportunities will be identified, which will be used to develop recommendations for improvements that build on previously completed studies for Leamington and the wider area.



STUDY SCOPE AND OBJECTIVES



The study will address **area specific concerns identified by the Municipality to improve multi-modal** connections within the study area to meet future needs.



Traffic assessment of the study area will be completed for existing (2020) and a future 10-year (2030) horizon to identify transportation related issues and opportunities.

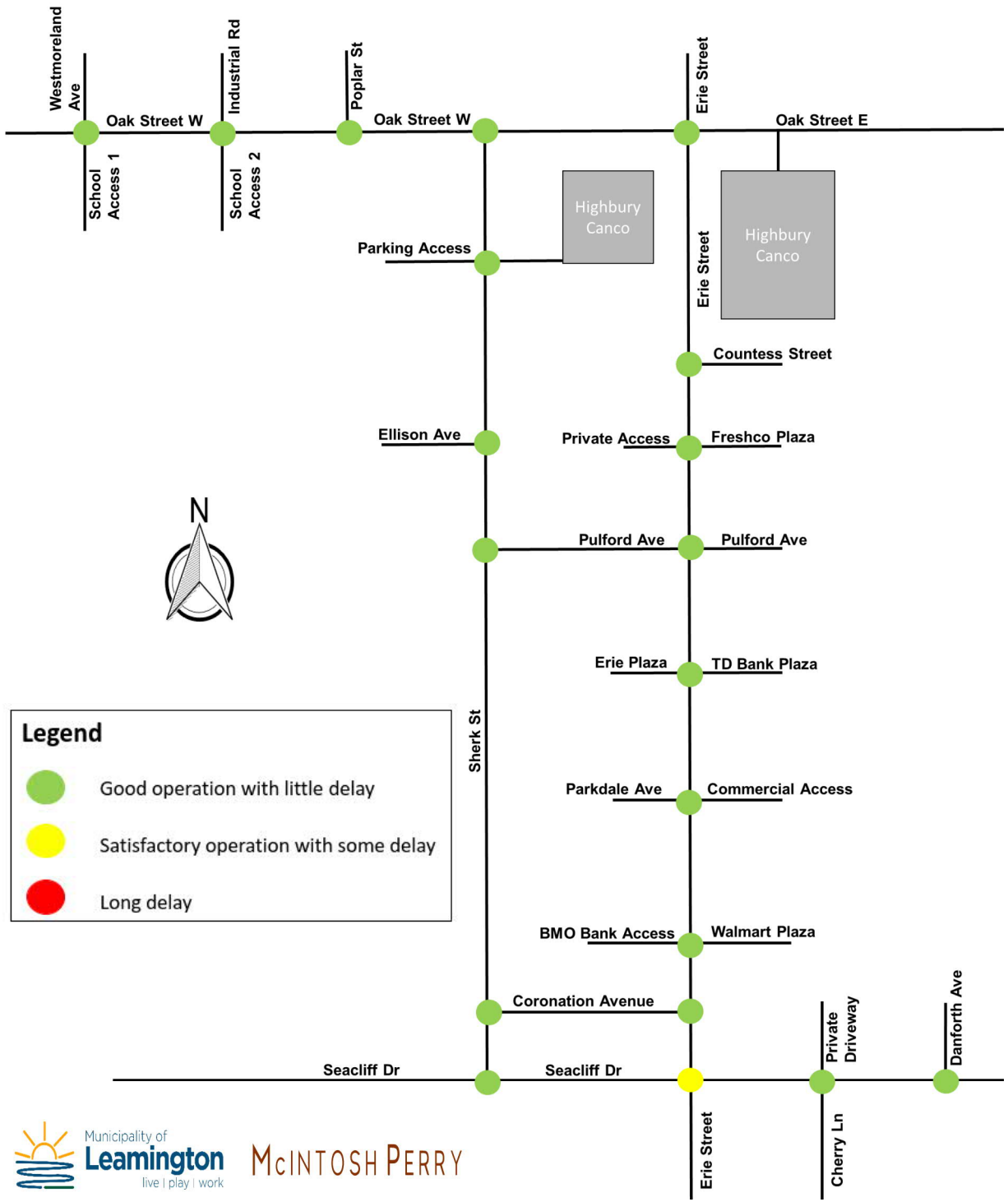


Develop a **long-range vision** for the study area and recommend practical solutions based on future traffic patterns, potential development, cycling and pedestrian activity.



Collect input and feedback from the public and stakeholders during the study to address community concerns.

EXISTING AM TRAFFIC ASSESSMENT

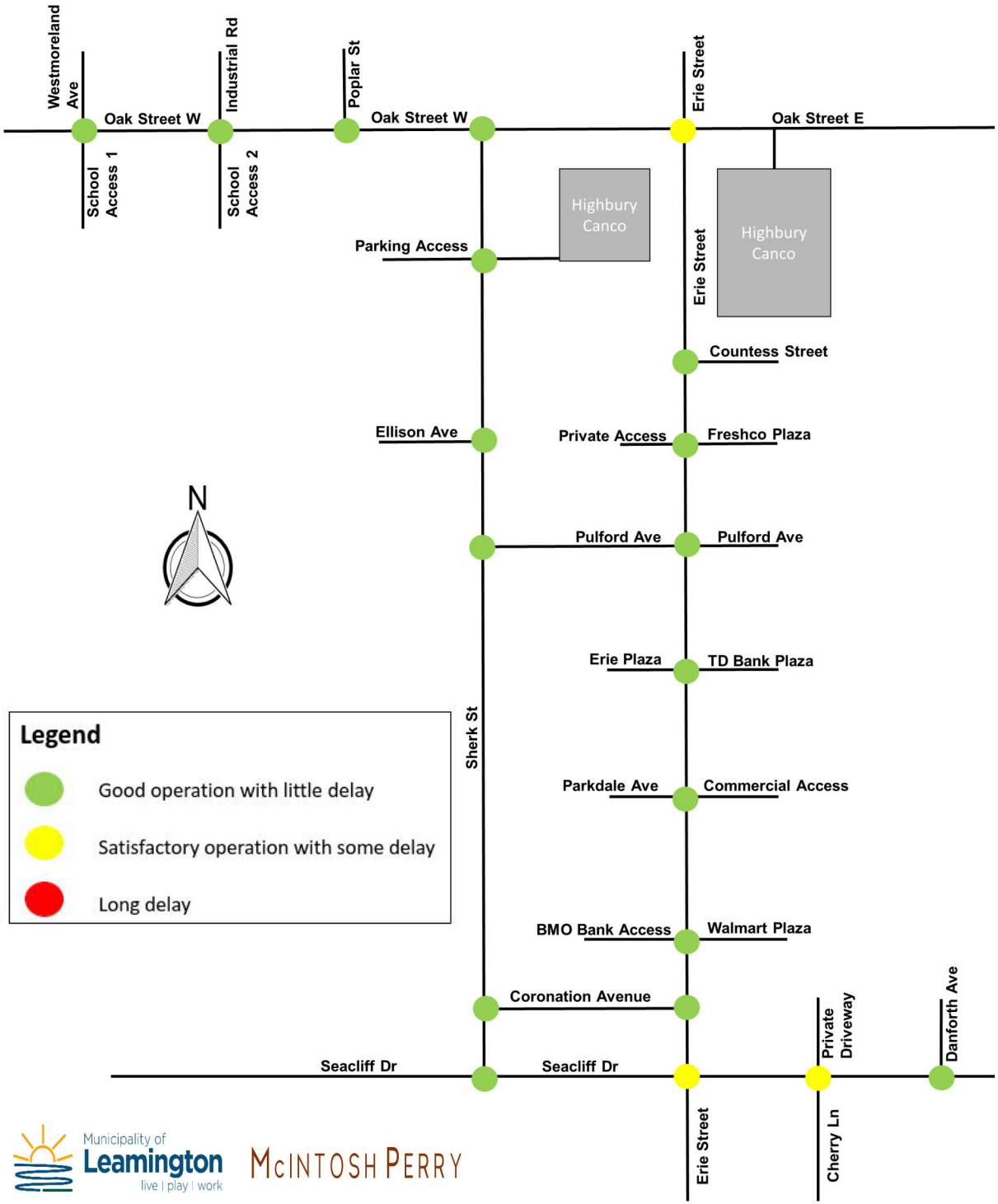


- Traffic volumes representative of typical 2020 AM weekday conditions used to assess morning intersection operations.
- Intersection operation defined in terms of level of service (LOS), a weighted average of delay for the entire intersection.
- Most intersections operate with good LOS and little delay for the AM peak period.
- The intersection of Erie Street and Seacliff Drive however, operates with some delay.

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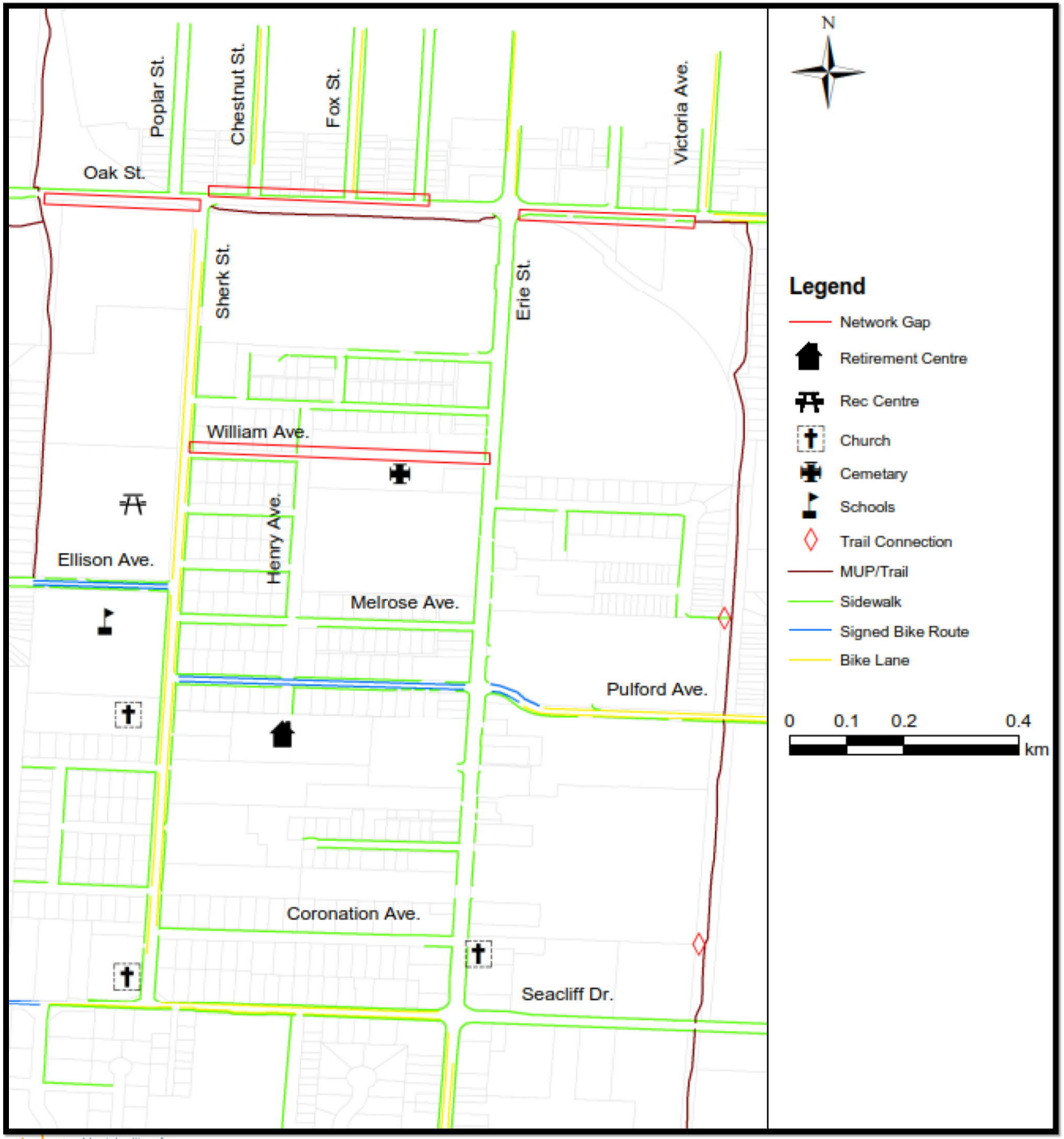
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EXISTING PM TRAFFIC ASSESSMENT



- Traffic volumes representative of typical 2020 PM weekday conditions used to assess evening intersection operations.
- Intersections continue to operate with good LOS and little delay.
- Three of the study intersections will operate with satisfactory LOS and experience some delay.

EXISTING ACTIVE TRANSPORTATION



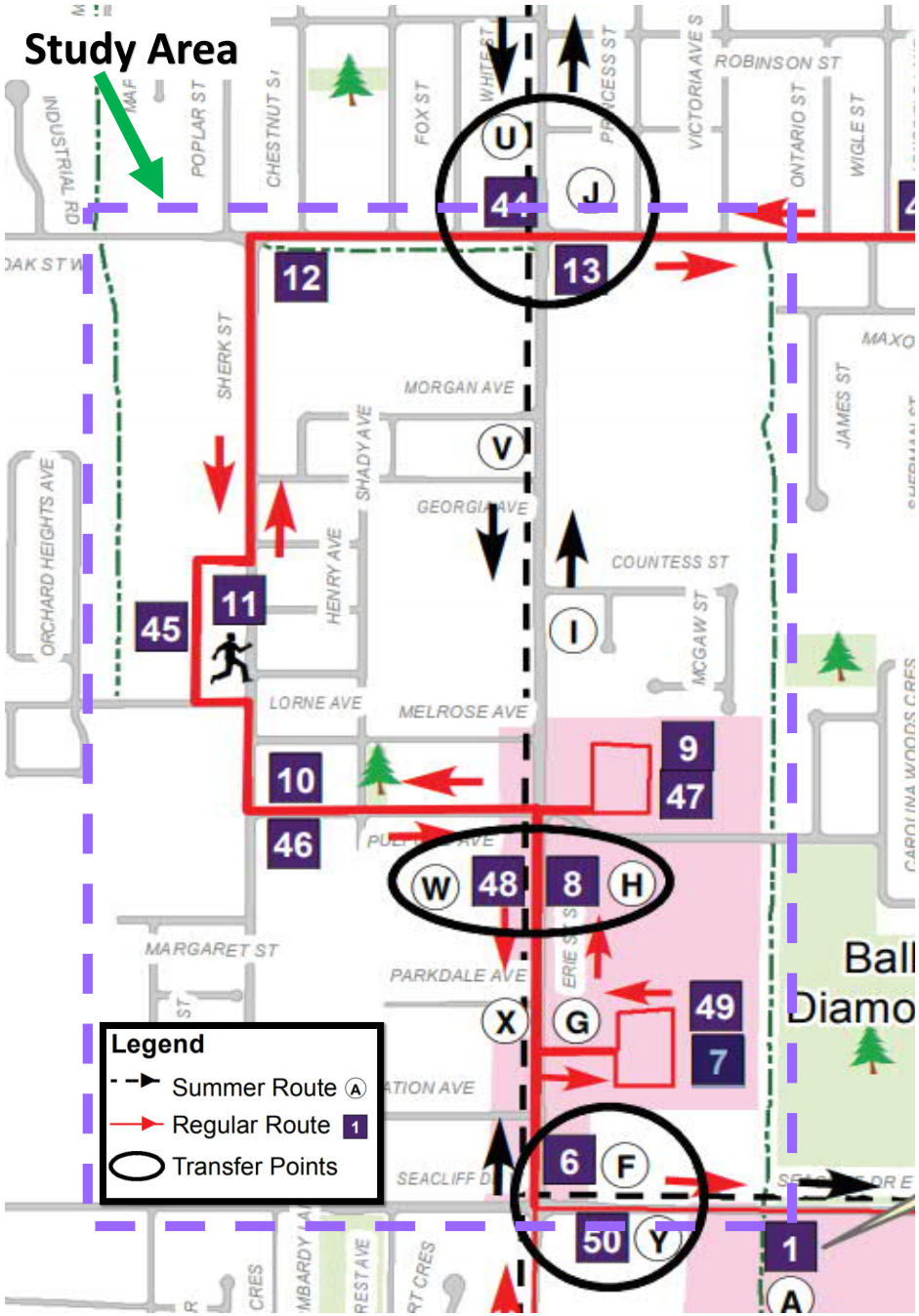
Existing active transportation (AT) network consists of:

- Bicycle lanes
- Multi-use trails
- Sidewalks

Existing network gaps limit east – west connectivity.

Proposed network improvements aim to enhance overall connectivity and eliminate gaps.

EXISTING TRANSIT SERVICE



Regular Route

- Service operates Monday to Saturday 7:00 A.M. – 7:04 P.M.
- Not operational on holidays
- 17 bus stops in study area
- 1 hour headways
- Provides connection north of study area to Talbot Street East and south to Robson Road

Erie Summer Route

- Service operates Friday, Saturday and holidays 7:20 A.M. – 7:23 P.M.
- Service commences Friday before Victoria Day ends on Labour Day
- 9 bus stops in study area
- 30 minute headways
- Provides connection north of study area to Wilkinson Drive and south to Robson Road

SAFETY REVIEW – COLLISIONS



Intersections of high incidence:

- Oak Street and Erie Street
- Erie Street and Pulford Avenue
- Erie Street and Seacliff Dive

Over 5 Years		
Total Collisions	Injury Collisions	Fatal Collisions
358	62	1

FUTURE DEVELOPMENT AND GROWTH

Future traffic volumes were developed based on applied network growth and forecasted traffic for planned / anticipated area developments.

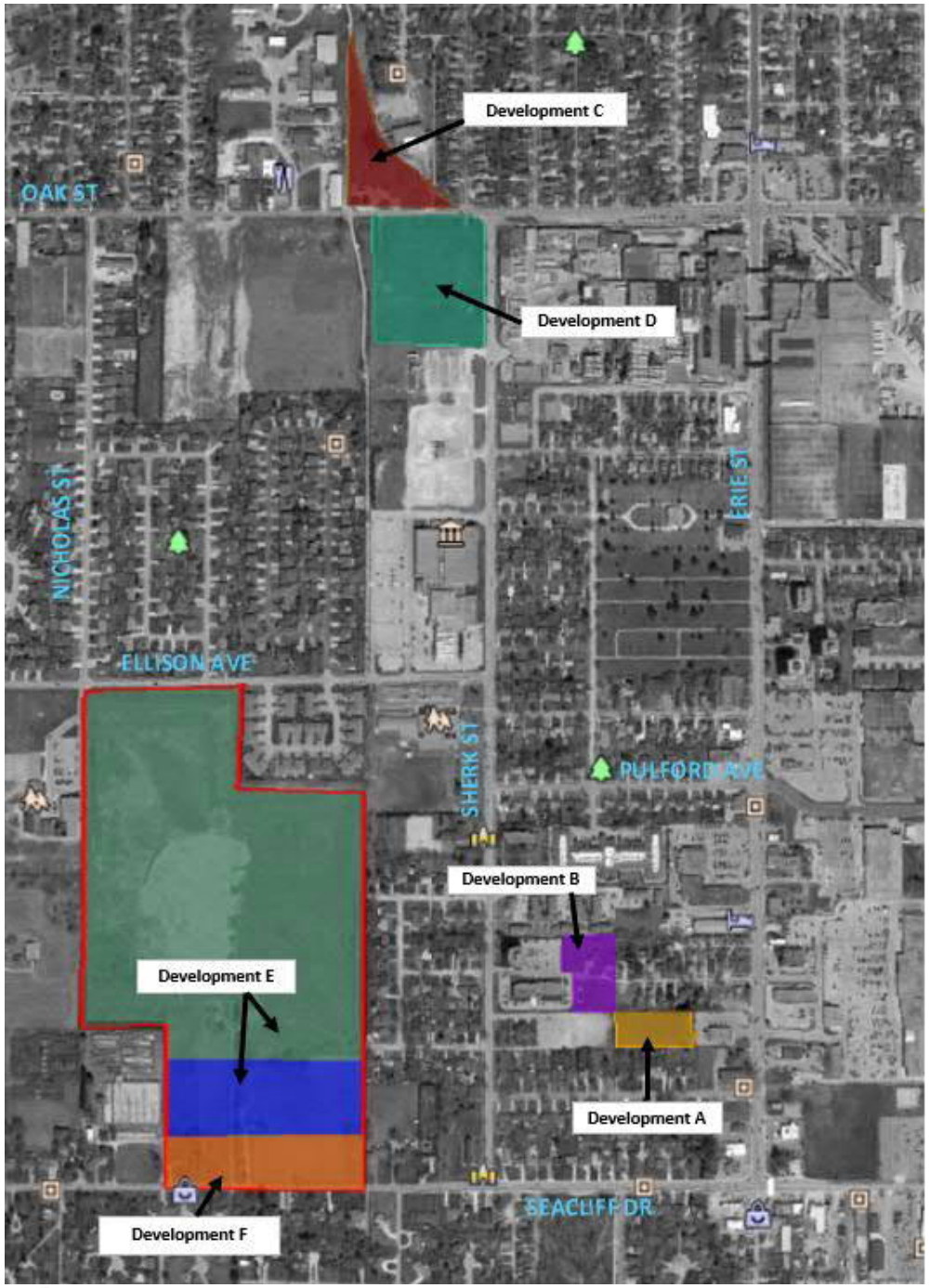
Future network growth of 2% per annum was applied to existing traffic volumes on major study area roads.





Traffic was generated for area developments anticipated to be developed within the 10-year planning horizon and distributed to the study area road network.

FUTURE DEVELOPMENT AND GROWTH



Five area developments have been identified for consideration within the future 2030 study horizon

- ❑ Development A – Retail / Commercial
- ❑ Development B – Residential Apartments
- ❑ Development C – Commercial
- ❑ Development D – Commercial
- ❑ Development E & F – Single develop consisting of residential (E) and commercial (F)

FUTURE ASSESSMENT OPTIONS

Forecasted 2030 traffic volumes was assessed based on ***three*** study scenarios

Do Nothing	Scenario Assessment	Recommendation
• Future traffic volumes assessed with no changes to the existing network	• Erie Street Corridor assessed for this future condition	• Not Recommended
Road Diet		
• Reduction of travel lanes from 4 lanes to 2 lanes • Addition of curbside bike lanes	• Erie Street Corridor assessed for this future condition	• Not Recommended
Ultimate Condition		
• Inter-parcel connections • No lane reduction • Adjustment to signal timing	• Erie Street Corridor assessed • Full study network assessed	• Recommended scenario

DO NOTHING ASSESSMENT

Erie Street corridor reviewed with 2030 volumes with no other changes from existing conditions.

- Turning movements at intersections operate with reasonable delay and acceptable levels of service
- Queue deficiencies common at intersections of Oak Street and Erie Street as well as Erie Street and Seacliff Drive
- Some operational improvements can be expected through optimization of traffic signal timings for future travel demands



ROAD DIET

A **Road Diet** is a Transportation Planning measure whereby the number of travel lanes and/or the effective width of the road is reduced to achieve systemic improvements. Implementation typical used to improve safety or provide space to accommodate other travel modes:

In the case of Erie Street, the implementation of a Road Diet would:

- Reduce the number of travel lanes from 4 lanes (2 per direction) to three lanes
- Provide 1 northbound lane, 1 southbound lane and a centre two-way left-turn lane
- Add a curb side bike lane in each direction



ROAD DIET ASSESSMENT

Analysis of the Erie Street corridor with the implementation of a Road Diet showed:

- Reduction of travel lanes, from 2 lanes per direction to 1 lane per direction, reduces the available roadway capacity, resulting in unacceptable levels of service and extensive queuing throughout the study corridor.

- Road diet implementation would provide satisfactory operation in the short-term, however, additional capacity would be required to maintain acceptable operation by the 2030 horizon.

- Future demand or additional growth in the study area beyond the 10-year horizon would result in worsening of operations on Erie Street. As a result, a Road Diet is **not** considered suitable for the corridor.



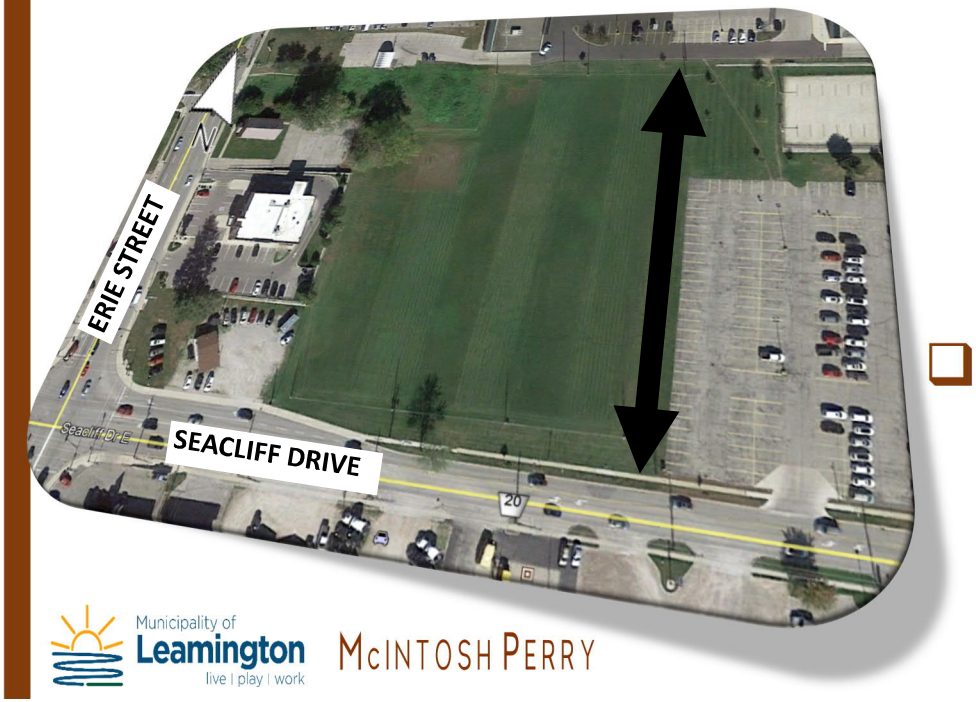
ULTIMATE CONDITION

Based on the introduction of:

- Vehicle connection between the Canadian Tire and Wal-Mart Plazas



- 
  Changes to traffic signal timings at intersections



- Vehicle connection between the Wal-Mart Plaza and Seacliff Drive

ULTIMATE CONDITION ASSESSMENT

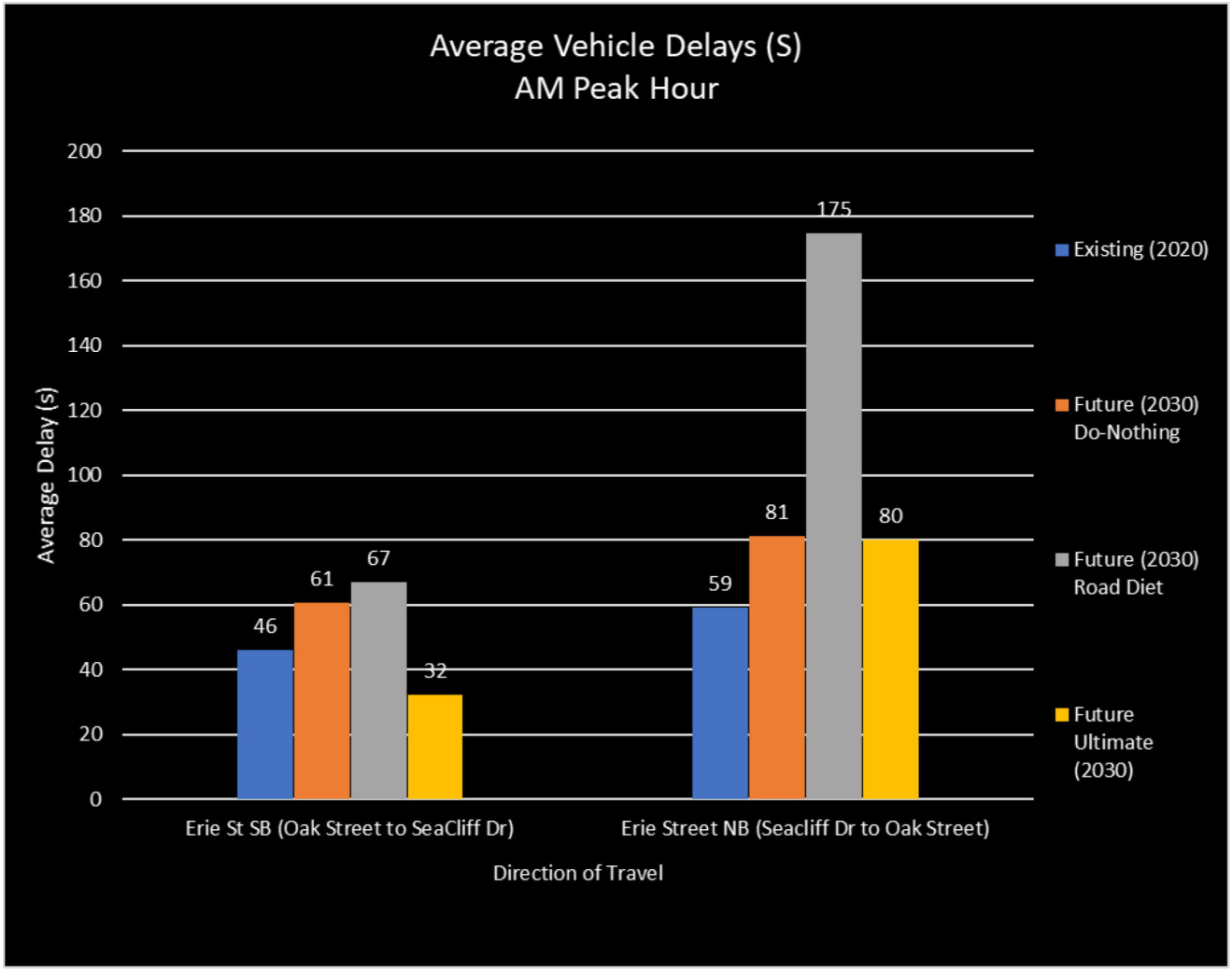
- Provides similar operating conditions to the future 2030 do-nothing scenario. Network adjustments for this scenario however, enabled the reduction of excessive queue lengths observed in the do-nothing scenario.



  - Ultimate Condition is considered most suitable scenario for network.

FUTURE ASSESSMENT FINDINGS - AM

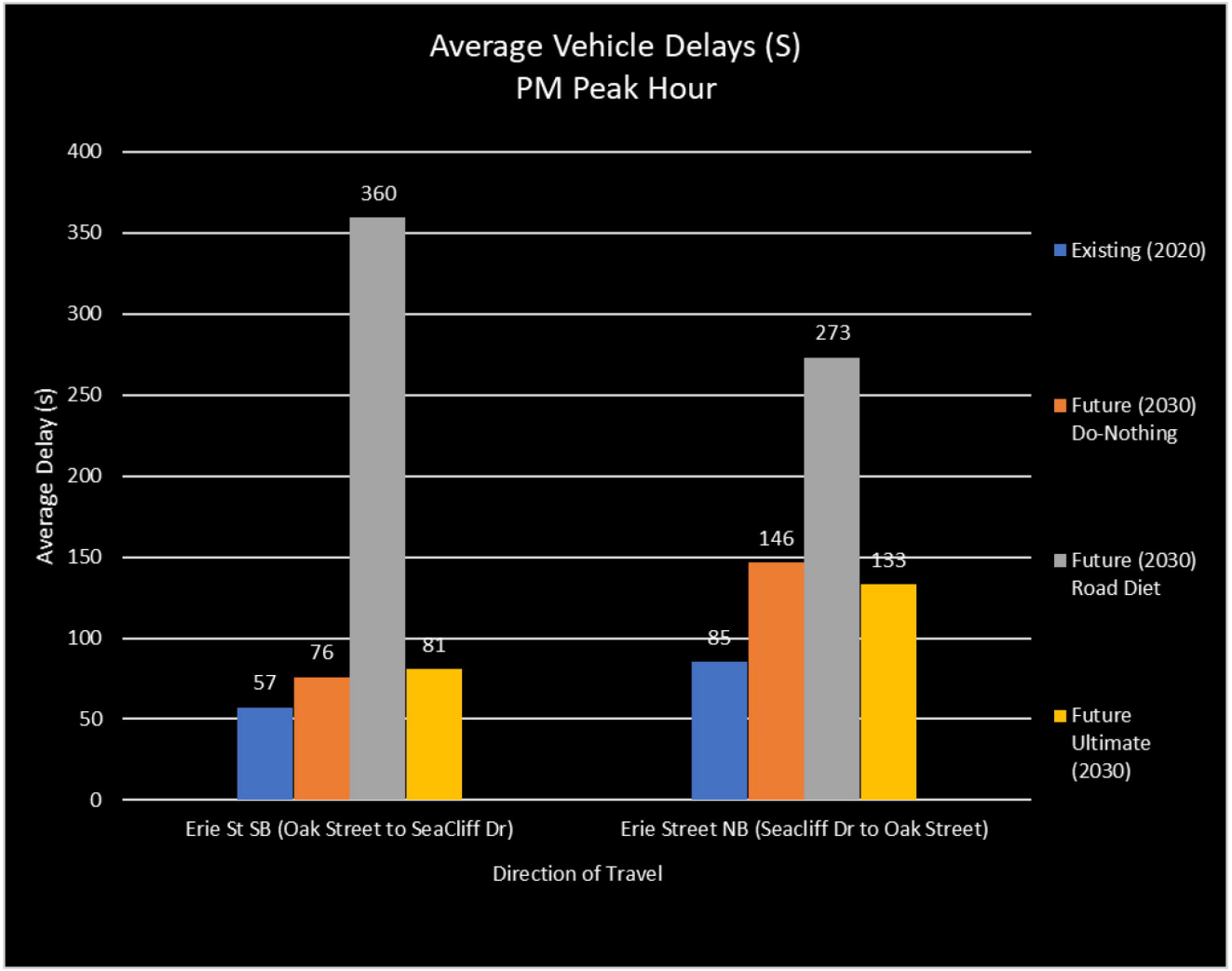
Southbound and northbound analysis summaries confirm that the Road Diet option results in significant delay and increased queuing, while the ultimate condition provides better overall operational characteristics than the Do-Nothing and Road Diet scenarios.



- Do-Nothing has highest driver delay in AM period
- Ultimate condition shows lowest delay

FUTURE ASSESSMENT FINDINGS - PM

Road diet operation continues to result in significantly longer delays for southbound and northbound travel. The Ultimate scenario has the shortest delays northbound and has slightly longer delays than the Do-Nothing scenarios southbound.



- Do-Nothing has highest driver delay in PM period.
- Ultimate condition shows lowest delay northbound and is slightly higher than Do-Nothing in the southbound direction.

AREA SPECIFIC CONCERNS



Multiple location specific concerns were identified across the study area which were reviewed with potential solutions incorporated into analysis for future conditions.



Solutions for some concerns will connect and work in tandem together to enhance overall network connections and operations.

AREA SPECIFIC LOCATION ASSESSMENT



Locations and conditions to be reviewed include:

1 Oak St W: Multi-use path review

2 Oak St E: Multi-use path review

3 Oak St E /Victoria Ave: AT connection review

4 Oak St W/Chestnut Ave – Oak St W/Sherk St: AT connections and intersection turning movement review

5 Oak St W/Fox St: Bicycle crossing review

6 Erie St/Oak St: AT connections and intersection facilities review

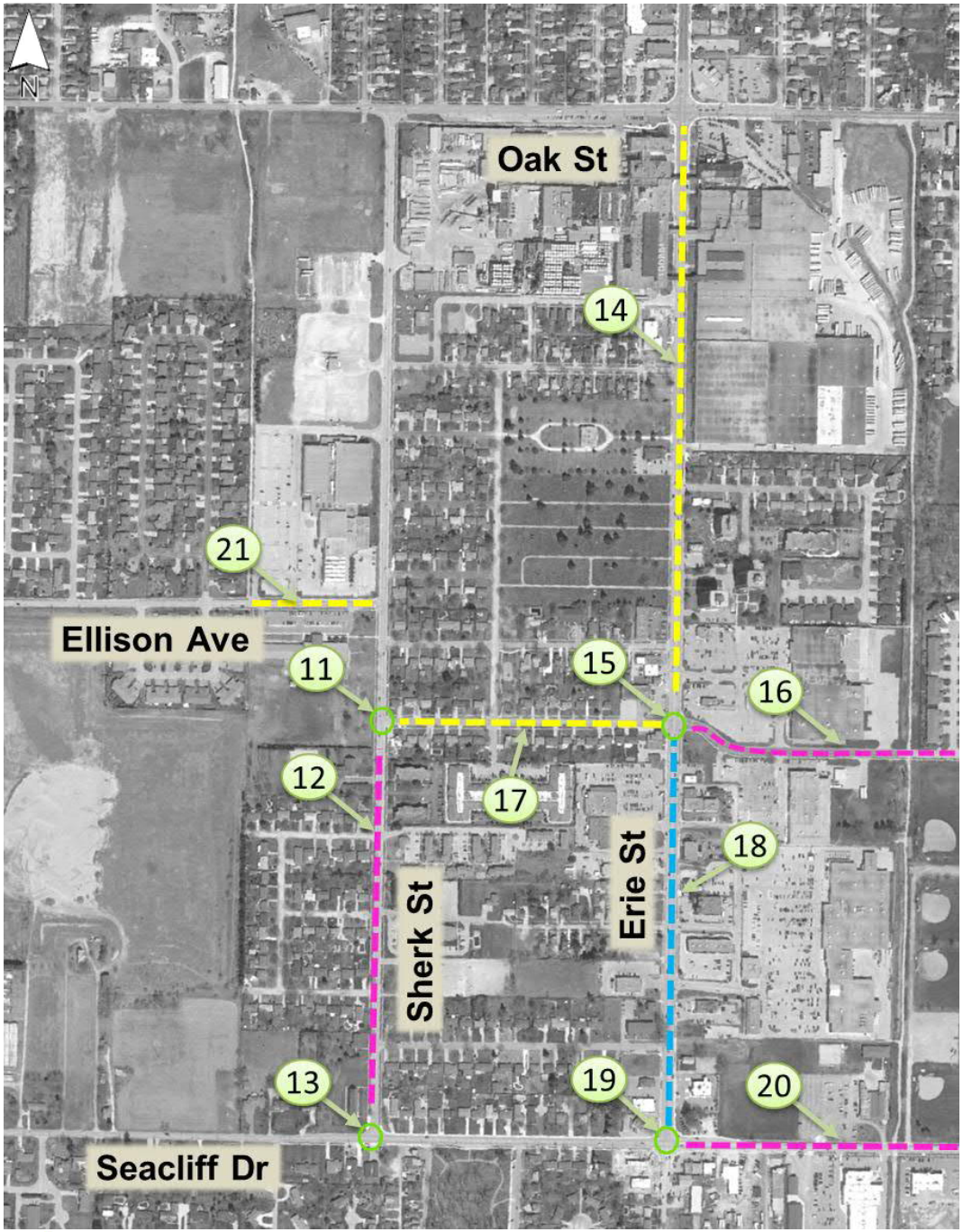
7 Sherk St/ Highbury Access: Pedestrian crossing and intersection control review

8 Sherk St/William Ave/NFFRC Access: Turning movements and bicycle crossing review

9 Sherk St/Ellison Ave: Traffic control and AT connection review

10 Sherk St/Melrose Ave: Review of intersection for potential closure

AREA SPECIFIC LOCATION ASSESSMENT



11 Sherk St/Pulford Ave: Traffic control and AT connection review

12 Sherk St/Pulford Ave to Seacliff Dr: Pedestrian crossing review

13 Seacliff Dr/Sherk St: AT connection review

14 Erie St: Cycling facilities and pedestrian crossing review

15 Erie St/Pulford Ave: Traffic signal timing and AT connection review

16 Pulford Ave/Canadian Tire/County Fair Mall Access: Assess pedestrian crossing requirements at this location

17 Pulford Ave: Cycling facilities review

18 Erie St: Corridor review and road diet assessment

19 Erie St/Seacliff Dr: AT connection review

20 16 Seacliff Dr E: Assess pedestrian crossing requirements at this location

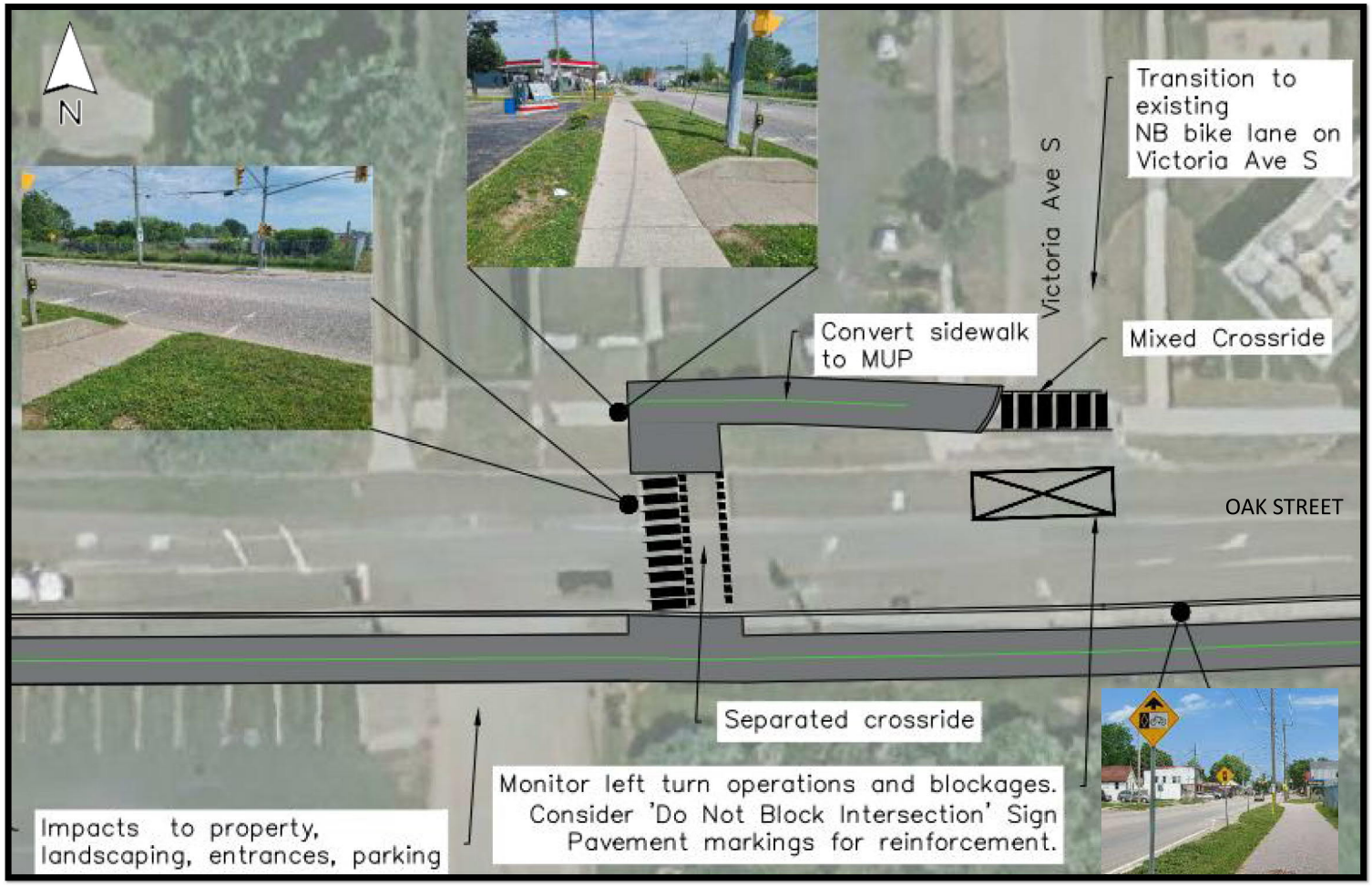
21 Ellison Ave: Cycling facilities review

POTENTIAL STUDY AREA SOLUTIONS



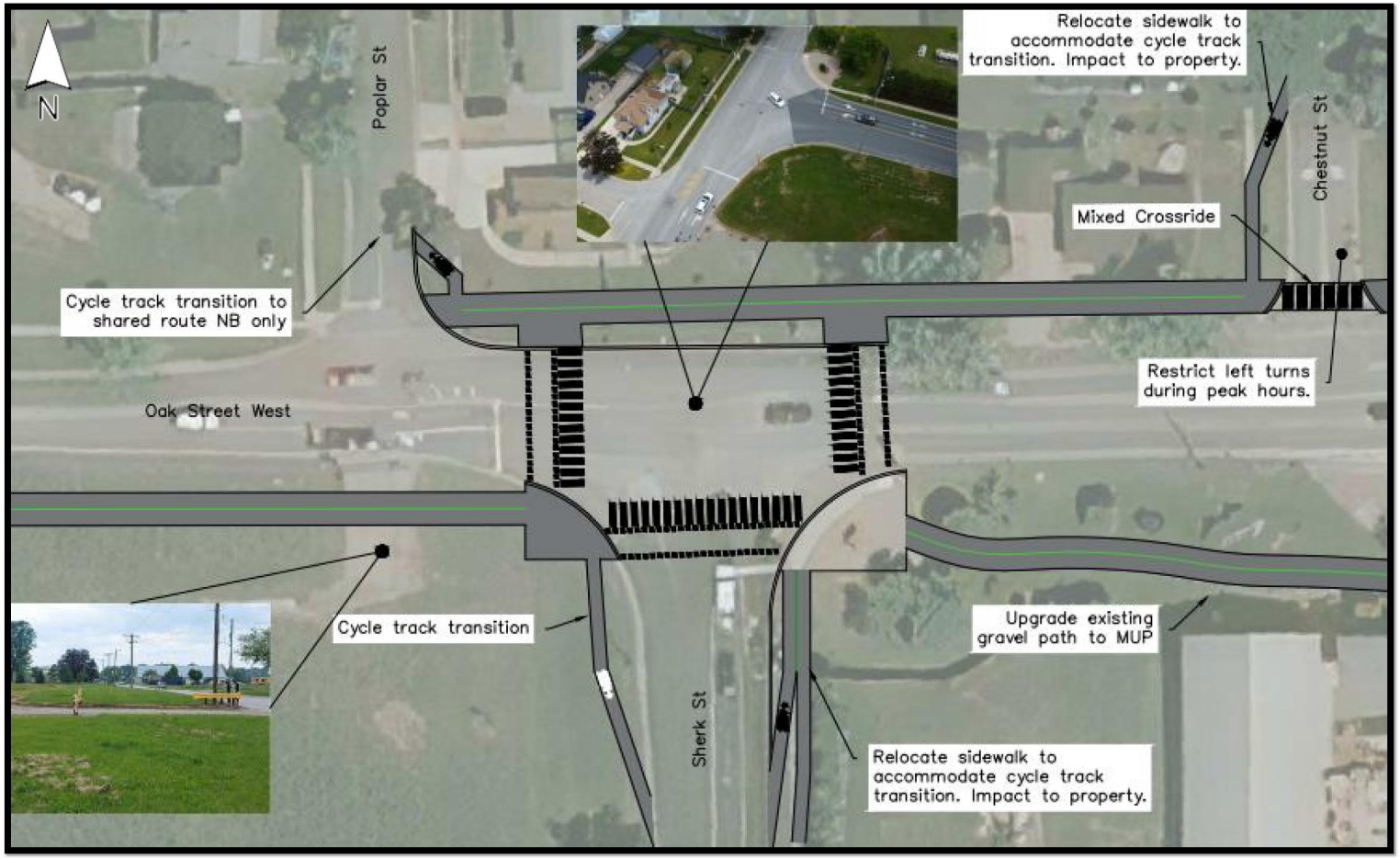
Oak Street West (#1)	Oak Street East (#2)
• Review whether bike lanes are needed between Sherk Street and Westmoreland Avenue. • Evaluate whether bike lanes identified in previous studies could be deleted and existing north side sidewalk replaced with an in boulevard multi-use path (MUP).	• Review the possibility of removing existing south side sidewalk with 3-meter wide multi-use path
Proposed Solutions	
• Bike lanes have not been suggested for Oak Street, rather a continuous 3-meter-wide multi-use path (MUP) is proposed along the south side of Oak Street from the Industrial Road over to the west trail. The MUP will provide connection to other area specific solutions for the corridor.	

POTENTIAL STUDY AREA SOLUTIONS



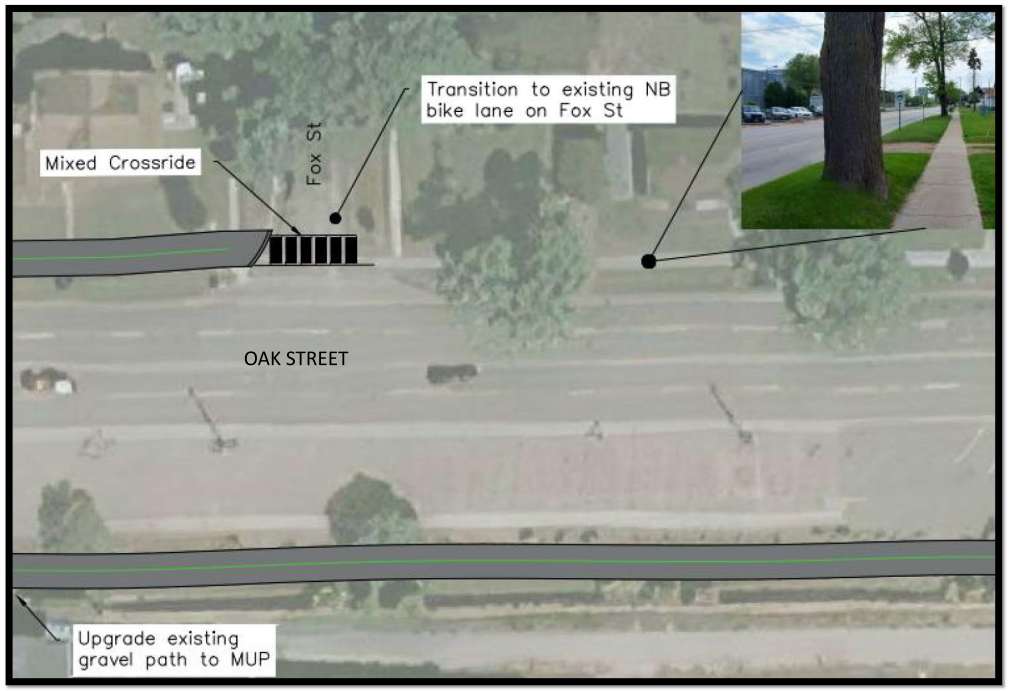
Oak Street / Victoria Street (#3)
• Identify how to construct an all ages and abilities AT link between the trail on the south side of Oak Street and northbound bike lane on Victoria Street.
Proposed Solutions
• Crossride proposed at signalized Canco access with MUP on northside of Oak Street to Victoria Street intersection. • Signage (Wa-73 Do Not Block Intersection) and pavement marking proposed at Victoria Street. • Future monitoring of operations recommended to determine effectiveness and need for upgrade of measures to include restriction of eastbound left-turns during peak hours (7 AM – 10AM and 3 PM – 7 PM) to limit queuing and operation impacts.

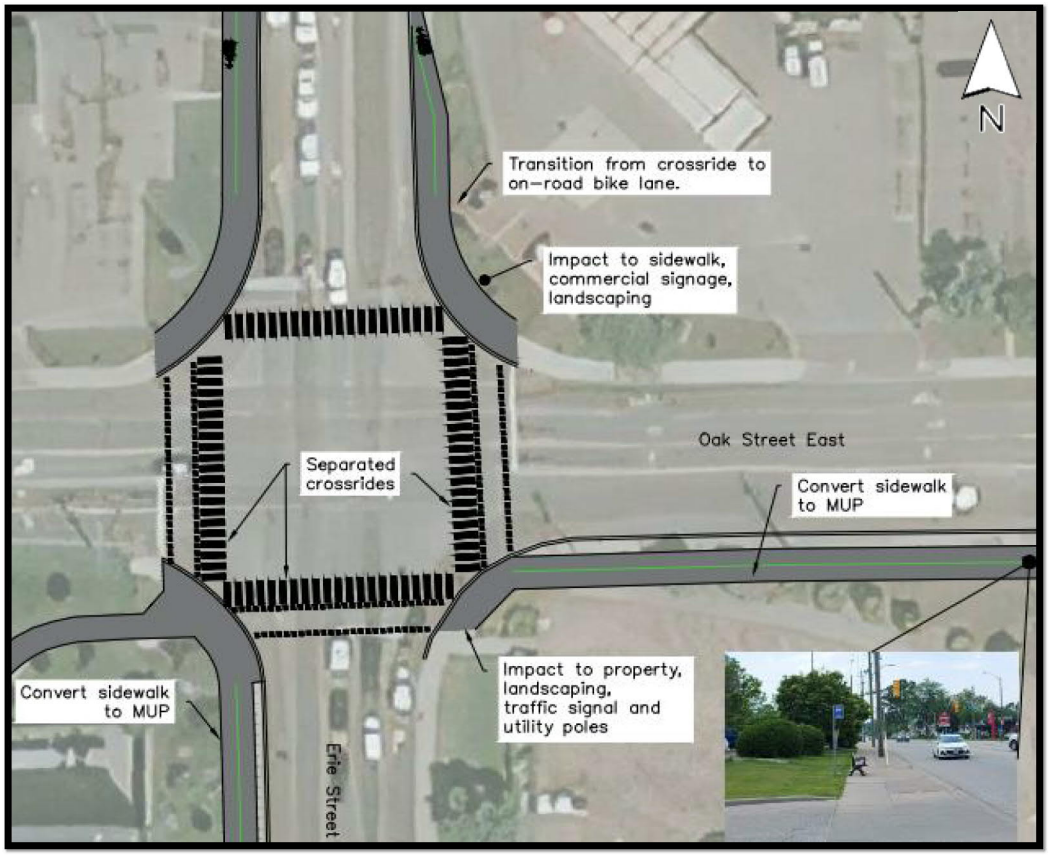
POTENTIAL STUDY AREA SOLUTIONS



Oak Street / Chestnut Street – Oak Street/Sherk Street (#4)
• Identify potential for all ages and abilities AT link between southbound bike lanes on Chestnut Street and Sherk street bikes lanes and trail on side of Oak Street. • Review southbound left turns from Chestnut Street on to Oak Street due to short offset to Sherk Street and westbound queued traffic blocking sightlines.
Proposed Solutions
• Bike boxes on east and west legs and crossride provide on each approach. • Provide MUP on the north side of Oak Street from Poplar Street to Chestnut Street for connectivity to bicycle facilities. • Addition of cycle tracks to connect to bike lanes and shared routes to MUPs. • Restriction of southbound left-turns during peak hours onto Oak Street (7 AM – 10AM and 3 PM – 7 PM).

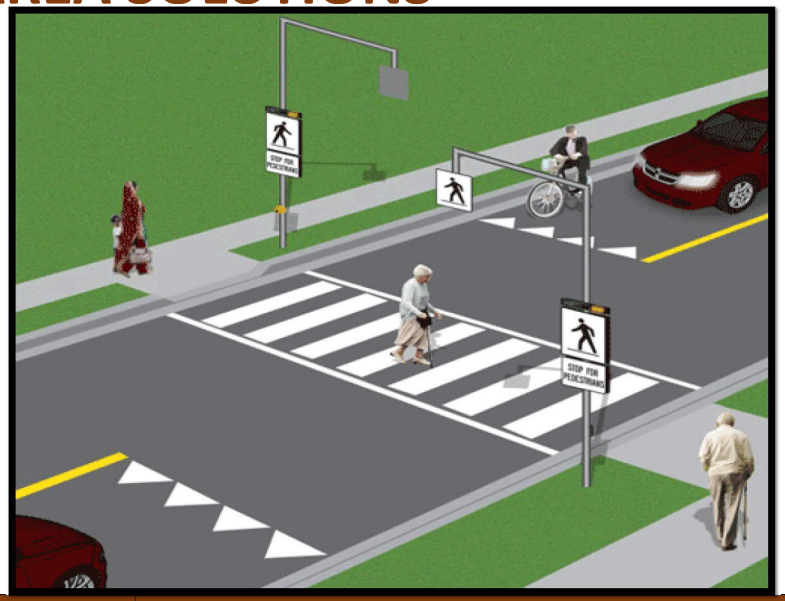
POTENTIAL STUDY AREA SOLUTIONS





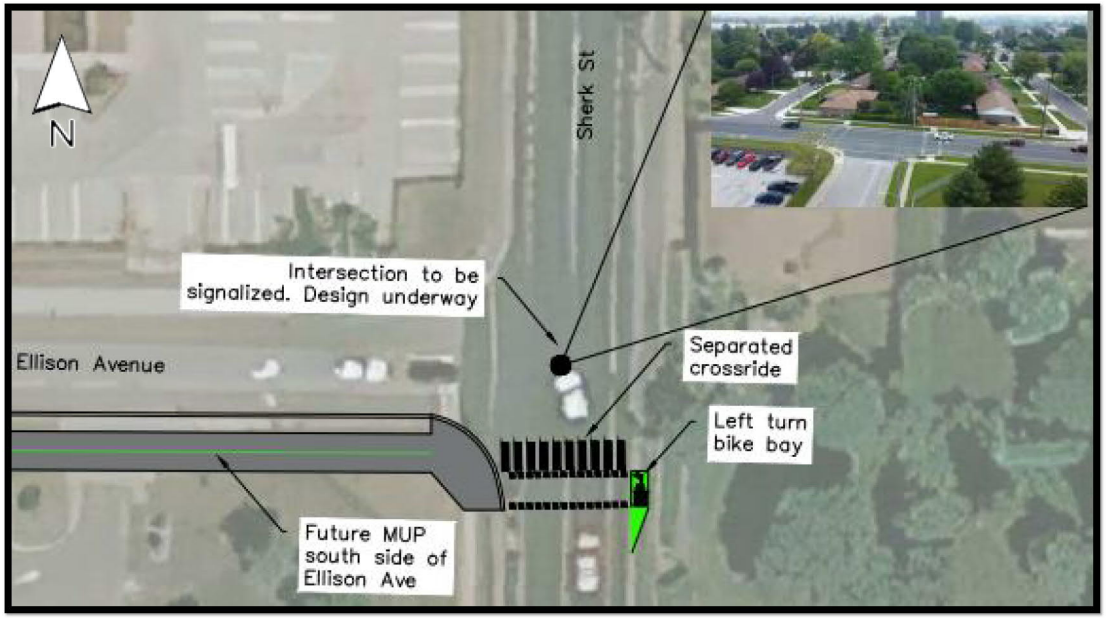
Oak Street / Fox Street (#5)	Erie Street / Oak Street (#6)
• Assess if crossride is an appropriate facility as identified in Leamington AT Plan to allow cyclists to go from trail on south side of Oak to northbound bike lane on Fox.	• Identify potential for all ages and facilities required at this location to interconnect AT facilities through the intersection .
Proposed Solutions	
• The proposed MUP on the northside of Oak Street will provide connectivity between Fox Street and crossride at the Oak Street and Sherk Street intersection. A mixed crossride at Fox Street connects its northbound bicycle lane to the proposed MUP. These connections thus eliminates the need for a mid-block crossride at Fox Street.	• Crossride and enhanced pavement marking for pedestrian crossing to be provided on east, west and south legs of intersection. A cycle track is proposed to connect the southbound bicycle lane to the crossride to provide additional safety for cyclist.

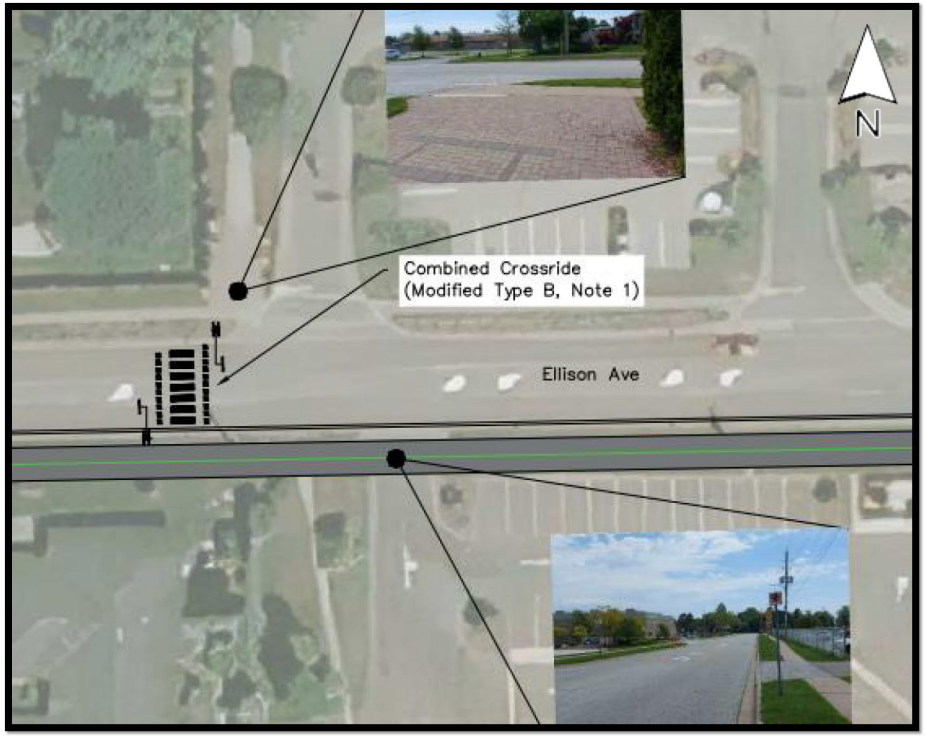
POTENTIAL STUDY AREA SOLUTIONS



Sherk Street/Highbury Canco Access (#7)	Sherk Street / William Avenue / NFFRC (#8)	Sherk Street / Pulford Street (#11)
• Review for possible pedestrian crossing and identify the type of crossing facility. • Review operational and design elements with respect to large seasonal vehicles or long trailer traffic during harvest period.	• Review allowable traffic operations at NFFRC and William Avenue. • Crossride identified for location in Leamington AT Plan to the allow completion of an AT facility via the NFFRC parking lot.	• Review the traffic control required at this intersection.
Proposed Solutions		
• Pedestrian crossing facility proposed on south side of access with new sidewalk connection in parking area. • Traffic signal not recommended at this time. • Signage proposed on Sherk Street to provide warning to drivers regarding tractor/multi-wagon access exit.	• Some sight lines impacts at NFFRC driveway stop bar; visibility improves at roadway edge of pavement. No change in allowable turning movement is proposed. Stop control operation to be maintained. • Mixed crossing proposed across the NFFRC driveway and north leg of intersection. • MUP across north edge of parking lot replacing a designated parallel parking area to connect to the west trail.	• Satisfactory operation under stop-control for both existing and future conditions, it is recommended this control be maintained. • Signalization requirements not met, thus traffic signals not recommended. • Roundabout not recommended due to property and cost impacts. • Mixed crossing across Sherk Street to connect bicycle lanes and signed route on Pulford Avenue proposed.

POTENTIAL STUDY AREA SOLUTIONS





Sherk Street / Ellison Avenue (#9)	Ellison Avenue (#21)
• Identify all ages and abilities facilities required at this location to interconnect AT facilities through the intersection.	• Review facility type for cyclists on Ellison between Sherk and the N/S trail based on anticipated traffic volumes determined through this study.

Proposed Solutions

- Signalization is planned for the Sherk Street and Ellison Avenue intersection by the MoL.
- A cycle track is proposed for the east side of the intersection and will provide connection from the northbound cycle lane to access to the proposed crossride across Sherk Street. Northbound and southbound cyclist can proceed through the intersection via designated bicycle crossing pavement markings.
- The existing shared lanes along Ellison Avenue are to be replaced with an MUP on the south side of Ellison Avenue, that will provide connectivity from the west trail to bicycle lanes on Sherk Street
- The existing pedestrian crossing on Ellison Avenue at Orchard Heights is to be removed and replaced by a combined / mixed crossride at the trail and will provide connectivity for pedestrians and cyclist between the trail / sidewalk to the south side MUP and school.

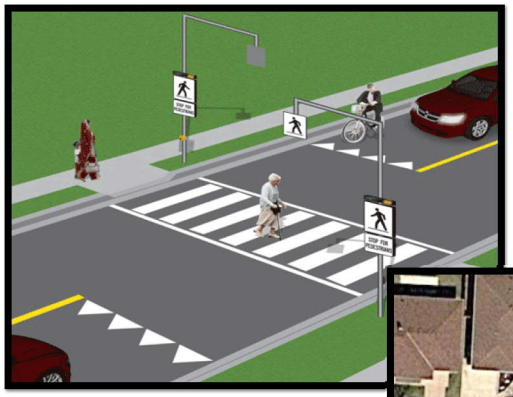
POTENTIAL STUDY AREA SOLUTIONS



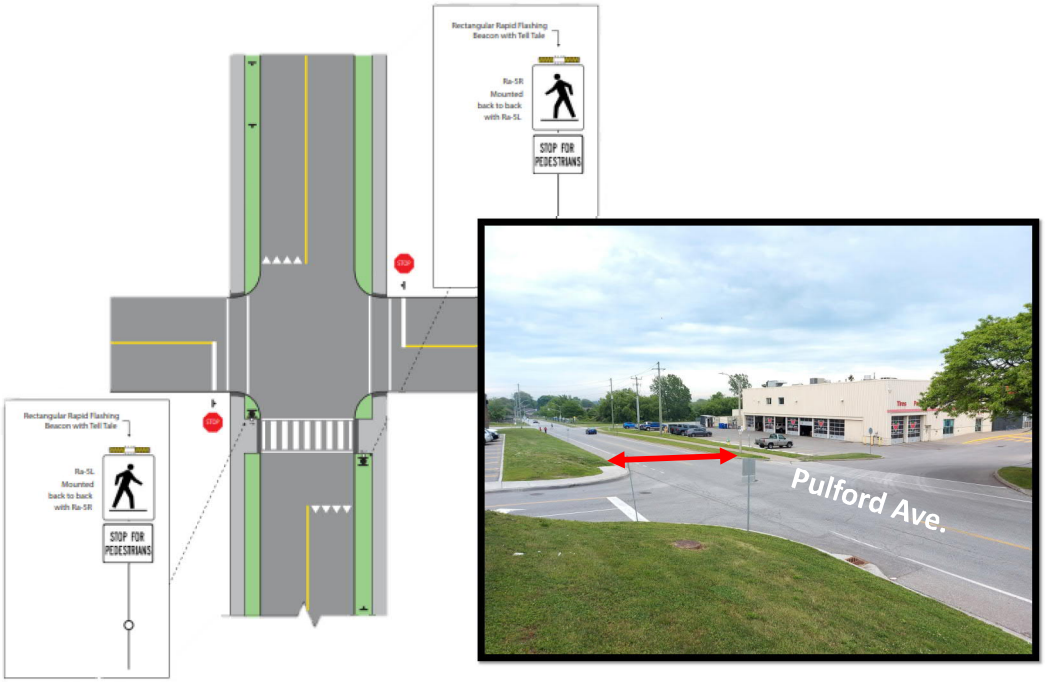


Sherk Street / Melrose Avenue (#10)
• Review possible closure of Melrose Avenue at Sherk Street.
Proposed Solutions
• The closure of Melrose Avenue at Erie Street to vehicular traffic has reduced connectivity and has thus eliminated Melrose Avenue as a throughfare. As such traffic turning onto Melrose Avenue from Sherk Street has reduced significantly, mitigating operational concerns at the intersection. • Closure of Sherk Street at Melrose Avenue is not currently recommended, with future monitoring of the intersection proposed.

POTENTIAL STUDY AREA SOLUTIONS

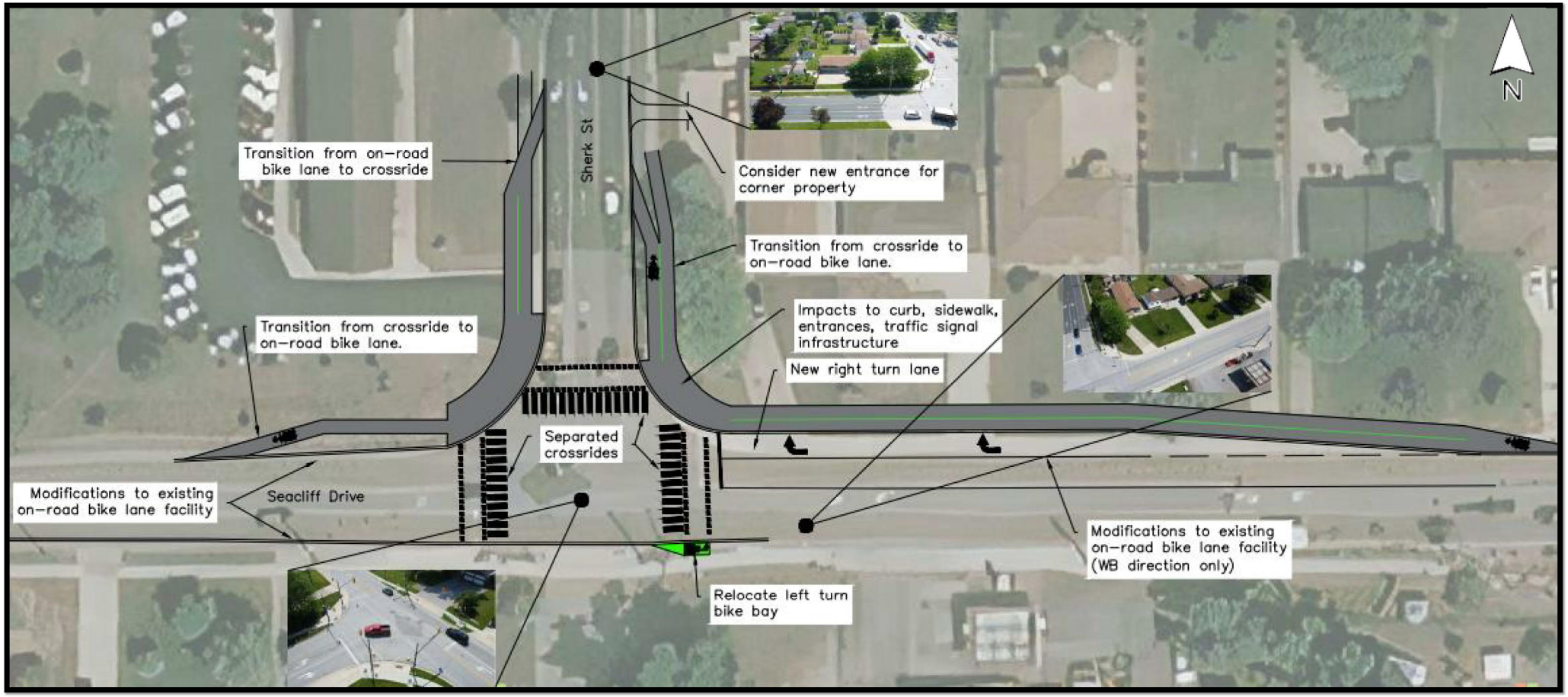






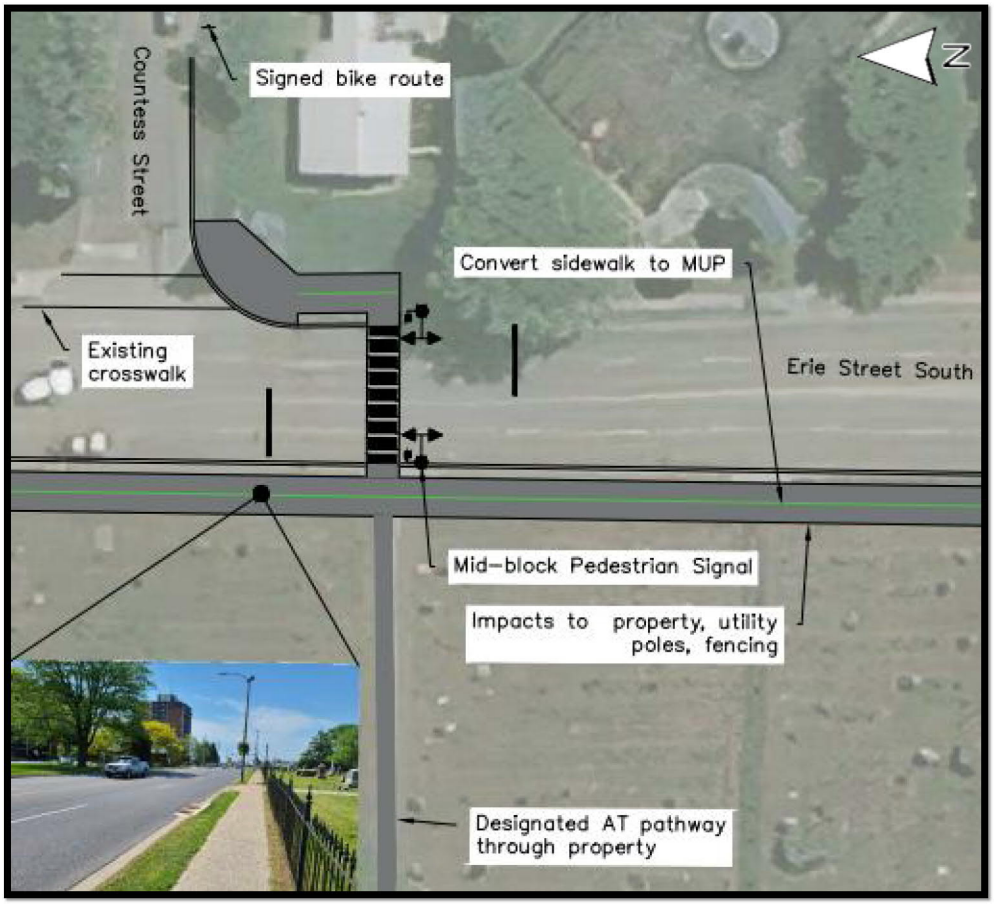
Sherk Street Pulford to Seacliff (#12)	Pulford / Canadian Tire/ County Fair Mall (#16)
• Review this section of roadway for sufficient pedestrian crossing opportunities and possible installation of crossing facility.	• Review this section of roadway for sufficient pedestrian crossing opportunities and possible installation of crossing facility.
Proposed Solutions	
• Pedestrian crossing facility to be considered based on future desire lines with development west of Sherk Street. Crossing at Margaret Street or Audrey Street per development connectivity. • Location good candidate with connectivity into new development and commercial area with potential for redevelopment of roadway and provides connectivity to available sidewalks on Pulford Avenue.	• Shared pedestrian and bicycle crossing facility proposed on east side of accesses connecting to existing sidewalk on north side and proposed MUP on south sides of Pulford Avenue.

POTENTIAL STUDY AREA SOLUTIONS



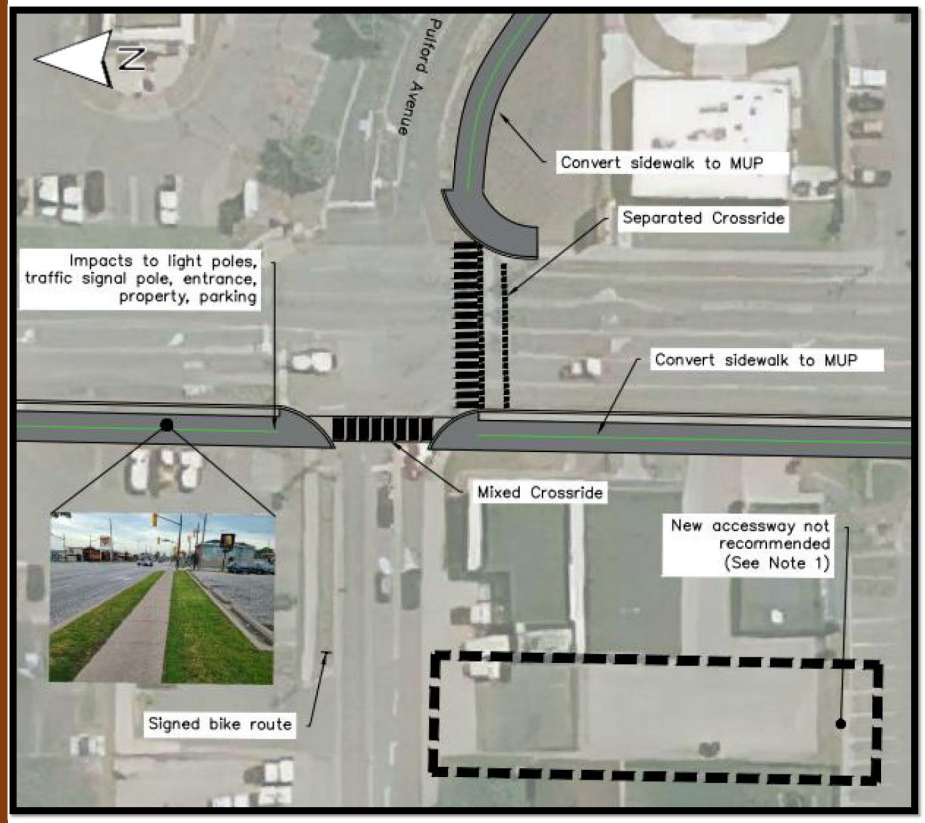
Seacliff Drive / Sherk Street (#13)
• Identify all ages and abilities facilities required at this location to interconnect AT facilities through the intersection.
Proposed Solutions
• Development of dedicated westbound right-turn lane proposed to accommodate future traffic demand, with impact to residential driveways anticipated. Operational changes proposed for corner lot residence include right in only from Seacliff Drive and new driveway access on Sherk Street. • Cycle tracks proposed to transition cyclists from bicycle lanes on one approach to crossrides or bicycle lanes on another. • Crossrides are to be provided across each approach of the intersection.

POTENTIAL STUDY AREA SOLUTIONS



Erie Street South (Oak to Pulford) (#14)
• Review options to provide cycling facilities • Concept for possible replacement of sidewalks with multi-use trail and / or relocating existing pedestrian crossing • Review section of roadway for pedestrian crossing opportunities
Proposed Solutions
• A 3-meter-wide multi-use path (MUP) along the west side of Erie Street from Oak Street to Seacliff Drive is proposed to accommodated bicycle traffic replacing the existing sidewalk. Lane reduction (road diet) to accommodate on-street bicycle lanes not considered a viable option due to significant capacity constraints and long delay for future conditions with road diet configuration. • A signalized mixed crossing for pedestrians and cyclist is proposed just south of the Countess Street intersection providing safe crossing opportunities between the east and west sides of Erie Street forming part of a wider east-west AT connection.

POTENTIAL STUDY AREA SOLUTIONS





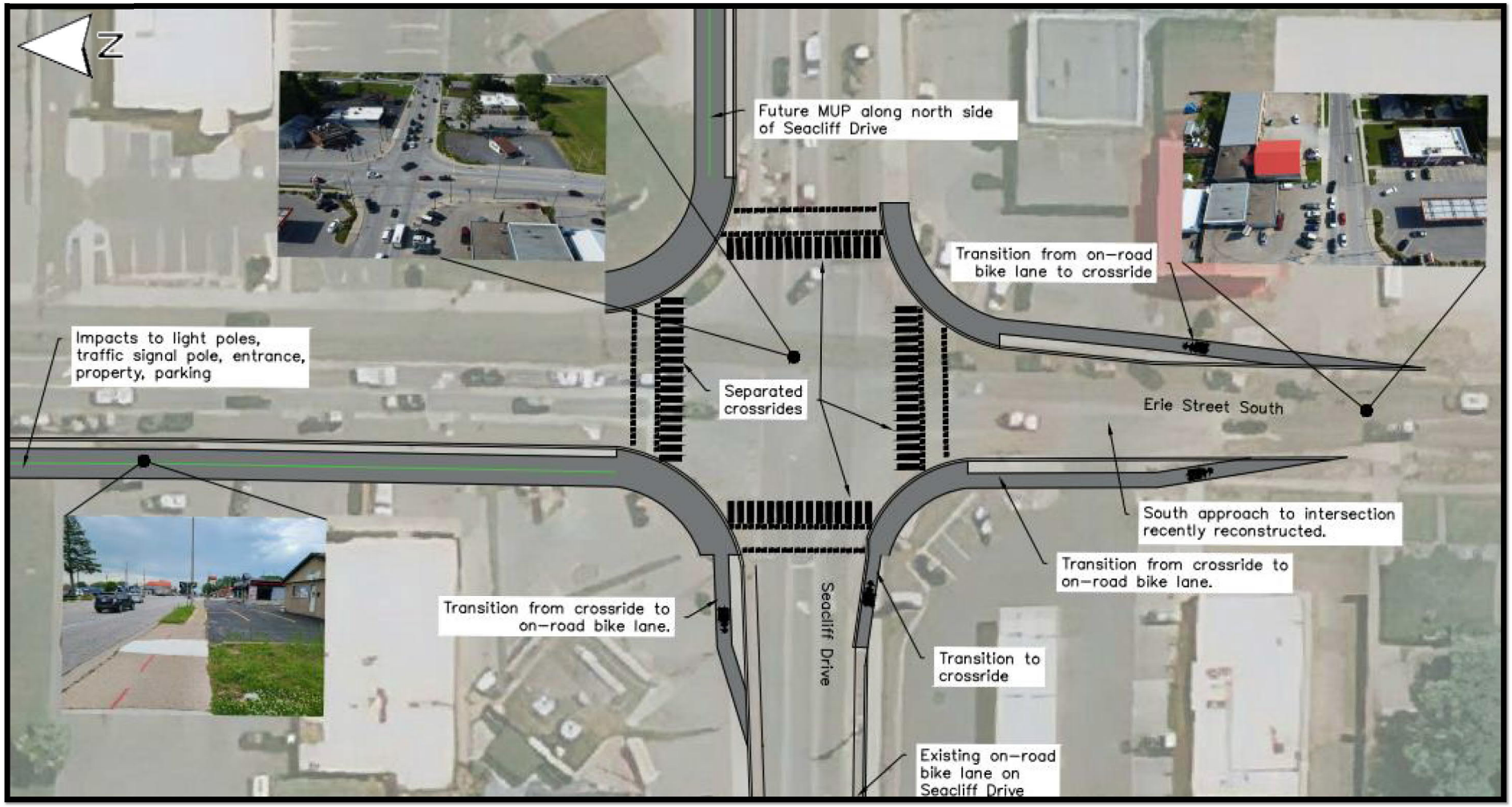


Erie Street / Pulford Avenue (#15)	Pulford Avenue (#17)
• Review traffic counts and signal timing plans to determine advanced phases for turning movements are warranted. • Identify all ages and abilities facilities required at this location to interconnect AT facilities through the intersection	• Review facility type for cyclists on Pulford between Erie and Sherk based on anticipated traffic determined through this study.

Proposed Solutions

- Signal timing was reviewed, and an advanced phase would negatively impact intersection operation at Erie Street and Pulford Avenue.
- An upgraded pedestrian crossing facility and crossride is proposed on the south approach of the Erie Street and Pulford Avenue intersection. The crossing facility will connect the Erie Street MUP to a proposed MUP on the southside of Pulford Avenue.
- The proposed southside Pulford Avenue MUP will connect Erie Street facilities to the east trail.
- Existing shared lanes on Pulford Avenue west of Erie Street are considered acceptable for future conditions with the addition of sharrows recommended. Consideration is to be given to a south side MUP should traffic volumes on Pulford Avenue grow significantly.

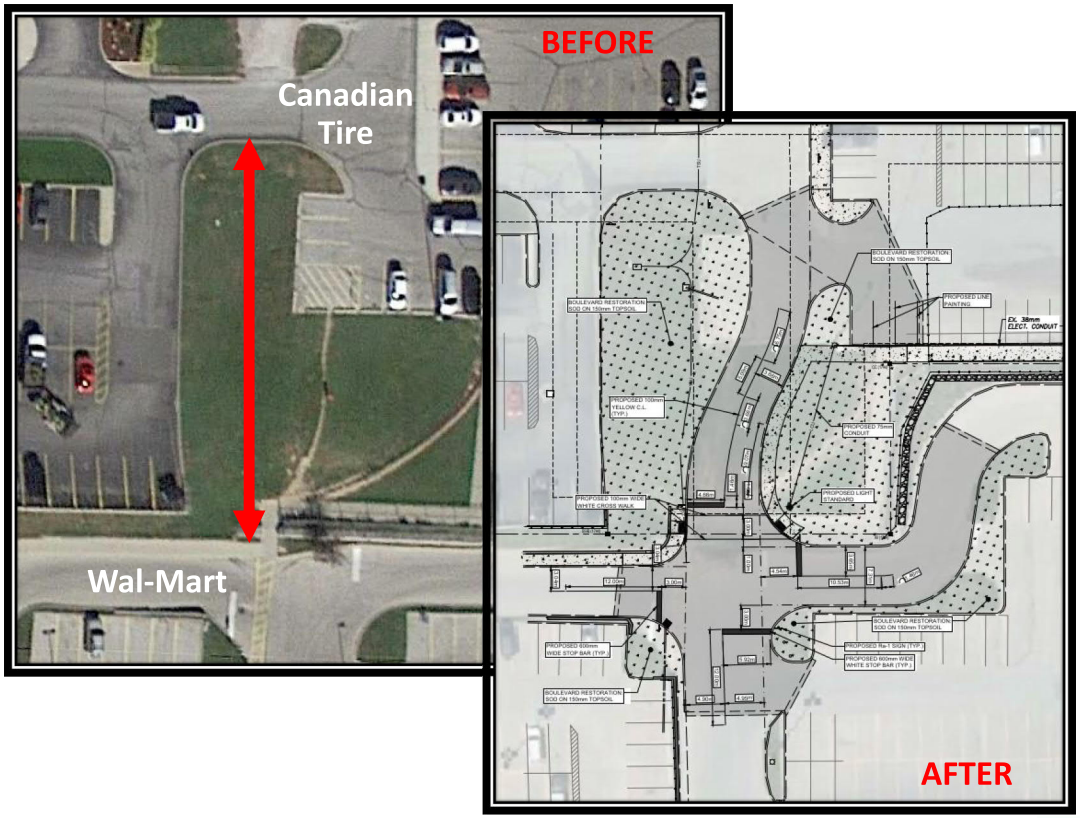
POTENTIAL STUDY AREA SOLUTIONS

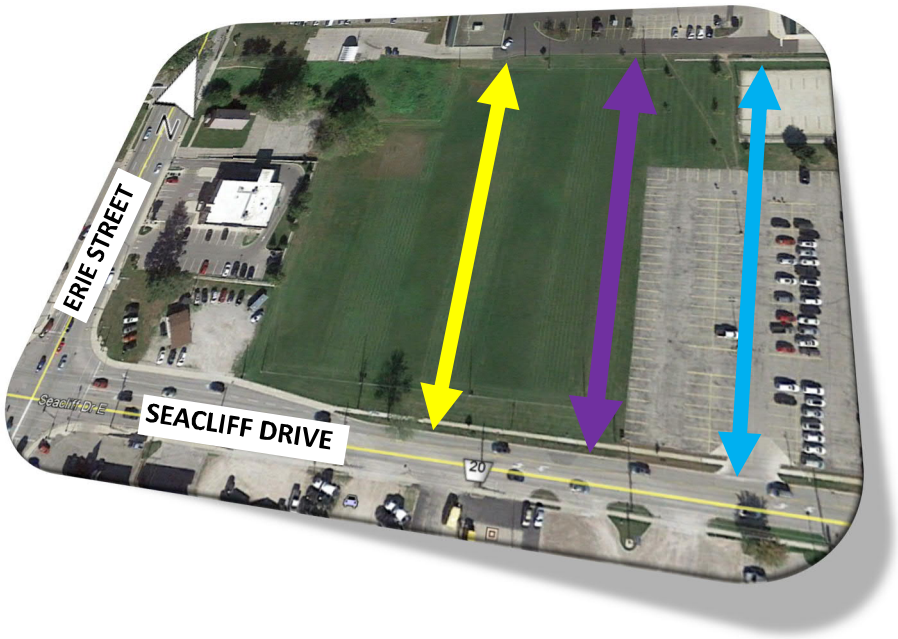


Erie Street / Seacliff Drive (#19)
• Identify all ages and abilities facilities required at this location to interconnect existing and planned AT facilities through the intersection

Proposed Solutions
• Upgraded pedestrian crossing and crossrides to be provided on each approach of the intersection. • The MUPs proposed on the north side of Seacliff Drive and west side of Erie Street will connect to crossride facilities at the Seacliff Drive and Erie Street intersection. • Cycle tracks are proposed to connect existing bicycle lanes on Seacliff Drive and Erie Street to proposed MUP and crossride facilities.

POTENTIAL STUDY AREA SOLUTIONS

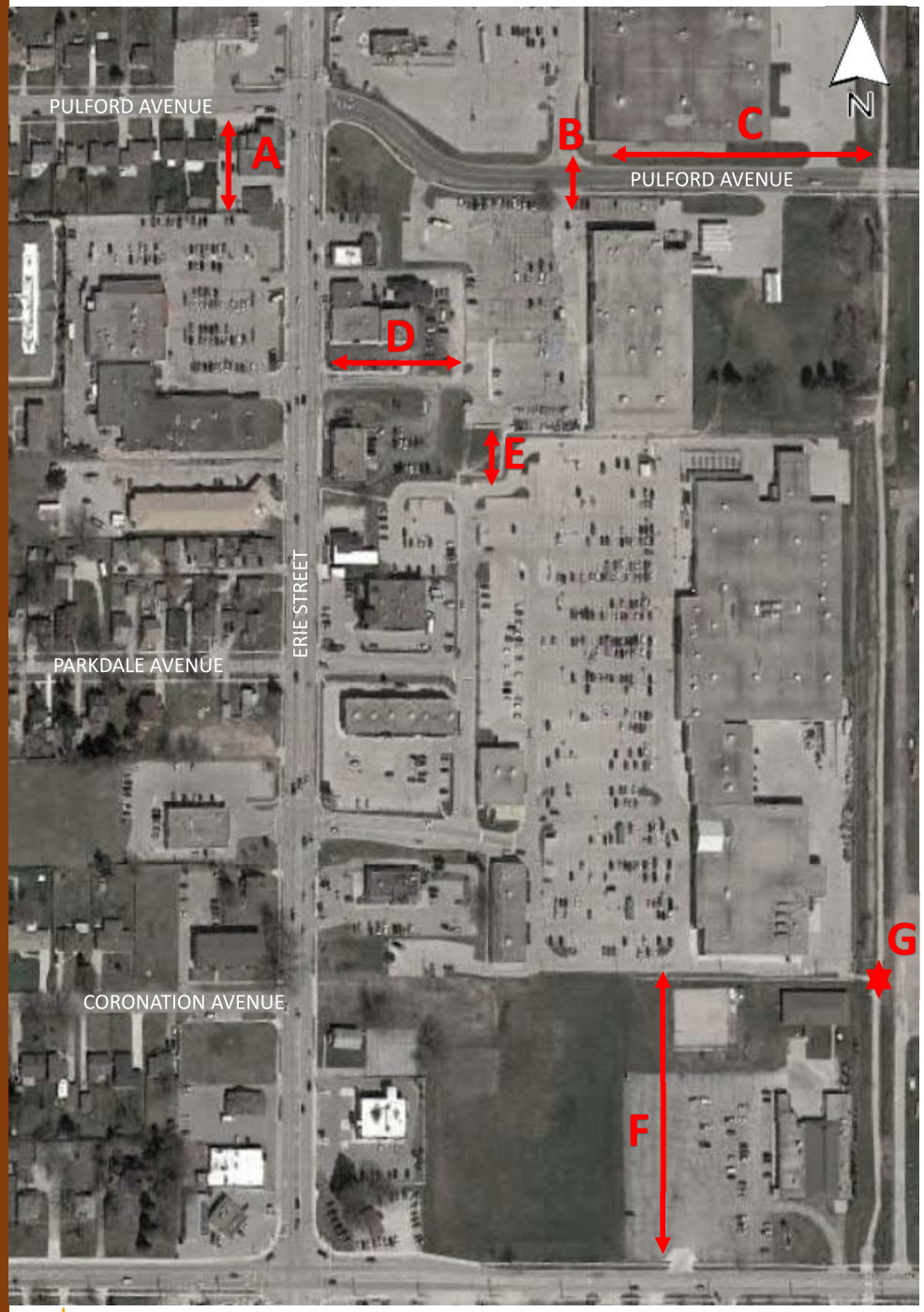




Erie Street South (#18)	Seacliff Drive East at 16 Seacliff Drive East (#20)
• Candidate for a road diet if traffic patterns could be shifted to relieve congestion • Interconnection of commercial properties 262 Erie Street South (Canadian Tire) and 280-304 Erie Street South (Walmart Plaza), and a new connection to from 280-304 Erie Street S to Seacliff	• Review this section of roadway for sufficient pedestrian crossing opportunities and possible installation of PXO(s) or other types of crossings based on actual, desire Line

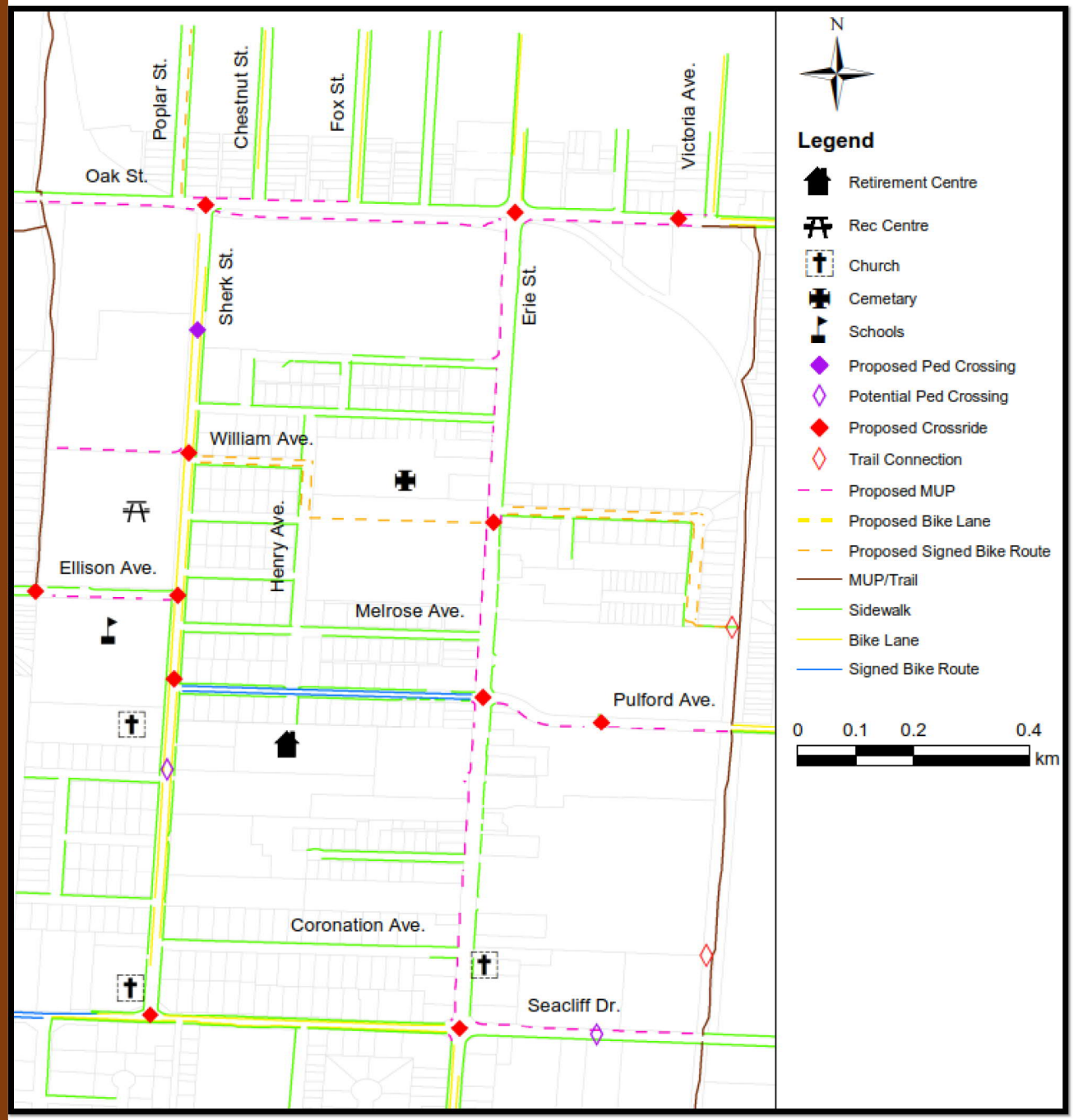
Proposed Solutions
• Road diet was not considered feasible for Erie Street and a 3-meter-wide MUP along the west side of Erie Street was proposed. A potential connection between Canadian Tire and Wal-Mart properties will reduced traffic volumes on Erie Street. • Connection to Seacliff Drive from Wal-Mart plaza recommended with accommodation for pedestrian crossing facility to be provided. Pedestrian facility to be based on intersection type/location at Seacliff Drive. Inter-parcel connection location may potentially have impacts on Seacliff Drive intersection operations and Roma Club property and access.

POTENTIAL STUDY AREA SOLUTIONS



- **A** – Close proximity to Erie Street and Pulford Avenue intersection access will impact intersection operation. **Not recommended**
- **B** – Pedestrian connection will improve safety for users. **Recommended**
- **C** – Grade change at plaza and MUP proposed on southside of street with connectivity to east trail. **Not Recommended**
- **D** – Worn path used by pedestrians should be formalized to provide safe internal connection. **Recommended**
- **E** – Will reduce turning movements at accesses on Erie Street and allow trips between parcels internally. **Recommended**
- **F** – Connection will increase connectivity and remove some volume from Erie Street. Impacts to existing parking lots and connection location to be considered. **Recommended**
- **G** – Existing connection refurbishment of steps and hand rails. **Recommended**

FUTURE ACTIVE TRANSPORTATION



To improve connectivity and eliminate gaps, future active transportation (AT) network proposes:

- Continuous AT connections
- Oak Street & Erie Street MUP
- New network crossings

STUDY AREA INITIATIVES



Engagement and educational campaigns that focus on the availability and safe use of existing and future active transportation facilities and programmes that increases safe non-auto movement of individuals thought the study area.

Considerations to be given to forming a commercial / community working group that will work with municipal staff to collectively develop strategies, that may reduce vehicle traffic on main corridors such as providing carshare, rideshare, delivery/pick up services, that would be benefit everyday operations in core area.



NEXT STEPS

Following this Public Engagement Session, the project team will:

- Refine solutions based on public feedback and review with MoL
- Generate recommendations for study area
- Finalize Study and inform Council
- Final Report will be provided in the Municipality's website for public review

All project updates will be available via the project website: www.leamingtontrafficstudy.ca

Please use this link to provide feedback to the project team during the comment period **August 16 to September 3** or contact one of the project team members directly. We would greatly appreciate receiving any comments or questions that you may have.

Thank you

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APPENDIX I – CYCLING FACILITY GUIDELINES

McINTOSH PERRY









Ontario

Book 18

Ontario Traffic Manual

June 2021

Cycling Facilities

5.2.3 Step 1: Pre-select Facility Type Options

Facility pre-selection is undertaken through the use of a nomograph which helps practitioners identify an appropriate level of separation and a set of reasonable facility types for a given context based on the motor vehicle posted speed (or operating speed where speeds significantly differ from posted limits) and average daily traffic volume. Separate nomographs have been provided for urban / suburban and rural contexts in **Figure 5.5 and Figure 5.6**. The outcome of Step 1 is not conclusive in itself. It is very important that the pre-selected facility types be validated through Step 2 and the design decision and rationale documented in Step 3.

The nomograph thresholds are generally consistent with guidance from other frequently used cycling guidelines including NACTO (USA)[5], TAC (Canada)[6], FHWA (USA)[7], and MTO[8].

The guidance is intended for corridors with one to three lane cross sections. Streets with two or more through lanes in each direction should at a minimum have a buffered bike lane or buffered paved shoulder, with physical separation being preferred.

If evidence suggests that operating speeds are higher than the posted limit, practitioners may consider using the 85th percentile operating speed as well as implementing traffic calming measures or increasing enforcement to decrease operating speeds.

Both urban / suburban and rural nomographs have transition zones between the solid colours. These zones represent a set of speed and volume parameters that may be compatible with either facility category. Further evaluation and consideration may be required to make this determination.

5.2.4 Step 2: Detailed & Contextual Evaluation

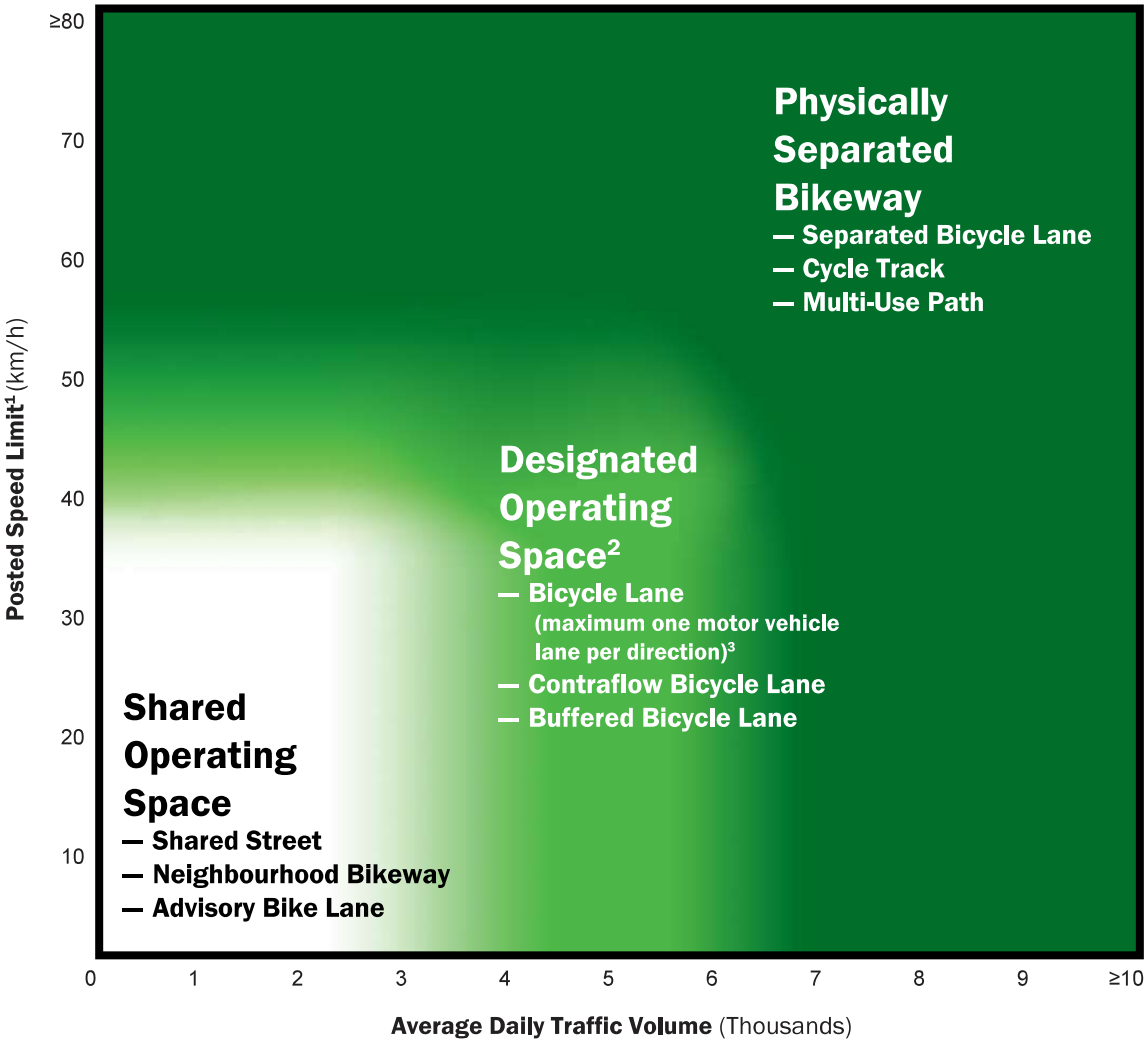
The nomograph tool in Step 1 helps in pre-selecting the preferred level of separation and identifying a set of facility type options. However, the facility may not always be the most appropriate or practical solution given site-specific design factors. Completion of Step 2 is critical to ensure that the assumptions embedded in Step 1 of the process are confirmed and validated.

In Step 2, practitioners should conduct desktop reviews and field investigations to better understand the context of the corridor. Site-specific conditions should be documented in the form of a data review summary, field notes, photos and observations or public and stakeholder feedback. The intent is to have sufficient evidence to confirm whether or not the level of separation and facility type pre-selected in Step 1 are suitable for the context of the roadway.

A set of application heuristics or knowledge-based rules have been developed to aid practitioners in Step 2 of the facility selection process. These heuristics link specific site conditions to appropriate facility types and supplementary design features.

The application heuristics are particularly important when the nomograph indicates that a corridor is in the nomograph transition zone. Generally, a higher level of separation in these contexts is preferred unless there are factors suggesting this may be unnecessary or infeasible. If the level of separation or facility type pre-selected in Step 1 is not compatible with the site context, a new facility should be chosen and re-evaluated. The

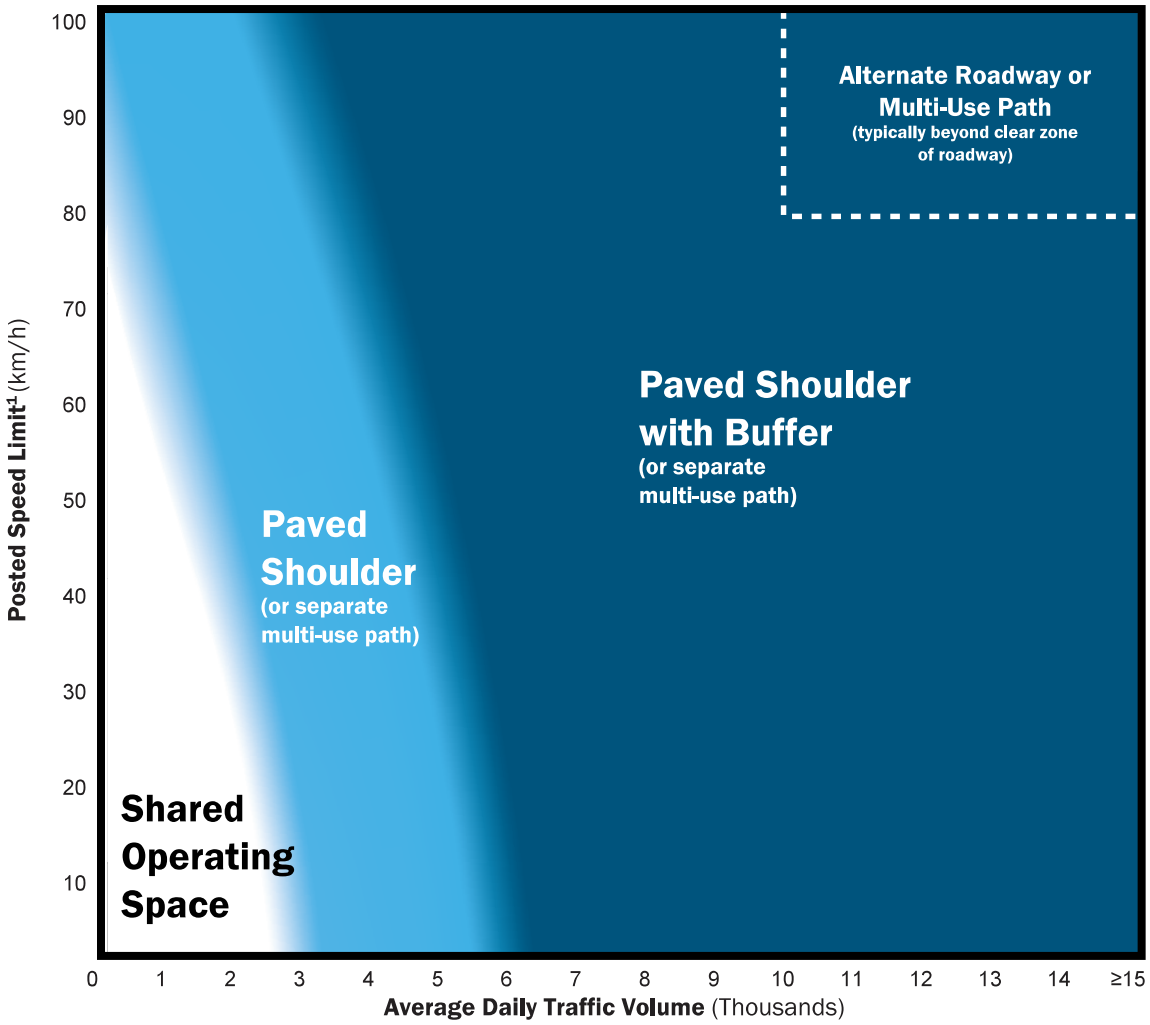
Desirable Cycling Facility Pre-Selection Nomograph Urban/Suburban Context (Step 1)



1 Operating speeds are assumed to be similar to posted speeds. If evidence suggests this is not the case, practitioners may consider using 85th percentile speeds or implementing measures to reduce operating speeds.
2 Physically separated bikeways may always be considered in the designated operating space area of the nomograph.
3 On roadways with two or more lanes per direction (including multi-lane one-way roadways), a buffered bicycle lane should be considered the minimum with a typical facility being a physically separated bikeway.

Figure 5.5 – Desirable Cycling Facility Pre-selection Nomograph — Urban/Suburban Context

Desirable Cycling Facility Pre-Selection Nomograph Rural Context[1] (Step 1)



1 In rural town/hamlet/village contexts, the urban/suburban nomograph may be used.
2 Operating speeds are assumed to be similar to posted speeds. If evidence suggests this is not the case, practitioners may consider using 85th percentile speeds or implementing measures to reduce operating speeds.
3 Paved shoulders should ideally be implemented where feasible along all designated bike routes, regardless of whether recommended by the nomograph
4 If the paved shoulder is recommended, consider incorporating a buffer as well if space allows
5 For roads with a posted speed limit of 80km/hr or higher a paved shoulder of 1.2 to 1.5 m, an additional 0.5 m to 1.0 m buffer should be considered, particularly if the roadway is a common truck route, due to the wind velocity impact of passing trucks

Figure 5.6 – Desirable Cycling Facility Pre-selection Nomograph — Rural Context

conclusions and potential next steps should be documented as part of Step 3.

The application heuristics have been grouped into the following functional categories: roadway characteristics, feasibility and attractiveness.

Roadway Characteristics

1. Motor vehicle speed
2. Motor vehicle volume and number of traffic lanes
3. Function of street, road or highway
4. Vehicle mix
5. On-street parking
6. Pedestrian activity
7. Frequency of intersections and crossings

Feasibility

8. Available space
9. Anticipated costs
10. Type of roadway improvement project

Attractiveness

11. User skill level and stress tolerance
12. Level of cycling usage
13. Function of route within the cycling network

Table 5.3 provides a visual summary of the road characteristic heuristics. Roadway characteristics are typically easier to quantify than feasibility and attractiveness considerations, which tend to be more qualitative in nature and are therefore not categorized in a table. Before applying the information in **Table 5.3**, or conducting analysis from the other application heuristics, the practitioner should have a concrete understanding what each heuristic means and the associated implications for facility selection.

5.2.4.1 *Roadway Characteristics*

Motor vehicle speed: As the speed differential between motorists and people cycling increases, so does the collision risk for cyclists using that roadway. Moreover, the absolute speed of motor vehicles is directly related to the risk of serious injury or death for a person cycling. When selecting a facility type, the 85th percentile operating speed should be considered, since even small numbers of vehicles traveling at high speeds can increase risk and degrade the comfort level of people cycling. If high outlying speeds are observed, consider measures to calm traffic and deter speeding.

Motor vehicle volume and number of traffic lanes: As motor vehicle volume increases, so does the frequency of passing events for people cycling using the roadway. This increases the level of stress experienced by a person cycling, and increases the risk of collisions. The number of traffic lanes also affects level of stress and, in particular, the complexity and number of conflict points that a road user has to manage at intersections. For planning purposes, the future year traffic volumes should be used when selecting an appropriate facility type. While the values presented are AADTs, peak hour volumes and seasonal variability should also be considered when selecting a facility type.

Table 5.3 – Roadway Characteristics Application Heuristics Summary

	Shared Roadway	Neighbourhood Bikeway	Rural Paved Shoulder	Advisory Bicycle Lane	Bicycle Lane	Buffered Bicycle Lane	Separated Bicycle Lane	Cycle Track	Multi-Use Path
Motor vehicle speed									
30 km/h or less	✓	✓	?	?					
40 km/h	?	?	?	✓	✓	✓	✓	✓	✓
50 km/h			?	✓	✓	✓	✓	✓	✓
60 km/h			?			?	✓	✓	✓
70 to 90 km/h			?					✓	✓
Over 90 km/h								✓	✓
Motor vehicle volumes									
<1,500 vehicles/day	✓	✓	?	?	?	?			
1,500 to 3,000 vpd	?	?	?	✓	✓	✓	✓	✓	✓
3,000 to 6,000 vpd			?	?	?	?	✓	✓	✓
6,000 to 10,000 vpd			?				✓	✓	✓
>10,000 vpd							?	✓	✓
Function of street/road/highway									
Access roads (local streets)	✓	✓	✓	?	?	?			
Both mobility and access roads (minor collectors)			?	?	✓	✓	✓	✓	✓
Mobility roads (major collectors and arterials)			?		?	?	✓	✓	✓
Vehicle mix									
More than 30 trucks/buses per hour in curb lane			?			?	✓	✓	✓
Bus stops located along route			?		?	?	✓	✓	✓
Pedestrian activity									
Low pedestrian volumes	✓	✓	✓	✓	✓	✓	✓	✓	✓
High pedestrian volumes	✓	✓		✓	✓	✓	✓	✓	?

✓	Typically appropriate for the context
?	Requires further context specific evaluation

	Shared Roadway	Neighbourhood Bikeway	Rural Paved Shoulder	Advisory Bicycle Lane	Bicycle Lane	Buffered Bicycle Lane	Separated Bicycle Lane	Cycle Track	Multi-Use Path
On-street parking									
Parallel parking; low turnover	?	?		?	?	?	✓	✓	✓
Parallel parking; high turnover							✓	✓	✓
Perpendicular or angle parking							✓	✓	✓
Frequency of intersections and crossings									
Limited intersections and driveway crossings	?	?	✓	✓	✓	✓	✓	✓	✓
Low-volume driveways or unsignalized intersections	✓	✓	✓	✓	✓	✓	✓	✓	✓
Frequent high-volume driveways or unsignalized intersections					?	?	✓	✓	?
Signalized intersections with high-volume turning conflicts						?	✓	✓	?

✓	Typically appropriate for the context
?	Requires further context specific evaluation

Function of street, road or highway: While generally reflected in motor vehicle volumes, the function of a roadway for access and mobility on local roads, minor collectors and major arterials differs and should be considered in cycling facility decisions. The significance of this factor will be higher in cases where volume or speed data are unavailable.

Vehicle mix: Heavy vehicles, such as trucks and buses have a greater influence on people cycling than light passenger vehicles. This is partly due to the larger difference in mass between cyclists and heavy commercial vehicles, and the increased severity of any resulting collision. Air turbulence generated by these high-sided vehicles also has a more significant impact on the difficulty of controlling a bicycle. As the volume of heavy vehicles increases, so too does the desirability of providing buffers or physical separation between people cycling and motorized traffic. Stationary trucks and buses may also occupy a cycling facility if adequate separation techniques are not used. When this occurs, it forces people cycling to merge into motor vehicle lanes elevating the level of stress cyclists experience. These stationary



Designing for All Ages & Abilities

Contextual Guidance for High-Comfort Bicycle Facilities



NACTO
National Association of City Transportation Officials

December 2017

Streets that are safe and comfortable for All Ages & Abilities bicycling are critical for urban mobility.

NACTO cities are leading the way in designing streets that are truly safe and inviting for bicyclists of All Ages & Abilities and attract wide ridership. This guidance—developed by practitioners from cities across North America—builds on NACTO's *Urban Bikeway Design Guide* and sets an **All Ages & Abilities** criteria for selecting and implementing bike facilities. Building bicycle infrastructure that meets this criteria is an essential strategy for cities seeking to improve traffic safety,[1] reduce congestion,[2] improve air quality and public health,[3] provide better and more equitable access to jobs and opportunities,[4] and bolster local economies.[5]

This All Ages & Abilities facility selection guidance is designed to be used in a wide variety of urban street types. It considers contextual factors such as vehicular speeds and volumes, operational uses, and observed sources of bicycling stress. In doing so, it allows planners and engineers to determine when, where, and how to best combine traffic calming tools, like speed reduction and volume management, with roadway design changes, like full lane separation, to reduce traffic fatalities and increase cycling rates and rider comfort.

The All Ages & Abilities criteria is a national and international best practice that should be adopted for all bicycle facility design and network implementation; lesser accommodation should require additional justification. Along with a problem-solving approach to street design, the All Ages & Abilities benchmark should be applied across a city's entire bicycle network to grow bicycling as a safe, equitable mode for the majority of people.

All Ages & Abilities Bike Facilities are ...

Safe

More people will bicycle when they have safe places to ride, and more riders mean safer streets. Among seven NACTO cities that grew the lane mileage of their bikeway networks 50% between 2007–2014, ridership more than doubled while risk of death and serious injury to people biking was halved.[6] Better bicycle facilities are directly correlated with increased safety for people walking and driving as well. Data from New York City showed that adding protected bike lanes to streets reduced injury crashes for all road users by 40% over four years.[7]

Comfortable

Bikeways that provide comfortable, low-stress bicycling conditions can achieve widespread growth in mode share. Among adults in the US, only 6–10% of people generally feel comfortable riding in mixed traffic or painted bike lanes.[8] However, nearly two-thirds of the adult population may be interested in riding more often, given better places to ride, and as many as 81% of those would ride in protected bike lanes.[9] Bikeways that eliminate stress will attract traditionally under-represented bicyclists, including women, children, and seniors.

Equitable

High-quality bikeways expand opportunities to ride and encourage safe riding. Poor or inadequate infrastructure—which has disproportionately impacted low-income communities and communities of color—forces people bicycling to choose between feeling safe and following the rules of the road, and induces wrong-way and sidewalk riding. Where street design provides safe places to ride and manages motor vehicle driver behavior, unsafe bicycling decisions disappear,[11] making ordinary riding safe and legal and reaching more riders.



SE Mill Street, PORTLAND
(photo credit: Portland Bureau of Transportation)

Who is the "All Ages & Abilities" User?

To achieve growth in bicycling, bikeway design needs to meet the needs of a broader set of potential bicyclists. Many existing bicycle facility designs exclude most people who might otherwise ride, traditionally favoring very confident riders, who tend to be adult men. When selecting a bikeway design strategy, identify potential design users in keeping with both network goals and the potential to broaden the bicycling user base of a specific street.



Children

School-age children are an essential cycling demographic but face unique risks because they are smaller and thus less visible from the driver's seat than adults, and often have less ability to detect risks or negotiate conflicts.



Seniors

People aged 65 and over are the fastest growing population group in the US, and the only group with a growing number of car-free households.[12] Seniors can make more trips and have increased mobility if safe riding networks are available. Bikeways need to serve people with lower visual acuity and slower riding speeds.



Women

Women are consistently under-represented as a share of total bicyclists, but the share of women riding increases in correlation to better riding facilities.[13] Concerns about personal safety including and beyond traffic stress are often relevant. Safety in numbers has additional significance for female bicyclists.



People Riding Bike Share

Bike share systems have greatly expanded the number and diversity of urban bicycle trips, with over 28 million US trips in 2016.[14] Riders often use bike share to link to other transit, or make spontaneous or one-way trips, placing a premium on comfortable and easily understandable bike infrastructure. Bike share users range widely in stress tolerance, but overwhelmingly prefer to ride in high-quality bikeways. All Ages & Abilities networks are essential to bike share system viability.



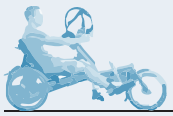
People of Color

While Black and Latinx bicyclists make up a rapidly growing segment of the riding population, a recent study found that fewer than 20% of adult Black and Latinx bicyclists and non-bicyclists feel comfortable in conventional bicycle lanes; fear of exposure to theft or assault or being a target for enforcement were cited as barriers to bicycling.[15] Long-standing dis-investment in street infrastructure means that these riders are disproportionately likely to be killed by a car than their white counterparts.[16]



Low-Income Riders

Low-income bicyclists make up half of all Census-reported commuter bicyclists, relying extensively on bicycles for basic transportation needs like getting to work.[17] In addition, basic infrastructure is often deficient in low-income neighborhoods, exacerbating safety concerns. An All Ages & Abilities bikeway is often needed to bring safe conditions to the major streets these bicyclists already use on a daily basis.



People with Disabilities

People with disabilities may use adaptive bicycles including tricycles and recumbent handcycles, which often operate at lower speeds, are lower to the ground, or have a wider envelope than other bicycles. High-comfort bicycling conditions provide mobility, health, and independence, often with a higher standard for bike infrastructure needed.



People Moving Goods or Cargo

Bicycles and tricycles outfitted to carry multiple passengers or cargo, or bicycles pulling trailers, increase the types of trips that can be made by bike, and are not well accommodated by bicycle facilities designed to minimal standards.



Confident Cyclists

The small percentage of the bicycling population who are very experienced and comfortable riding in mixed motor vehicle traffic conditions are also accommodated by, and often prefer, All Ages & Abilities facilities, though they may still choose to ride in mixed traffic.

Choosing an All Ages & Abilities Bicycle Facility

This chart provides guidance in choosing a bikeway design that can create an All Ages & Abilities bicycling environment, based on a street's basic design and motor vehicle traffic conditions such as vehicle speed and volume. This chart should be applied as part of a flexible, results-oriented design process on each street, alongside robust analysis of local bicycling conditions as discussed in the remainder of this document.

Users of this guidance should recognize that, in some cases, a bicycle facility may fall short of the All Ages & Abilities criteria but still substantively reduce traffic stress. Jurisdictions should not use an inability to meet the All Ages & Abilities criteria as reason to avoid implementing a bikeway, and should not prohibit the construction of facilities that do not meet the criteria.

Contextual Guidance for Selecting All Ages & Abilities Bikeways

Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		*Any*	*Any of the following:* high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts‡	**Protected Bicycle Lane**
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	**Shared Street**
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	**Bicycle Boulevard**
≤ 25 mph	≤ 500 – 1,500			
	≤ 1,500 – 3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	**Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane**
	≤ 3,000 – 6,000			**Buffered or Protected Bicycle Lane**
	Greater than 6,000			**Protected Bicycle Lane**
	Any	Multiple lanes per direction		
Greater than 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	**Protected Bicycle Lane, or Reduce Speed**
		Multiple lanes per direction		**Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed**
	Greater than 6,000	*Any*	*Any*	**Protected Bicycle Lane, or Bicycle Path**
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		*Any*	High pedestrian volume	**Bike Path with Separate Walkway or Protected Bicycle Lane**
			Low pedestrian volume	**Shared-Use Path or Protected Bicycle Lane**

* While posted or 85th percentile motor vehicle speed are commonly used design speed targets, 95th percentile speed captures high-end speeding, which causes greater stress to bicyclists and more frequent passing events. Setting target speed based on this threshold results in a higher level of bicycling comfort for the full range of riders.

† Setting 25 mph as a motor vehicle speed threshold for providing protected bikeways is consistent with many cities' traffic safety and Vision Zero policies. However, some cities use a 30 mph posted speed as a threshold for protected bikeways, consistent with providing Level of Traffic Stress level 2 (LTS 2) that can effectively reduce stress and accommodate more types of riders.[18]

‡ Operational factors that lead to bikeway conflicts are reasons to provide protected bike lanes regardless of motor vehicle speed and volume.

The All Ages & Abilities Design Toolbox

Five major types of bikeway provide for most bike network needs, based on the contextual guidance on page 4. This list is organized from more to less shared operation with automobiles. Each facility type is appropriate as an All Ages & Abilities bikeway in relevant street contexts. The NACTO *Urban Bikeway Design Guide* provides detailed guidance on bikeway facilities.



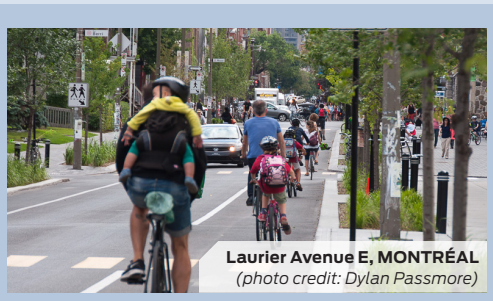
Argyle Street, CHICAGO
(photo credit: Chicago DOT)

Low-Speed Shared Streets allow bicyclists to comfortably operate across the entire roadway. Shared streets target very low operating speeds for all users, typically no greater than 10 mph. The volume of people walking and bicycling should be much greater than vehicle volume to maintain comfort. Issues for bicycling in shared environments arise from conflicts with people walking, who may be expected at any point across the street's width. Materials and street edges must be appropriate for bicycling; materials are often varied to delineate road space, but any seams or low mountable curbs must be designed to avoid creating fall hazards for bicyclists.



SE Taylor Street, PORTLAND
(photo credit: Greg Raisman)

Bicycle Boulevards (or neighborhood greenways) provide continuous comfortable bicycle routes through the local street network. Bike Boulevards are characterized by slow motor vehicle speeds and low volumes. Sometimes these are present by the very nature of the street and its function (e.g. narrow streets with no major destinations), but sometimes design work is needed, such as adding traffic calming elements, filtering most motor vehicle traffic off, and/or prioritizing bicycles at major and minor street intersections. In this way, bicycling is made comfortable across the entire roadway. Directional markings and wayfinding signage provide riders with intuitive, coherent routing.



Laurier Avenue E, MONTRÉAL
(photo credit: Dylan Passmore)

Buffered & Conventional Bicycle Lanes provide organized space for bicycling, and are often part of street reconfiguration projects that improve safety and comfort for all users. Bicycle lanes are an important tool to improve comfort and safety on streets where the number of passing events is too high for comfortable mixed-traffic bicycling, but where curbside activity, heavy vehicles, and lane invasion are not significant sources of conflict. Buffered bike lanes are almost always higher comfort than conventional bike lanes. In many cases, cross-sections with room for buffered bicycle lanes also have room for protected bicycle lanes.



Dunsmuir Street, VANCOUVER
(photo credit: Paul Kreuger via Flickr)

Protected Bicycle Lanes (also known as Separated Bike Lanes or Cycle Tracks) use a combination of horizontal separation (buffer distance) and vertical separation (e.g. flex posts, parked cars, or curbs) to protect people bicycling from motor vehicle traffic. The combination of lateral buffer distance and vertical separation elements (such as flexible delineators, curbs or height differences, or vehicle parking) can ameliorate most of the stressors of on-street bicycling. The robustness of bikeway separation often scales relative to adjacent traffic stress.



Cultural Trail, INDIANAPOLIS
(photo credit: Green Lanes Project)

Shared-Use & Bicycle Paths have in many cities served as the early spines of an All Ages & Abilities network. Paths can provide a continuous corridor, but usually do not take riders to their destinations. High pedestrian volumes, driveways, obtrusive bollards, sharp geometry, and crossings all degrade bicycling comfort, but often require long project timelines to eliminate. To become useful for transportation, paths work best when connected to an on-street network that meets the same high benchmark of rider comfort, and design provides bicycle-friendly geometry. Ideally, bicycles should be separated from pedestrians where significant volume of either mode is present, but where space limitations exist, multi-use paths are still valuable.

Motor Vehicle Speed & Volume Increase Stress

Whether or not people will bicycle is heavily influenced by the stresses they encounter on their trip. These stressors impact their actual physical safety and their perceived comfort level.

For all roadways and bike facilities, two of the biggest causes of stress are vehicular traffic speed and volume. These factors are inversely related to comfort and safety; even small increases in either factor can quickly increase stress and potentially increase injury risk.[19] The stresses created by speed are compounded by vehicular volume, and vice versa.

Slower or less confident bicyclists experience "near misses"—or non-injury incidents that cause stress—much more frequently per trip than faster riders, which can contribute to discouraging people from riding who would otherwise do so.[20]

SPEED

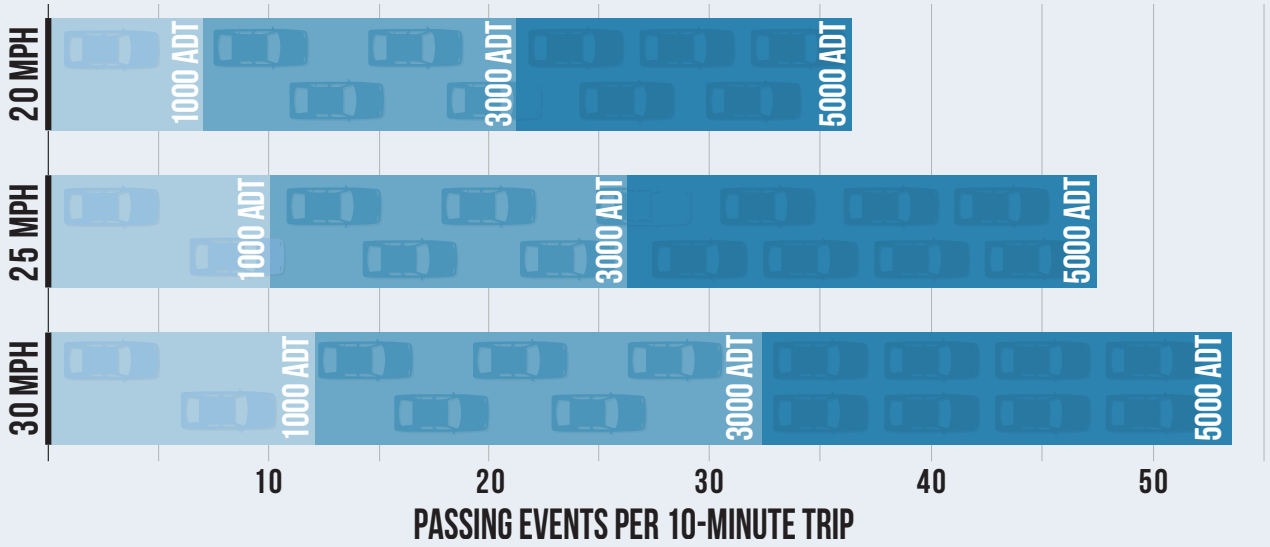
High motor vehicle speeds and speeding introduce significant risk to all road users, narrowing driver sight cones, increasing stopping distance, and increasing injury severity and likelihood of fatality when crashes occur.[21] Most people are not comfortable riding a bicycle immediately next to motor vehicles driving at speeds over 25 mph. Conventional bike lanes are almost always (with rare exceptions) inadequate to provide an All Ages & Abilities facility in such conditions.

VOLUME

When vehicular volumes and speeds are low, most people feel most comfortable bicycling in the shared roadway as they are able to maintain steady paths and riding speeds with limited pressure to move over for passing motor vehicles. However, as motor vehicle volume increases past 1,000 – 2,000 vehicles per day (or roughly 50 vehicles in the peak direction per peak hour), most people biking will only feel comfortable if vehicle speeds are kept below 20 mph.

Conflicts Increase with Speed & Volume

This chart illustrates the number of passing events (at increasing motor vehicle average speed and volume) experienced over a 10-minute period by a bicyclist riding 10 mph. As motor vehicle speed and volume increase, they magnify the frequency of stressful events for people bicycling.



APPENDIX J – PEDESTRIAN CROSSOVER ASSESSMENT

McINTOSH PERRY

Ontario

Book 15

Ontario Traffic Manual

June 2016

Pedestrian Crossing Treatments

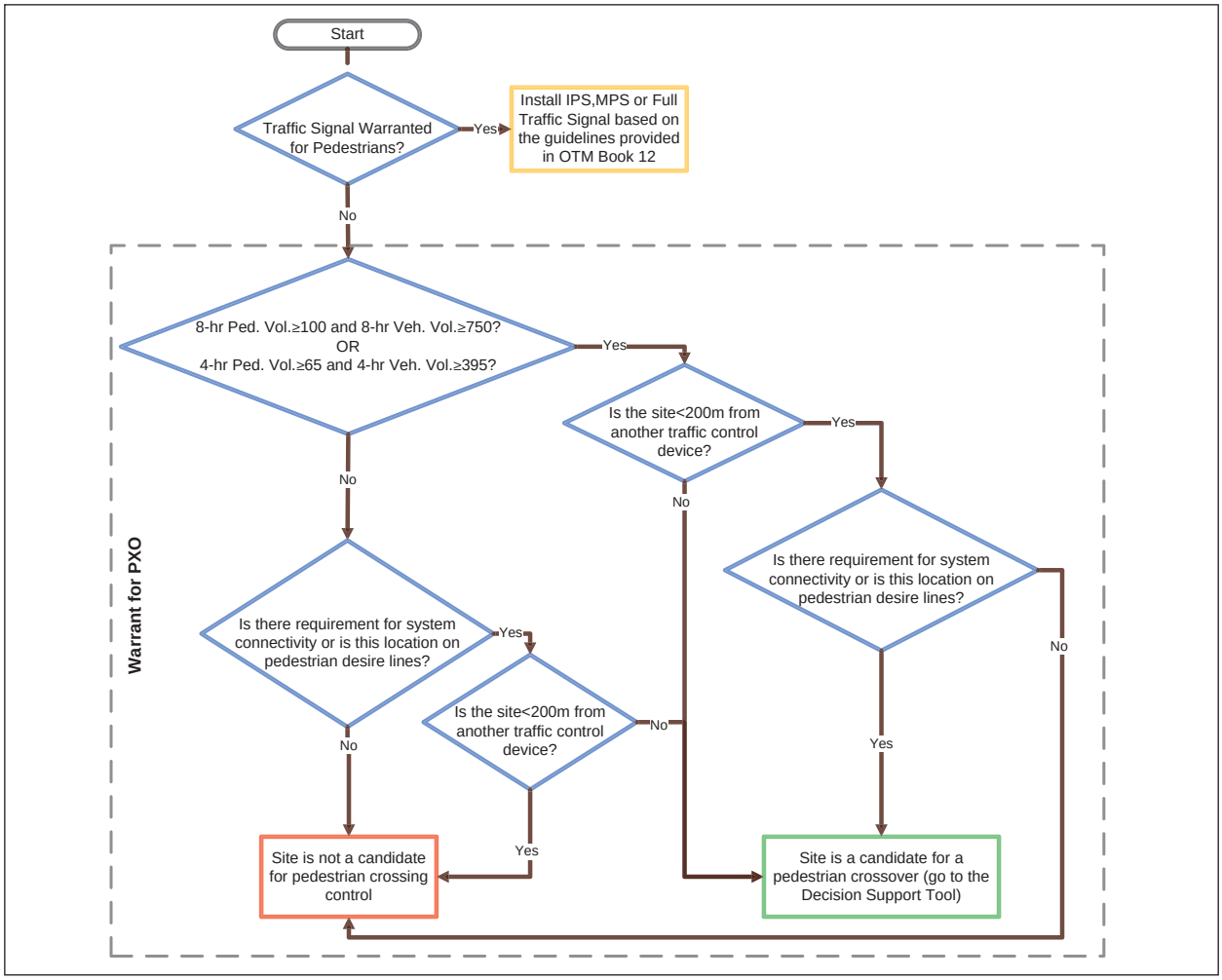


Figure 2: Decision Support Tool – Preliminary Assessment

to reflect a factored volume based on "equivalent adults" and the following definitions as described in OTM Book 12:

- Unassisted – Adults and adolescents at or above the age of 12 are considered "unassisted" pedestrians.
- Assisted – Children under the age of 12, senior citizens, disabled pedestrians and other pedestrians requiring special consideration or assistance are considered "assisted" pedestrians. In cases where an adult is accompanying a pedestrian included in the "assisted" category, both individuals should be counted as "assisted" pedestrians to reflect their higher vulnerability. It should be recognized that the exact age of the pedestrian is not critical, but the observers will need to use their judgment to place each pedestrian into one of the two categories.

The factored pedestrian volume is calculated as follows:

Adjusted volume = Unassisted Pedestrian Volume + 2 x Assisted Pedestrian Volume

Figure 3 and Figure 4 show the graphs used to determine whether a pedestrian control

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
Time Period	Lower Bound	Upper Bound		1 or 2 Lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 Hour	750	2,250	≤50	Level 2 Type D	Level 2 Type C[3]	Level 2 Type D[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	4,500	6,000	≤50	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

[2]Use of two sets of side mounted signs for each direction (one on the right side and one on the median)

[3] Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

Sherk Street & Highbury Canco Driveway Access Count Date: 06-Oct-20

# of Lanes =	3*	
Posted Speed =	50	km/h
Raised Ped Refuge?	No	
AADT =		veh/day
4-Hr Volume =	1918	veh
8-Hr Volume =		veh
4-Hr Ped Volume =	36	
8-Hr Ped Volume =		
Signal Warrant	Not Warranted	

Sherk Street & Highbury Canco Driveway Access Count Date: 06-Oct-20

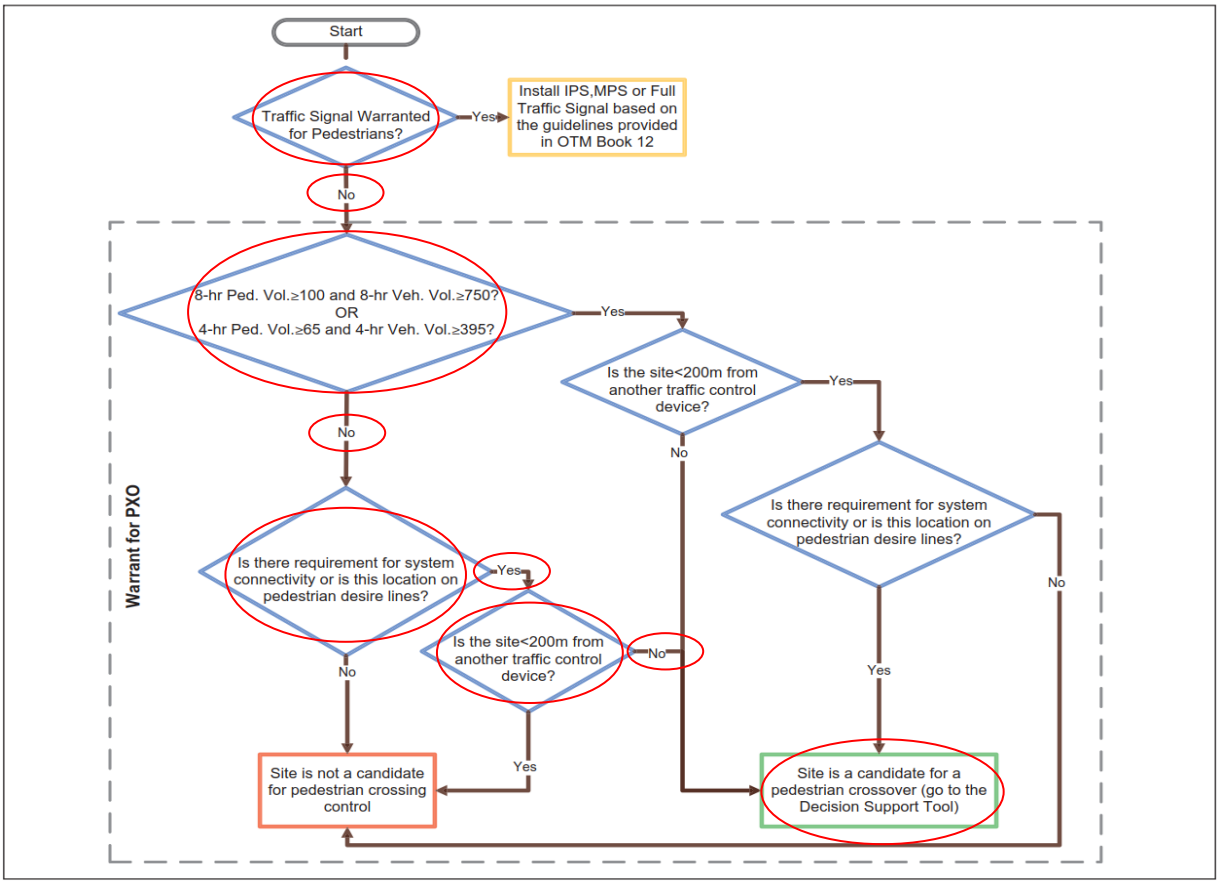


Figure 2: Decision Support Tool – Preliminary Assessment

Based on Figure 2:

The site is a candidate for a PXO

Vehicle and pedestrian volumes do not warrant intersection signalization or a PXO

As a crossing at this site is required to improve system connectivity it is considered a candidate for a PXO

Sherk Street & Highbury Canco Driveway Access Count Date: 06-Oct-20

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
Time Period	Lower Bound	Upper Bound		1 or 2 Lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 Hour	750	2,250	≤50	Level 2 Type D	Level 2 Type C[3]	Level 2 Type D[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	4,500	6,000	≤50	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

[2]Use of two sets of side mounted signs for each direction (one on the right side and one on the median)

[3]Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

Based on Table 7:

While Sherk Street is a two-lane two-way roadway, width of the crossing would equal that of 3 typical 3.5 m lanes and should be considered as such

Based on the expected vehicle volumes, posted speed and roadway configuration a Level 2 Type B PXO should be implemented at this site

Figure below illustrates a typical Level 2 Type B PXO at an intersection on a two-lane two-way roadway

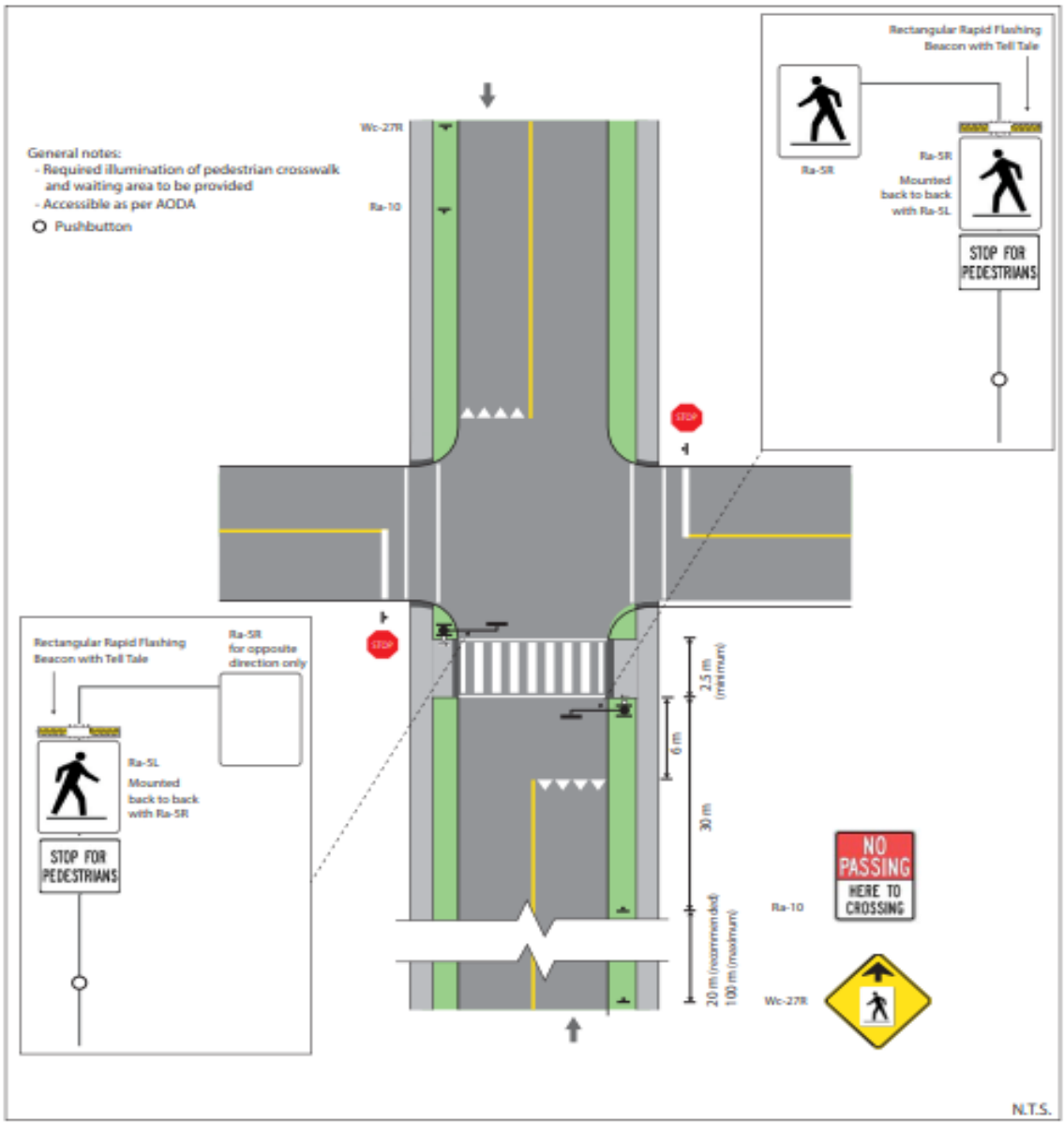


Figure 27: Pedestrian Crossover Level 2 Type B – Intersection (2-way)

Sherk Street & William Avenue / NFFRC Count Date: 06-Oct-20

# of Lanes =	3*	
Posted Speed =	50	km/h
Raised Ped Refuge?	No	
AADT =		veh/day
4-Hr Volume =	1918	veh
8-Hr Volume =		veh
4-Hr Ped Volume =	-	
8-Hr Ped Volume =	-	
Signal Warrant	Not Warranted	

Sherk Street & William Avenue / NFFRC Count Date: 06-Oct-20

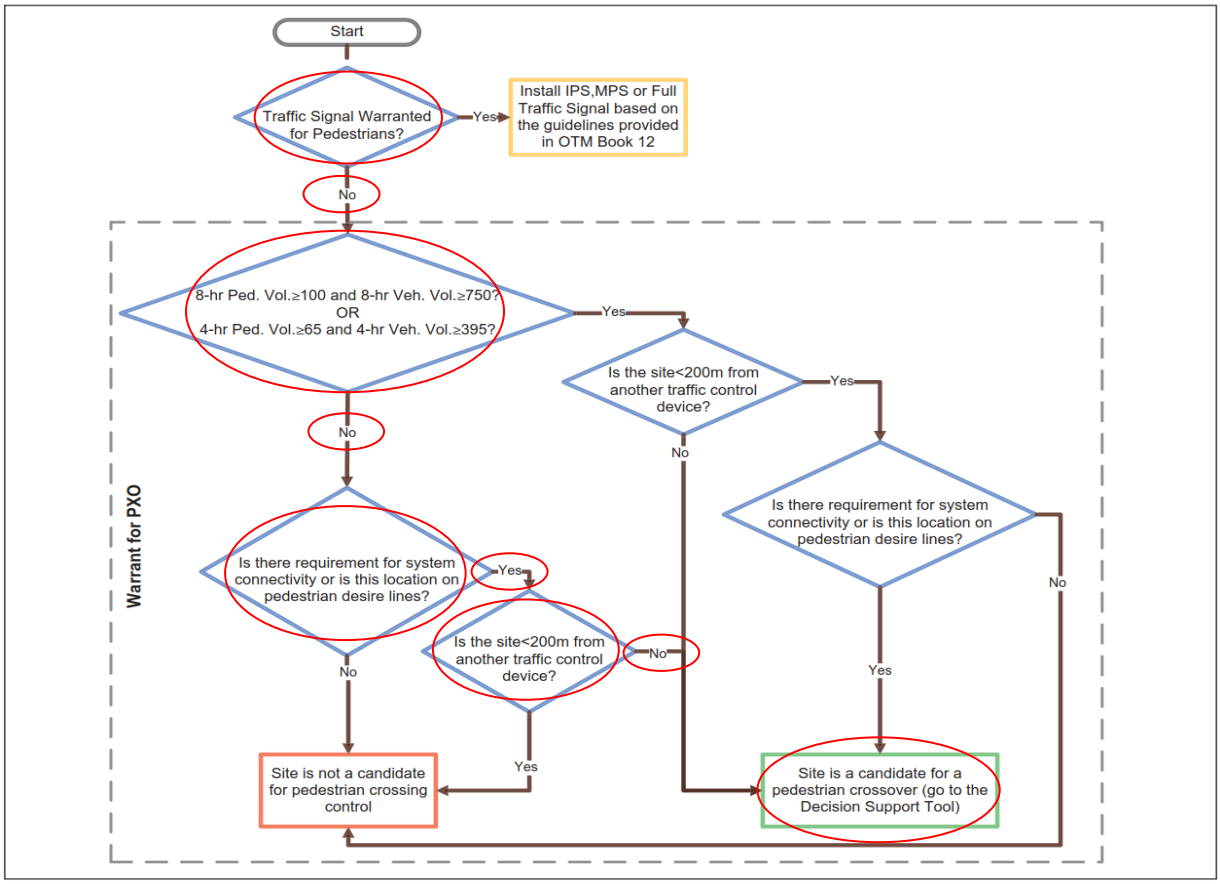


Figure 2: Decision Support Tool – Preliminary Assessment

Based on Figure 2:

The site is a candidate for a PXO

Vehicle and pedestrian volumes do not warrant intersection signalization or a PXO

As a crossing at this site is required to improve system connectivity it is considered a candidate for a PXO

Sherk Street & William Avenue / NFFRC Count Date: 06-Oct-20

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
Time Period	Lower Bound	Upper Bound		1 or 2 Lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 Hour	750	2,250	≤50	Level 2 Type D	Level 2 Type C[3]	Level 2 Type D[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	4,500	6,000	≤50	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

[2]Use of two sets of side mounted signs for each direction (one on the right side and one on the median)

[3] Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

Based on Table 7:

While Sherk Street is a two-lane two-way roadway, width of the crossing would equal that of 3 typical 3.5 m lanes and should be considered as such

Based on the expected vehicle volumes, posted speed and roadway configuration a Level 2 Type B PXO should be implemented at this site

Sherk Street & William Avenue / NFFRC Count Date: 06-Oct-20

Figure below illustrates a typical Level 2 Type B PXO at an intersection on a two-lane two-way roadway

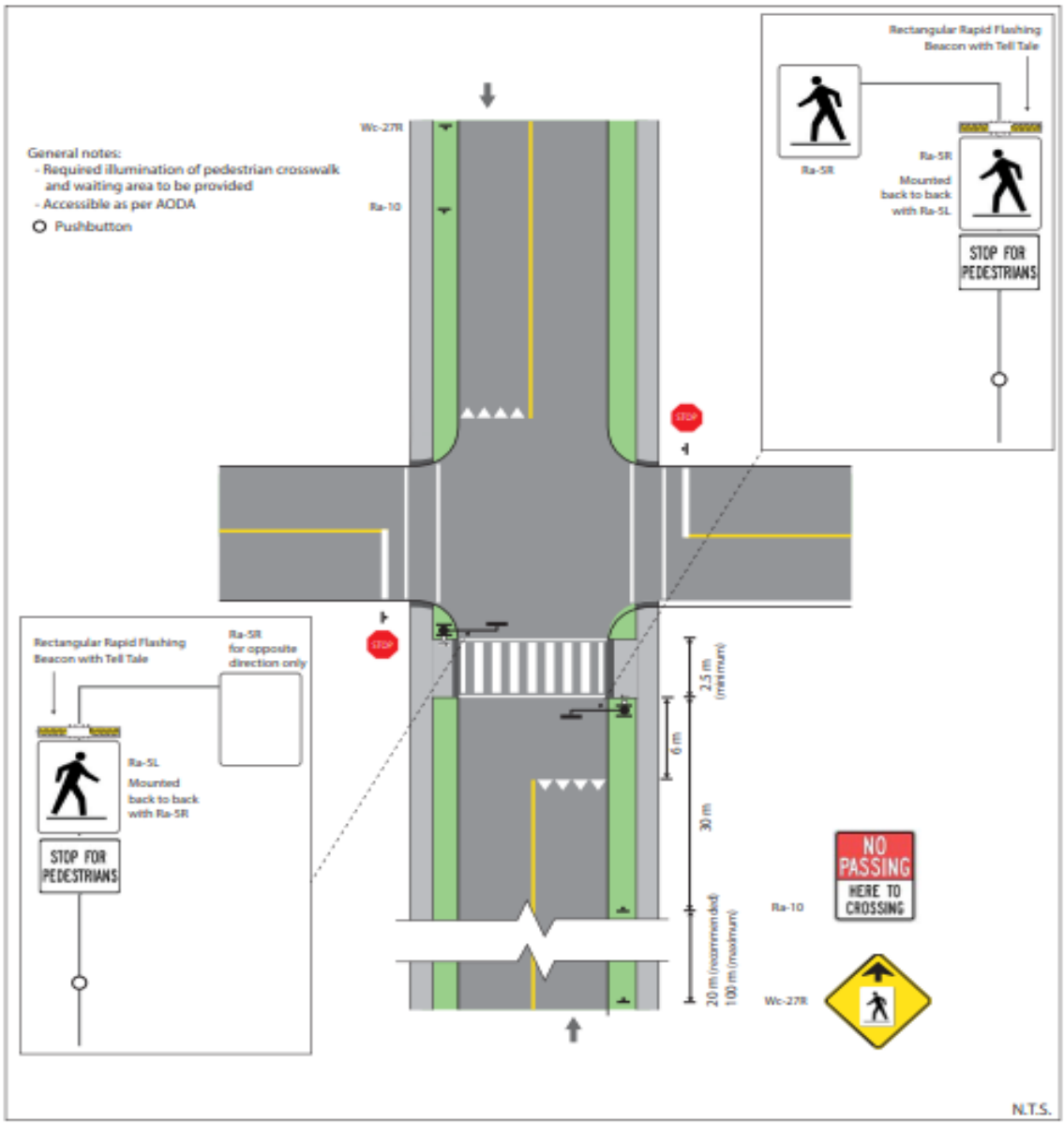


Figure 27: Pedestrian Crossover Level 2 Type B – Intersection (2-way)

Sherk Street & Pulford Avenue Count Date: 06-Oct-20

# of Lanes =	3*	
Posted Speed =	50	km/h
Raised Ped Refuge?	No	
AADT =		veh/day
4-Hr Volume =	2058	veh
8-Hr Volume =		veh
4-Hr Ped Volume =	2	
8-Hr Ped Volume =		
Signal Warrant	Not Warranted	

Sherk Street & Pulford Avenue Count Date: 06-Oct-20

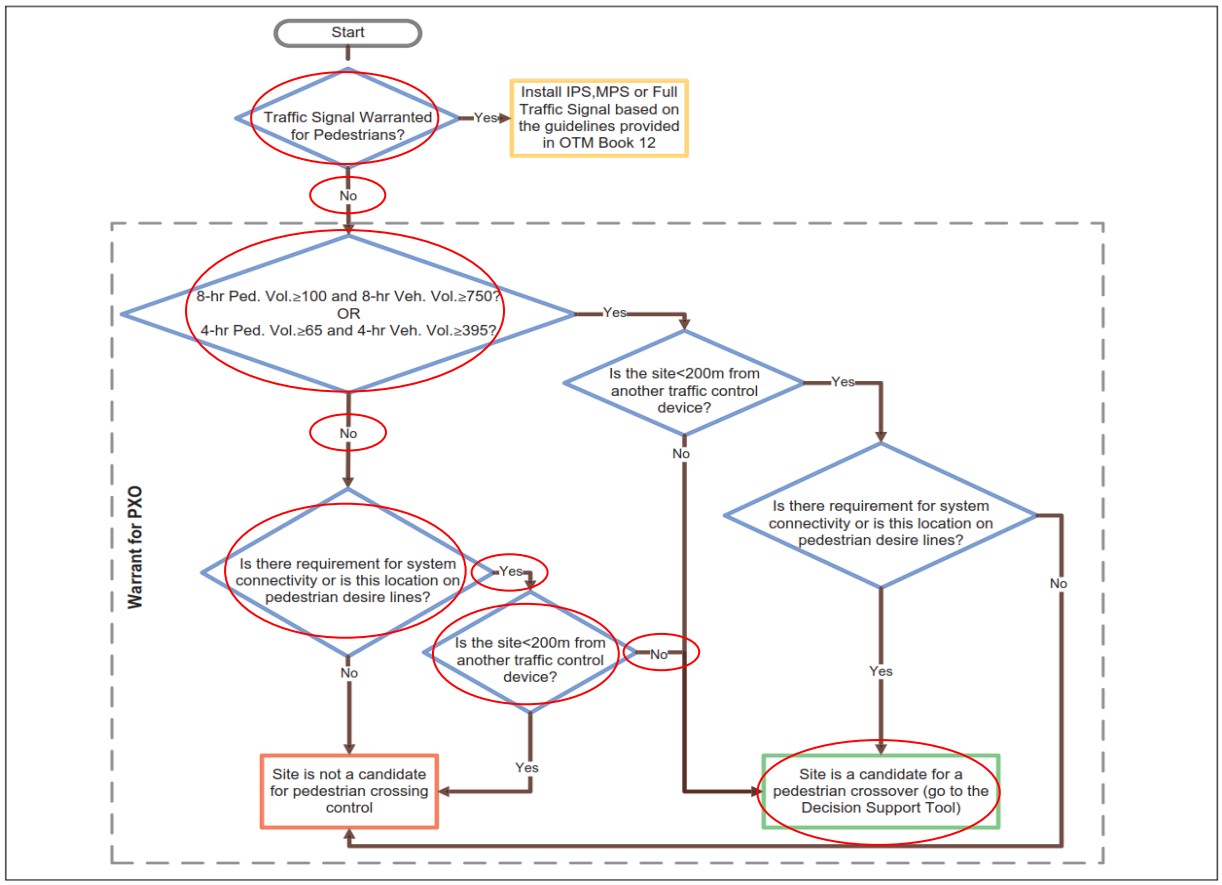


Figure 2: Decision Support Tool – Preliminary Assessment

Based on Figure 2:

The site is a candidate for a PXO

Vehicle and pedestrian volumes do not warrant intersection signalization or a PXO

As a crossing at this site is required to improve system connectivity it is considered a candidate for a PXO

Sherk Street & Pulford Avenue Count Date: 06-Oct-20

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
Time Period	Lower Bound	Upper Bound		1 or 2 Lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 Hour	750	2,250	≤50	Level 2 Type D	Level 2 Type C[3]	Level 2 Type D[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	4,500	6,000	≤50	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

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Sherk Street & Pulford Avenue Count Date: 06-Oct-20

Figure below illustrates a typical Level 2 Type B PXO at an intersection on a two-lane two-way roadway

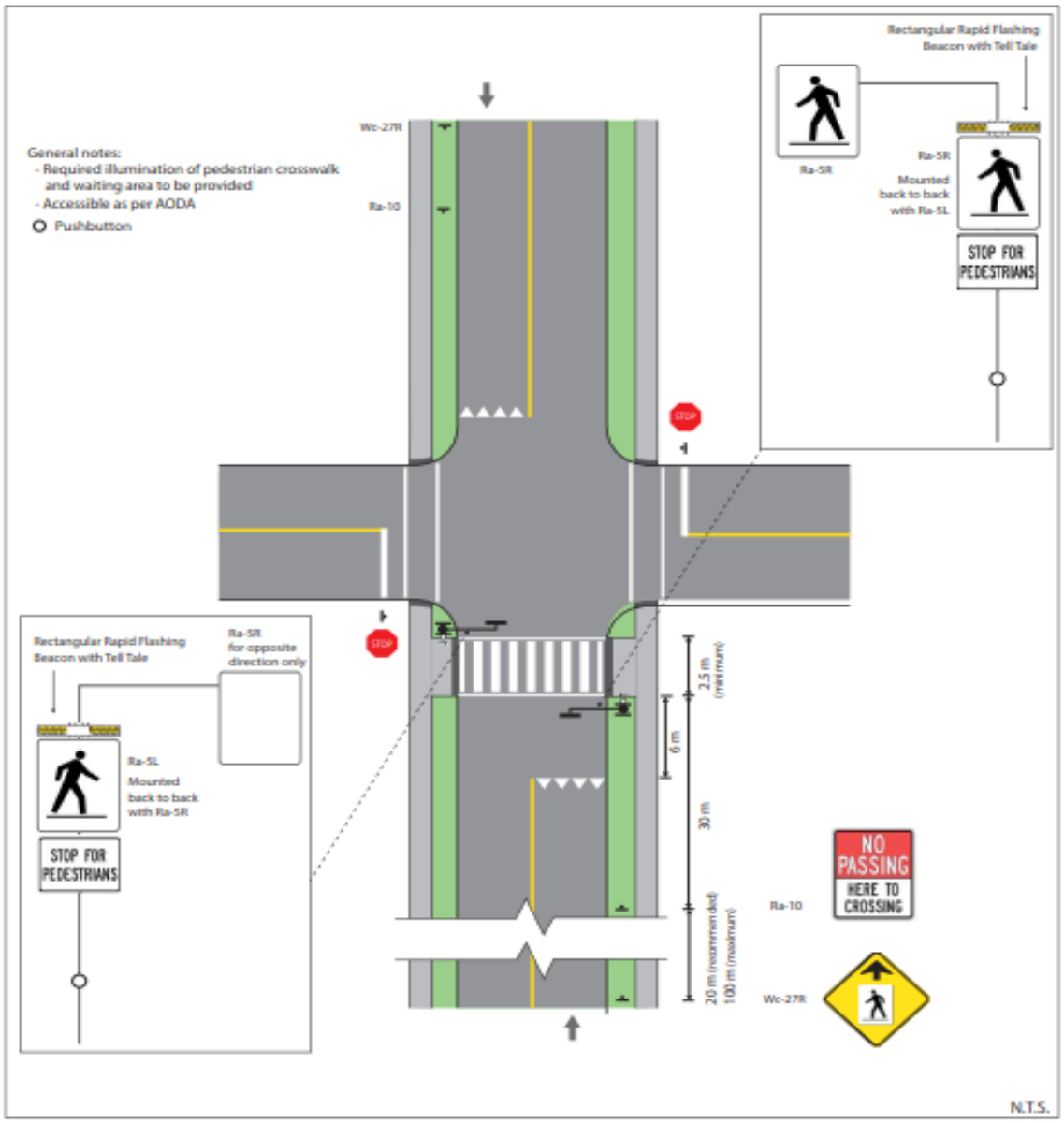


Figure 27: Pedestrian Crossover Level 2 Type B – Intersection (2-way)

Sherk Street & Margaret Count Date: 06-Oct-20

# of Lanes =	3*	
Posted Speed =	50	km/h
Raised Ped Refuge?	No	
AADT =		veh/day
4-Hr Volume =	1620	veh
8-Hr Volume =		veh
4-Hr Ped Volume =	-	
8-Hr Ped Volume =	-	
Signal Warrant	Not Warranted	

Sherk Street & Margaret Count Date: 06-Oct-20

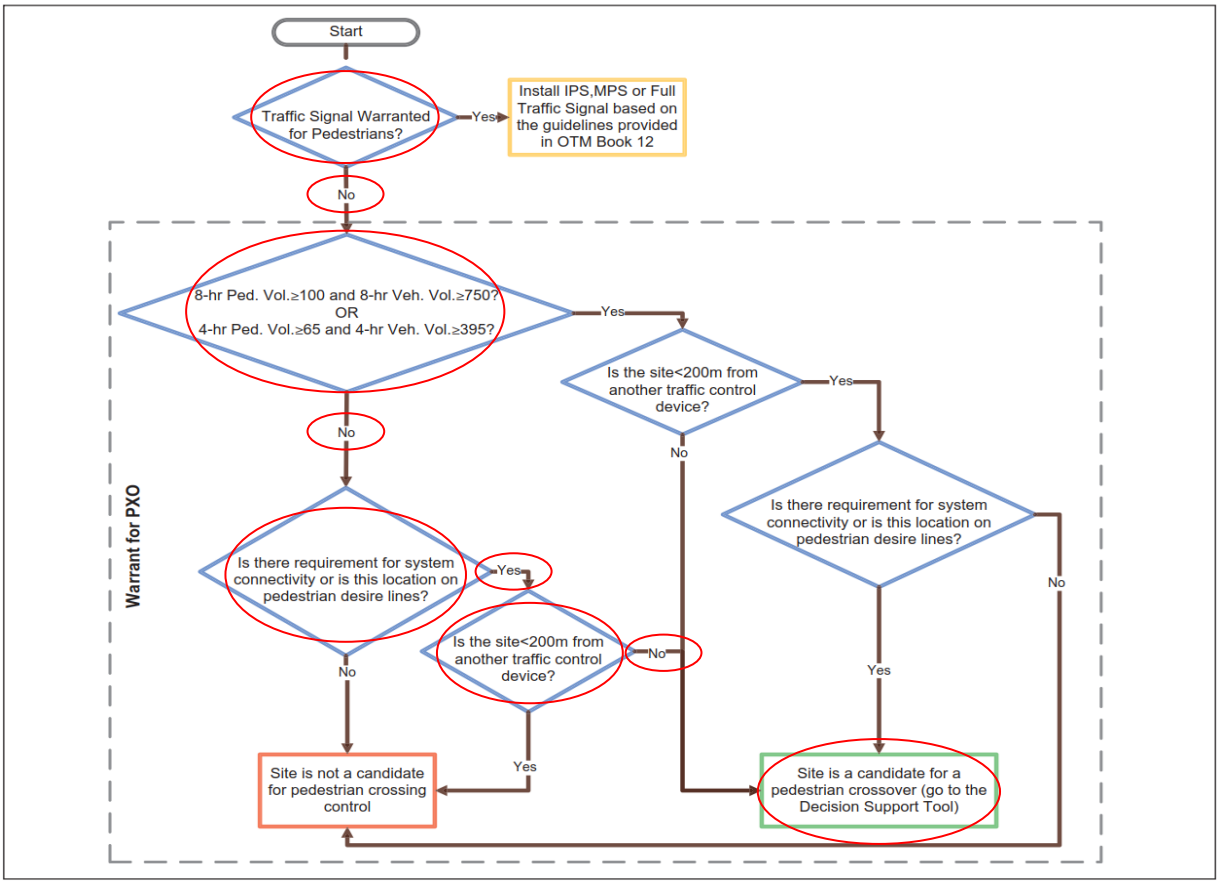


Figure 2: Decision Support Tool – Preliminary Assessment

Based on Figure 2:

The site is a candidate for a PXO

Vehicle and pedestrian volumes do not warrant intersection signalization or a PXO

As a crossing at this site is required to improve system connectivity it is considered a candidate for a PXO

Sherk Street & Margaret Count Date: 06-Oct-20

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
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4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
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4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

[2]Use of two sets of side mounted signs for each direction (one on the right side and one on the median)

[3] Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

Based on Table 7:

While Sherk Street is a two-lane two-way roadway, width of the crossing would equal that of 3 typical 3.5 m lanes and should be considered as such

Based on the expected vehicle volumes, posted speed and roadway configuration a Level 2 Type B PXO should be implemented at this site

Sherk Street & Margaret Count Date: 06-Oct-20

Figure below illustrates a typical Level 2 Type B PXO at an intersection on a two-lane two-way roadway

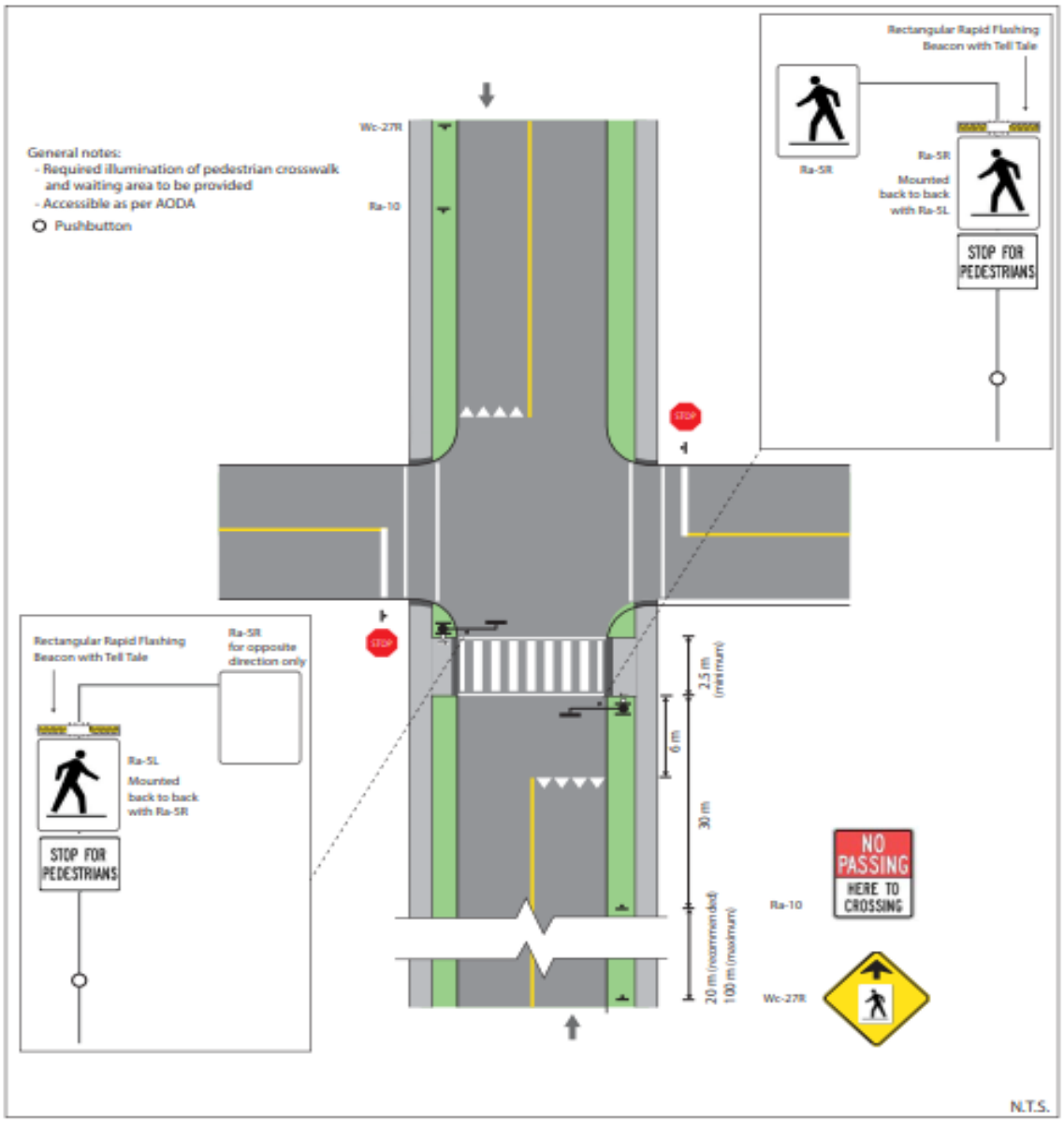


Figure 27: Pedestrian Crossover Level 2 Type B – Intersection (2-way)

Erie Street and Highbury Canco Pedestrian Crossing Count Date: 17-Jul-18

# of Lanes =	4	
Posted Speed =	50	km/h

Raised Ped Refuge? No

AADT =		veh/day
4-Hr Volume =		veh
8-Hr Volume =	7500-17500	veh

4-Hr Ped Volume =	167
8-Hr Ped Volume =	265

Signal Warrant Not Warranted

Erie Street and Highbury Canco Pedestrian Crossing Count Date: 17-Jul-18

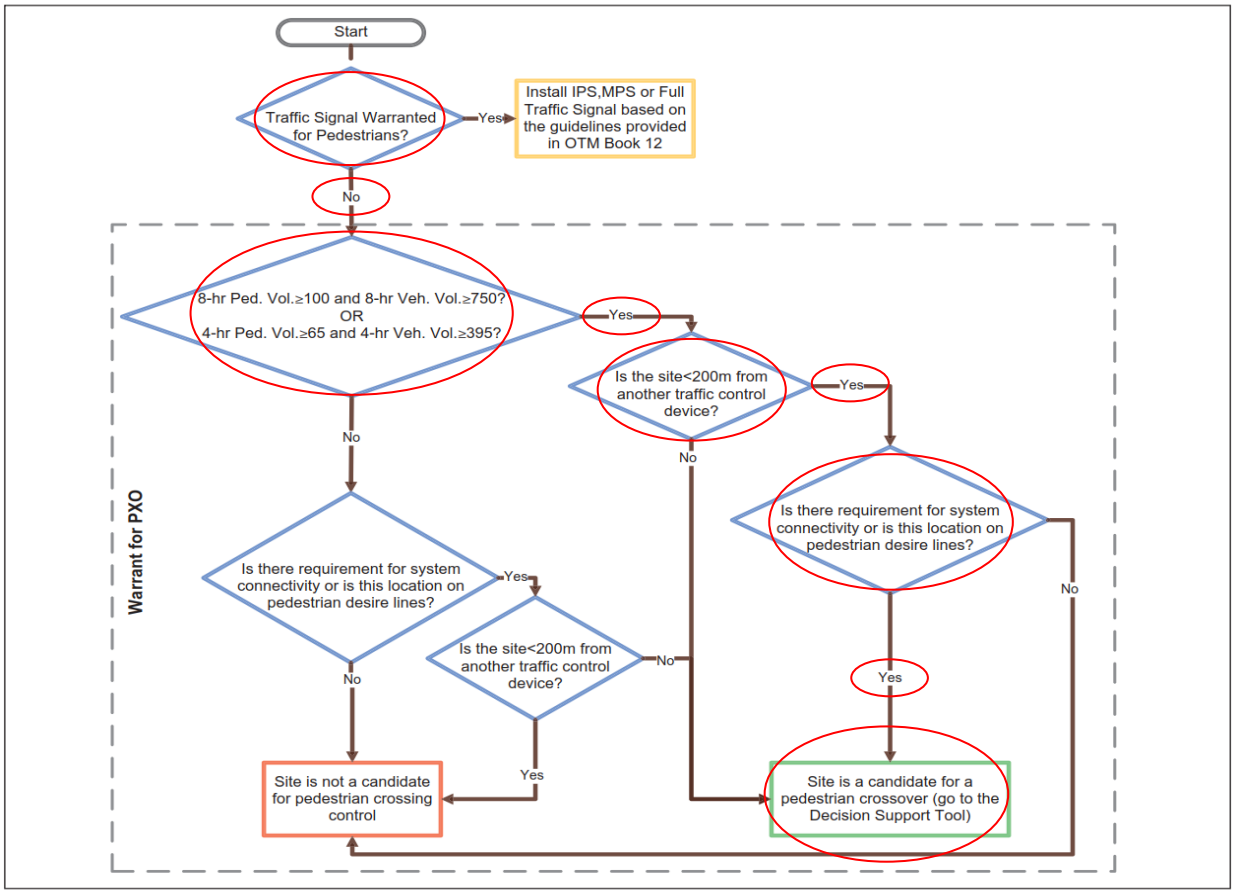


Figure 2: Decision Support Tool – Preliminary Assessment

Based on Figure 2:

The site is a candidate for a PXO

Vehicle and pedestrian volumes do not warrant intersection signalization

Vehicle and pedestrian volumes warrant a PXO at this site however PXO's are not recommended within 200 m of a controlled crossing

Intersection of Erie St and Oak St is 130 m from proposed location

As this site lies along pedestrian desire lines it is considered a candidate for a PXO

Erie Street and Highbury Canco Pedestrian Crossing Count Date: 17-Jul-18

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
Time Period	Lower Bound	Upper Bound		1 or 2 Lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 Hour	750	2,250	≤50	Level 2 Type D	Level 2 Type C[3]	Level 2 Type D[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	4,500	6,000	≤50	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

[2]Use of two sets of side mounted signs for each direction (one on the right side and one on the median)

[3] Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

Based on Table 7:

A PXO is not recommended on a four lane roadway with 8-hour volumes of 7500 vehicles or greater

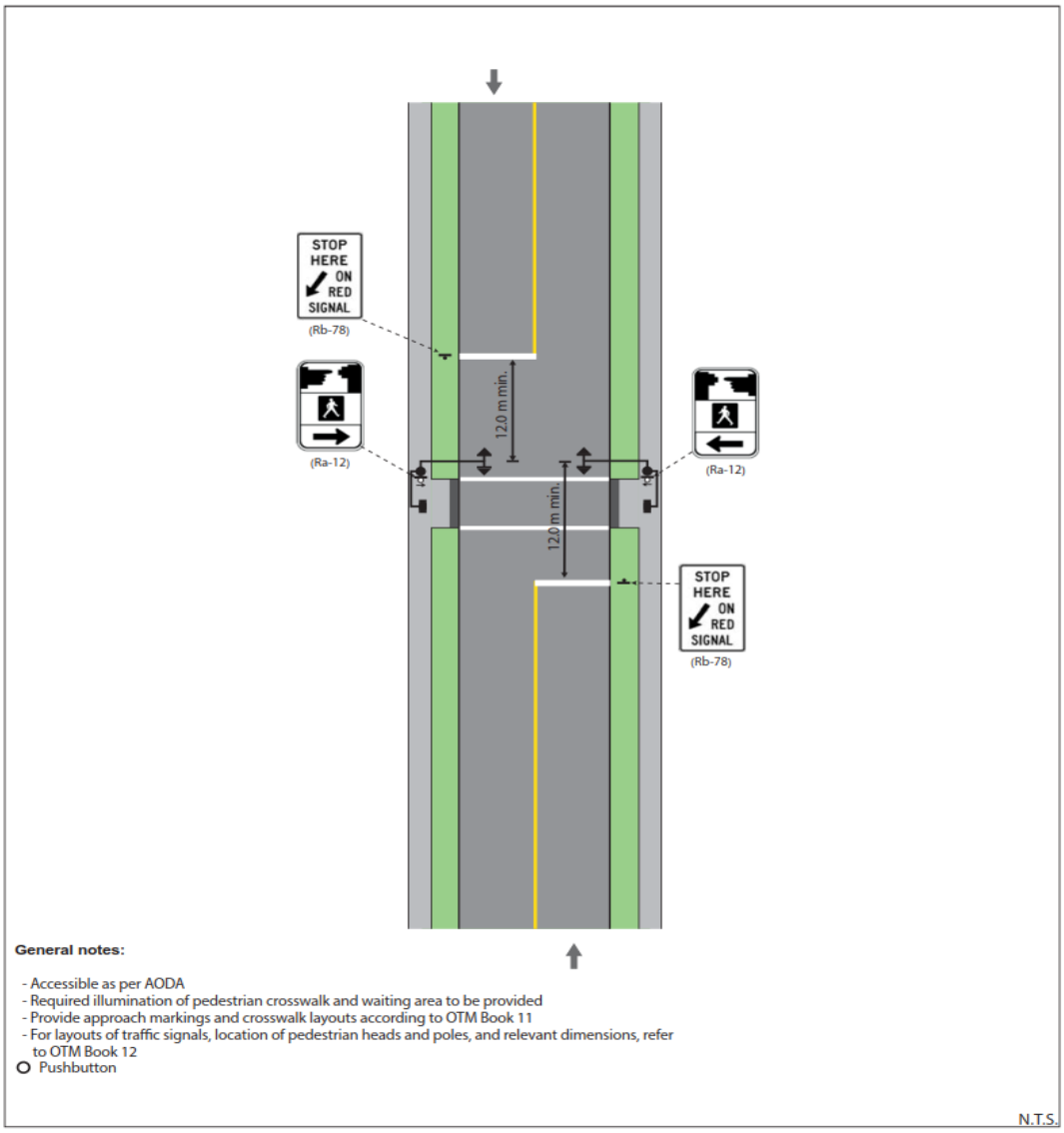
Introduction of raised island refuge does not change recommendation for no PXO

Requires lane reduction to 3 lanes, as recommended in the Pedestrian Crossing Review completed by RC Spencer, to permint installation of a PXO

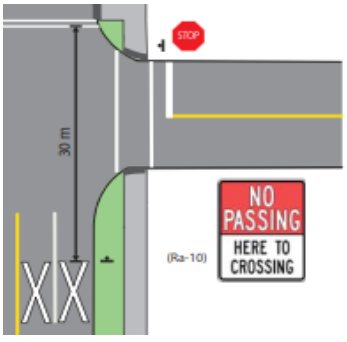
While a PXO is not recommended for this location the requirements for a controlled crossing have been met. As a

Erie Street and Highbury Canco Pedestrian Crossing Count Date: 17-Jul-18

Figure below illustrates a typical MPS on a two-lane two-way roadway



Implementation on a four-lane roadway would require additional signal heads as well as no passing zone signage and pavement markings



Erie Street and Countess Street Count Date: 18-Jan-18

# of Lanes =	4	
Posted Speed =	50	km/h

Raised Ped Refuge? No

AADT =		veh/day
4-Hr Volume =		veh
8-Hr Volume =	7806	veh

4-Hr Ped Volume =	
8-Hr Ped Volume =	7

Signal Warrant Not Warranted

Erie Street and Countess Street Count Date: 18-Jan-18

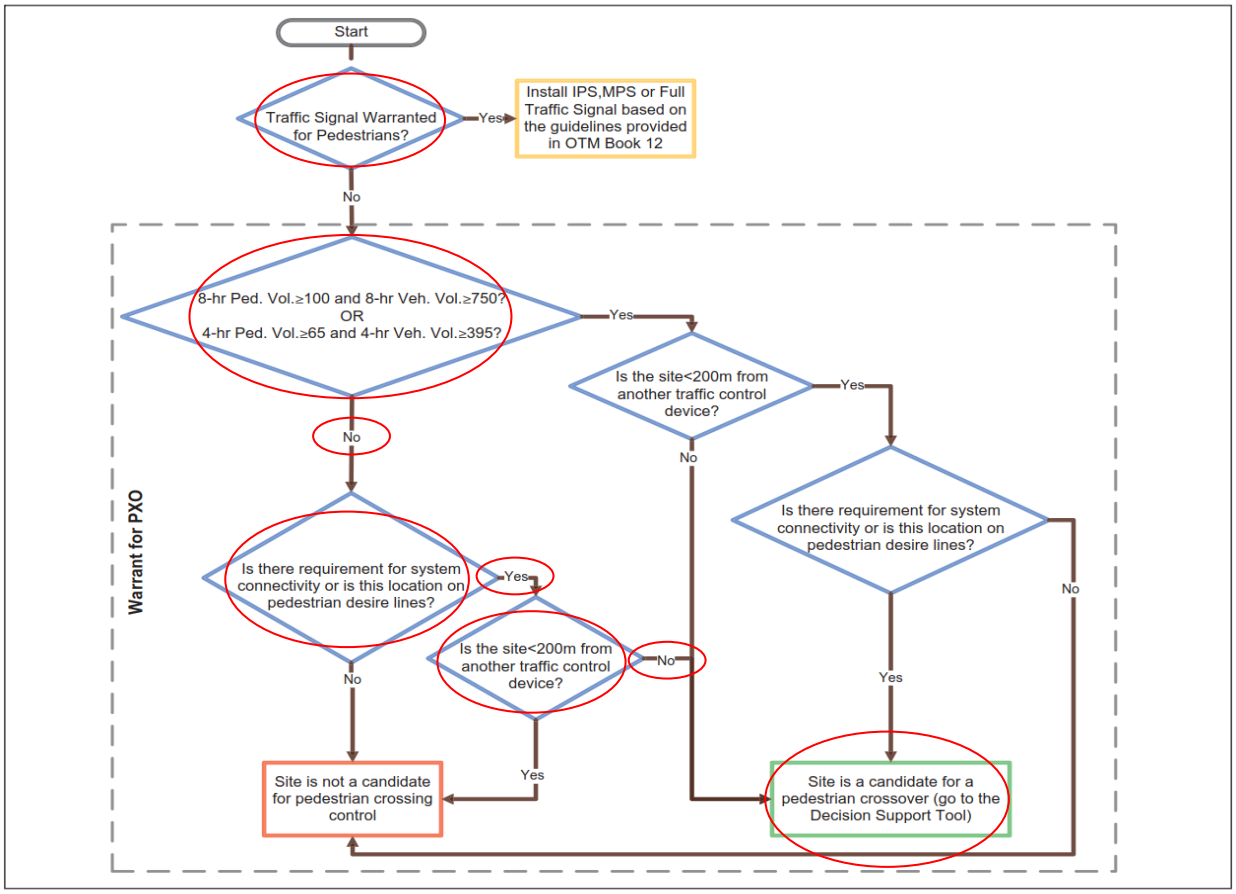


Figure 2: Decision Support Tool – Preliminary Assessment

Based on Figure 2:

The site is a candidate for a PXO

Vehicle and pedestrian volumes do not warrant intersection signalization or a PXO

As a crossing at this site is required to improve system connectivity it is considered a candidate for a PXO

Erie Street and Countess Street Count Date: 18-Jan-18

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
Time Period	Lower Bound	Upper Bound		1 or 2 Lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 Hour	750	2,250	≤50	Level 2 Type D	Level 2 Type C[3]	Level 2 Type D[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	4,500	6,000	≤50	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

[2]Use of two sets of side mounted signs for each direction (one on the right side and one on the median)

[3] Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

Based on Table 7:

A PXO is not recommended on a four lane roadway with 8-hour volumes of 7500 vehicles or greater

Introduction of raised island refuge does not change recommendation for no PXO

Requires lane reduction to 3 lanes, as recommended at Highbury Canco Pedestrian Crossing Review completed by RC Spencer, to permit installation of a PXO

While a PXO is not recommended for this location the requirements for a controlled crossing have been met. As a

Figure below illustrates a typical IPS on a two-lane two-way roadway

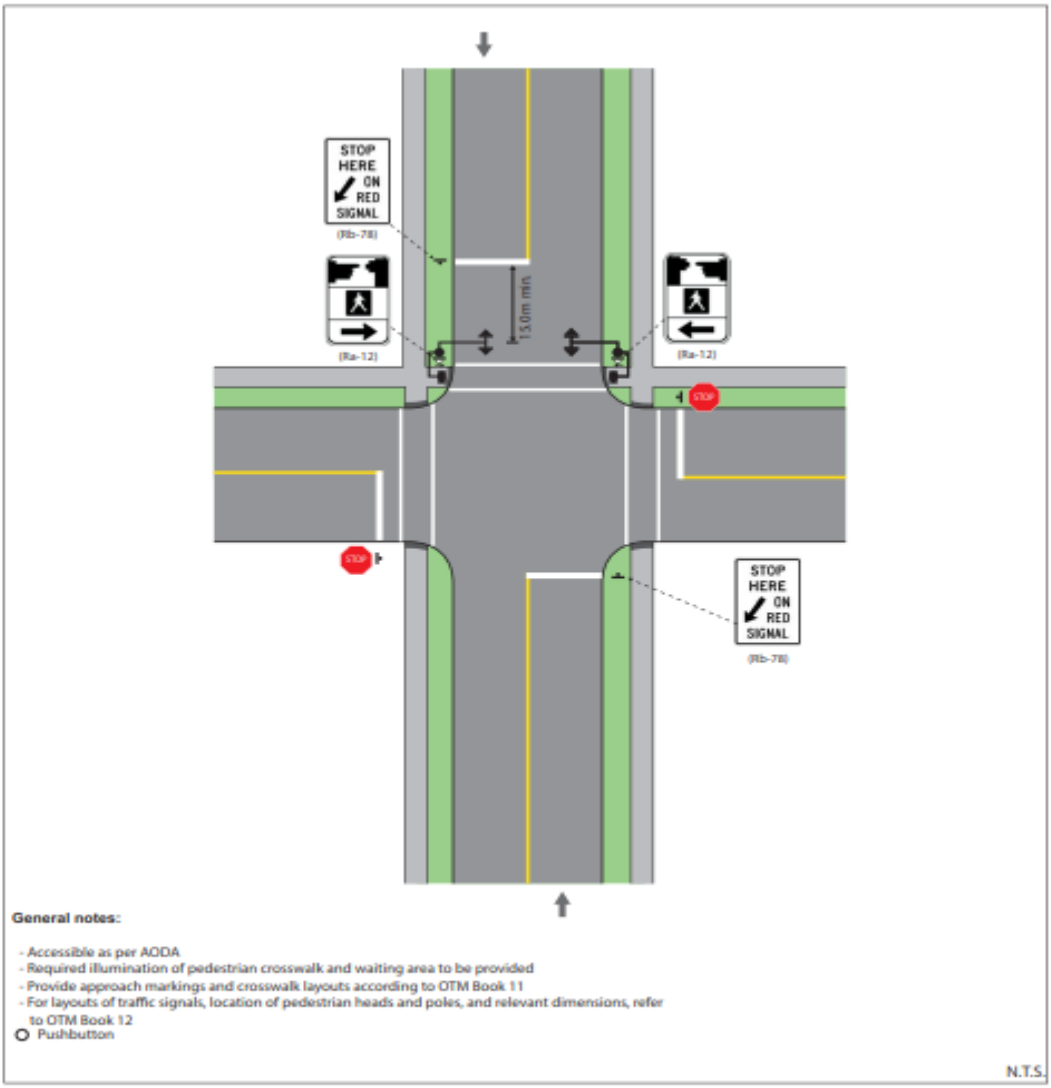
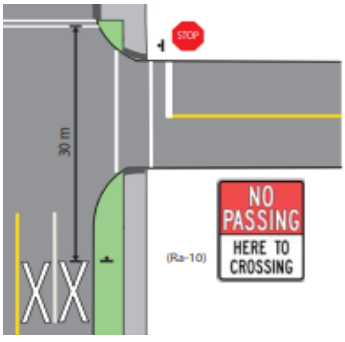


Figure 15: Intersection Pedestrian Signal Pedestrian Crossing Treatment (2-lane, 2-way)

Implementation on a four-lane roadway would require additional signal heads as well as no passing zone signage and pavement markings



Pulford Street & Plaza Entrances Count Date: 04-May-21

# of Lanes = 3*

Posted Speed = 50 km/h

Raised Ped Refuge? No

AADT = veh/day
4-Hr Volume = 854 veh
8-Hr Volume = veh

4-Hr Ped Volume = 30
8-Hr Ped Volume =

Signal Warrant Not Warranted

Pulford Street & Plaza Entrances Count Date: 04-May-21

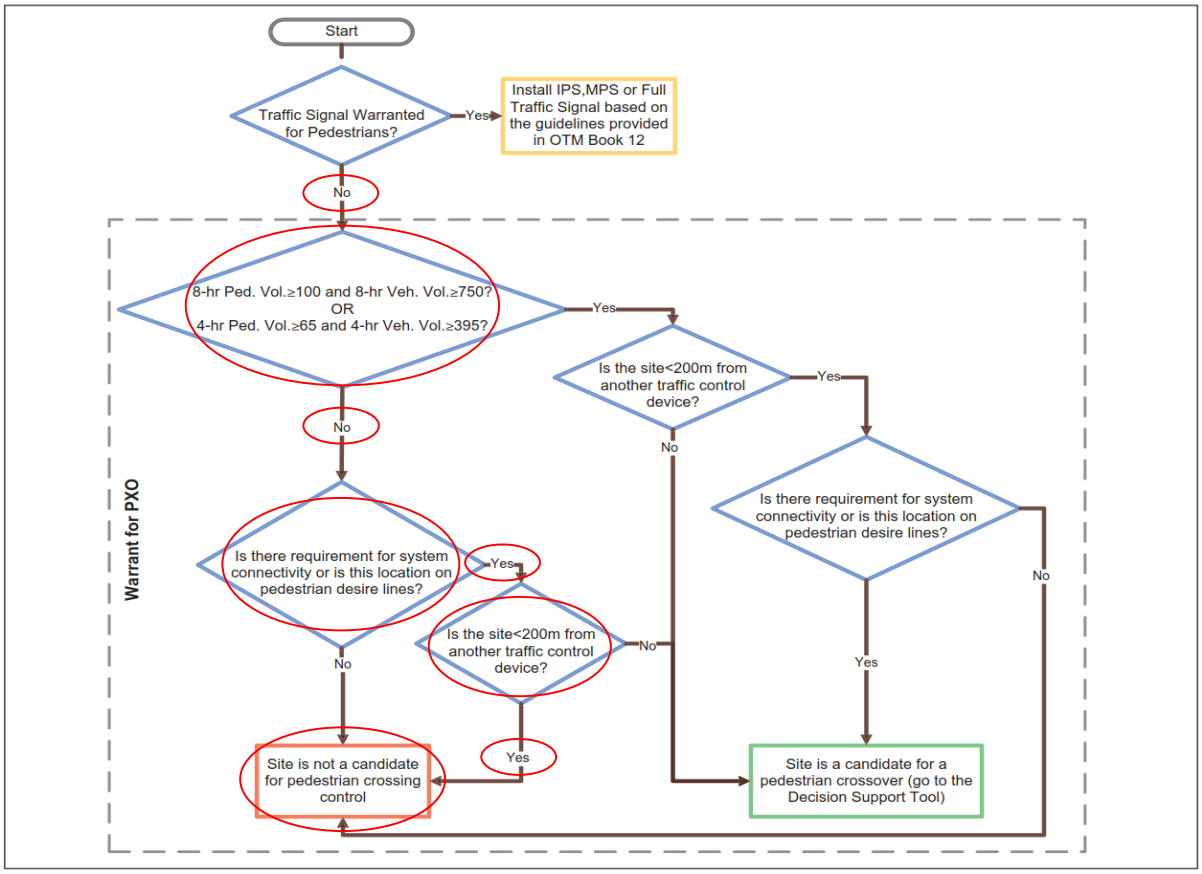


Figure 2: Decision Support Tool – Preliminary Assessment

Based on Figure 2:

The site is not a candidate for a PXO

Vehicle and pedestrian volumes do not warrant intersection signalization or a PXO

While a crossing at this site is required to improve system connectivity, due to the location within 200 m of the signalized Erie Street and Pulford Avenue intersection it is not considered a candidate for a PXO

As counts at this location were taken during the pandemic lockdown they may be not be representative of typical conditions. If the 4-hr pedestrian volume was found to equal or exceed 65 this site would be considered a candidate for a PXO

Pulford Street & Plaza Entrances Count Date: 04-May-21

Table 7: Pedestrian Crossover Selection Matrix

Two-way Vehicular Volume			Posted Speed Limit (km/h	Total Number of Lanes for the Roadway Cross Section[1]			
Time Period	Lower Bound	Upper Bound		1 or 2 Lanes	3 lanes	4 lanes w/raised refuge	4 lanes w/o raised refuge
8 Hour	750	2,250	≤50	Level 2 Type D	Level 2 Type C[3]	Level 2 Type D[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	750	2,250	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	395	1,185					
8 Hour	2,250	4,500	≤50	Level 2 Type D	Level 2 Type B	Level 2 Type D[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	2,250	4,500	60	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	1,185	2,370					
8 Hour	4,500	6,000	≤50	Level 2 Type C	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	4,500	6,000	60	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 2 Type B
4 Hour	2,370	3,155					
8 Hour	6,000	7,500	≤50	Level 2 Type B	Level 2 Type B	Level 2 Type C[2]	Level 1 Type A
4 Hour	3,155	3,950					
8 Hour	6,000	7,500	60	Level 2 Type B	Level 2 Type B		
4 Hour	3,155	3,950					
8 Hour	7,500	17,500	≤50	Level 2 Type B	Level 2 Type B		
4 Hour	3,950	9,215					
8 Hour	7,500	17,500	60	Level 2 Type B			
4 Hour	3,950	9,215					

Type A Type B Type C Type D

Approaches to roundabouts should be considered a separate roadways.

[1]The total number of lanes is representative of crossing distance. The width of these lanes is assumed to be between 3.0 m and 3.75 m according to MTO Geometric Design Standards for Ontario Highways (Chapter D.2). A cross sectional feature (e.g. bike lane or on-street parking) may extend the average crossing distance beyond this range of lane widths.

[2]Use of two sets of side mounted signs for each direction (one on the right side and one on the median)

[3] Use Level 2 Type B PXO up to 3 lanes total, cross section one-way.

The hatched cells in this table show that a PXO is not recommended for sites with these traffic and geometric conditions. Generally a traffic signal is warranted for such conditions.

Based on Table 7:

While a PXO is not recommended based on available data, should the 4-hr pedestian volume at this location be found to equal or exceed 65 a PXO would become recommended at this site.
While Pulford Avenue is a two-lane two-way roadway, width of the crossing would equal that of 3 typical 3.5 m lanes and should be considered as such
Based on the expected vehicle volumes, posted speed and roadway configuration a Level 2 Type C PXO should be implemented at this site should the 4-hr pedestrian volume equal or exceed 65

Pulford Street & Plaza Entrances Count Date: 04-May-21

Figure below illustrates a typical Level 2 Type C PXO at an intersection on a two-lane two-way roadway

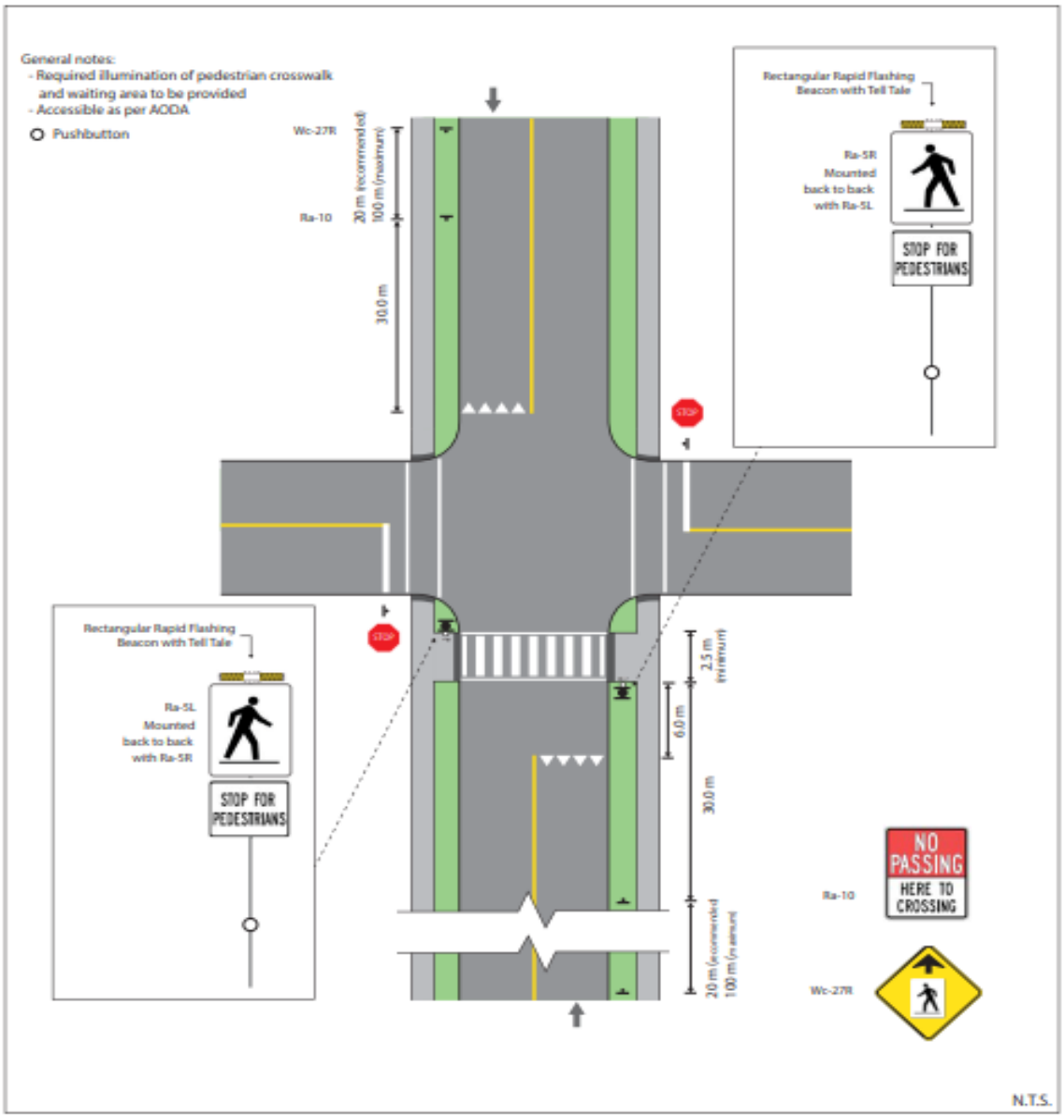


Figure 36: Pedestrian Crossover Level 2 Type C – Intersection (2-way)

APPENDIX K – SIGNAL WARRANT ASSESSMENT

McINTOSH PERRY

Signal Warrant Calculation: Justification 7 - Projected Volumes

MAJOR STREET: Sherk Street

MINOR STREET: Pulford Avenue

SCENARIO Existing Conditions (2020)

NUMBER OF APPROACH LANES: 1 [X] 2 [ ]

TEE INTERSECTION CONFIGURATION YES [X] NO [ ]

FLOW CONDITIONS: FREE FLOW (RURAL) [ ] RESTRICTED FLOW (URBAN) [X]

VOLUME	AM	PM	FACTOR *	
1A - All	707	887	n/a	399
1B - Minor	102	162	50%	66
2A - Major	605	725	50%	333
2B - Crossi	16	42	50%	15

* This factor relates average of the "peak eight hours" to the average of the "am and pm peak hours"

OVERALL WARRANT

150% SATISFIED:	YES [ ]	NO [X]	Warrant for new intersection with forecast traffic
120% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with forecast traffic
100% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic *
COMBO 80% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic
80% SATISFIED:	YES [ ]	NO [X]	

* Consider full underground provisions if 100% for forecast traffic

WARRANT 1 - MINIMUM VEHICULAR VOLUME

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
ALL APPROACHES	480	720	600	900	399
	% FULFILLED				55%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MINOR STREET APPROACHES	180	255	180	255	66
	% FULFILLED				26%

WARRANT 2 - DELAY TO CROSS TRAFFIC

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MAJOR STREET APPROACHES	480	720	600	900	333
	% FULFILLED				46%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
TRAFFIC CROSSING MAJOR STREET	50	75	50	75	15
	% FULFILLED				19%

1A - MINIMUM VEHICULAR VOLUME: Total vehicle volume on all approaches for average day

1B - MINIMUM VEHICULAR VOLUME: Total vehicle volume on minor streets

2A - DELAY TO CROSS TRAFFIC: Total vehicle volume on major street for average day

2B - DELAY TO CROSS TRAFFIC: Total vehicle and pedestrian volume crossing major street; comprising: (1) lefts from both minor streets, (2) heaviest through from minor street, (3) 50% of heavier left turn from major street when following criteria met: (a) left turn volume >120 and (b) left turn volume plus opposing volume > 720, (4) pedestrians crossing the major street.

Signal Warrant Calculation: Justification 7 - Projected Volumes

MAJOR STREET: Sherk Street

MINOR STREET: Pulford Avenue

SCENARIO Future Conditions (2030)

NUMBER OF APPROACH LANES: 1 [X] 2 [ ]

TEE INTERSECTION CONFIGURATION YES [X] NO [ ]

FLOW CONDITIONS: FREE FLOW (RURAL) [ ] RESTRICTED FLOW (URBAN) [X]

VOLUME	AM	PM	FACTOR *	
1A - All	963	1,250	n/a	553
1B - Minor	135	226	50%	90
2A - Major	828	1,024	50%	463
2B - Crossi	26	76	50%	26

* This factor relates average of the "peak eight hours" to the average of the "am and pm peak hours"

OVERALL WARRANT

150% SATISFIED:	YES [ ]	NO [X]	Warrant for new intersection with forecast traffic
120% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with forecast traffic
100% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic *
COMBO 80% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic
80% SATISFIED:	YES [ ]	NO [X]	

* Consider full underground provisions if 100% for forecast traffic

WARRANT 1 - MINIMUM VEHICULAR VOLUME

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
ALL APPROACHES	480	720	600	900	553
	% FULFILLED				77%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MINOR STREET APPROACHES	180	255	180	255	90
	% FULFILLED				35%

WARRANT 2 - DELAY TO CROSS TRAFFIC

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MAJOR STREET APPROACHES	480	720	600	900	463
	% FULFILLED				64%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
TRAFFIC CROSSING MAJOR STREET	50	75	50	75	26
	% FULFILLED				34%

1A - MINIMUM VEHICULAR VOLUME: Total vehicle volume on all approaches for average day

1B - MINIMUM VEHICULAR VOLUME: Total vehicle volume on minor streets

2A - DELAY TO CROSS TRAFFIC: Total vehicle volume on major street for average day

2B - DELAY TO CROSS TRAFFIC: Total vehicle and pedestrian volume crossing major street; comprising: (1) lefts from both minor streets, (2) heaviest through from minor street, (3) 50% of heavier left turn from major street when following criteria met: (a) left turn volume >120 and (b) left turn volume plus opposing volume > 720, (4) pedestrians crossing the major street.

Signal Warrant Calculation: Justification 7 - Projected Volumes

MAJOR STREET: Sherk Street

MINOR STREET: Ellison Avenue

SCENARIO Existing Conditions (2020)

NUMBER OF APPROACH LANES: 1 [X] 2 [ ]

TEE INTERSECTION CONFIGURATION YES [X] NO [ ]

FLOW CONDITIONS: FREE FLOW (RURAL) [ ]; RESTRICTED FLOW (URBAN) [X]

VOLUME	AM	PM	FACTOR *	
1A - All	799	912	n/a	428
1B - Minor	174	188	50%	91
2A - Major	625	724	50%	337
2B - Crossi	42	55	50%	24

* This factor relates average of the "peak eight hours" to the average of the "am and pm peak hours"

OVERALL WARRANT

150% SATISFIED:	YES [ ]	NO [X]	Warrant for new intersection with forecast traffic
120% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with forecast traffic
100% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic *
COMBO 80% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic
80% SATISFIED:	YES [ ]	NO [X]	

* Consider full underground provisions if 100% for forecast traffic

WARRANT 1 - MINIMUM VEHICULAR VOLUME

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
ALL APPROACHES	480	720	600	900	428
	% FULFILLED				59%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MINOR STREET APPROACHES	180	255	180	255	91
	% FULFILLED				35%

WARRANT 2 - DELAY TO CROSS TRAFFIC

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MAJOR STREET APPROACHES	480	720	600	900	337
	% FULFILLED				47%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
TRAFFIC CROSSING MAJOR STREET	50	75	50	75	24
	% FULFILLED				32%

1A - MINIMUM VEHICULAR VOLUME: Total vehicle volume on all approaches for average day

1B - MINIMUM VEHICULAR VOLUME: Total vehicle volume on minor streets

2A - DELAY TO CROSS TRAFFIC: Total vehicle volume on major street for average day

2B - DELAY TO CROSS TRAFFIC: Total vehicle and pedestrian volume crossing major street; comprising: (1) lefts from both minor streets, (2) heaviest through from minor street, (3) 50% of heavier left turn from major street when following criteria met: (a) left turn volume >120 and (b) left turn volume plus opposing volume > 720, (4) pedestrians crossing the major street.

Signal Warrant Calculation: Justification 7 - Projected Volumes

MAJOR STREET: Sherk Street

MINOR STREET: Ellison Avenue

SCENARIO Future Conditions (2030)

NUMBER OF APPROACH LANES: 1 [X] 2 [ ]

TEE INTERSECTION CONFIGURATION YES [X] NO [ ]

FLOW CONDITIONS: FREE FLOW (RURAL) [ ] RESTRICTED FLOW (URBAN) [X]

VOLUME	AM	PM	FACTOR *	
1A - All	1,112	1,344	n/a	614
1B - Minor	254	261	50%	129
2A - Major	858	1,083	50%	485
2B - Crossi	92	98	50%	48

* This factor relates average of the "peak eight hours" to the average of the "am and pm peak hours"

OVERALL WARRANT

150% SATISFIED:	YES [ ]	NO [X]	Warrant for new intersection with forecast traffic
120% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with forecast traffic
100% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic *
COMBO 80% SATISFIED:	YES [ ]	NO [X]	Warrant for existing intersection with existing traffic
80% SATISFIED:	YES [ ]	NO [X]	

* Consider full underground provisions if 100% for forecast traffic

WARRANT 1 - MINIMUM VEHICULAR VOLUME

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
ALL APPROACHES	480	720	600	900	614
	% FULFILLED				85%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MINOR STREET APPROACHES	180	255	180	255	129
	% FULFILLED				50%

WARRANT 2 - DELAY TO CROSS TRAFFIC

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
MAJOR STREET APPROACHES	480	720	600	900	485
	% FULFILLED				67%

150% SATISFIED:	YES [ ]	NO [X]
120% SATISFIED:	YES [ ]	NO [X]
100% SATISFIED:	YES [ ]	NO [X]
80% SATISFIED:	YES [ ]	NO [X]

APPROACH LANES	1		2 OR MORE		AVERAGE HOUR PERIOD
FLOW CONDITION	FREE FLOW	REST. FLOW	FREE FLOW	REST. FLOW	
		X			
TRAFFIC CROSSING MAJOR STREET	50	75	50	75	48
	% FULFILLED				63%

1A - MINIMUM VEHICULAR VOLUME: Total vehicle volume on all approaches for average day

1B - MINIMUM VEHICULAR VOLUME: Total vehicle volume on minor streets

2A - DELAY TO CROSS TRAFFIC: Total vehicle volume on major street for average day

2B - DELAY TO CROSS TRAFFIC: Total vehicle and pedestrian volume crossing major street; comprising: (1) lefts from both minor streets, (2) heaviest through from minor street, (3) 50% of heavier left turn from major street when following criteria met: (a) left turn volume >120 and (b) left turn volume plus opposing volume > 720, (4) pedestrians crossing the major street.

APPENDIX L – ERIE STREET AND PULFORD AVENUE LEFT-TURN ADVANCE REVIEW

McINTOSH PERRY

Figure L1: 2030 Existing Left-Turn Phases (Southbound Permitted & Protected Left-Turn)

Intersection / Movement	Available Storage (m)	AM Peak				PM Peak			
		LOS	Delay (s)	v/c	Queue (m)	LOS	Delay (s)	v/c	Queue (m)
Erie St S & Pulford Ave	-	**B**	**12**	-	-	**B**	**13**	-	-
EB Left	25	C	32	0.28	28	C	33	0.34	33
EB Through-Right		B	12	0.45	34	B	14	0.51	48
WB Left	25	D	46	0.61	34	E	64	0.80	45
WB Through-Right		C	23	0.38	39	C	21	0.43	82
NB Left	35	A	9	0.17	21	A	9	0.30	26
NB Through-Right		A	7	0.39	54	A	8	0.50	54
SB Left	45	A	6	0.12	28	A	7	0.18	36
SB Through-Right		A	7	0.29	52	A	8	0.35	56

Figure L2: 2030 Northbound and Southbound Permitted & Protected Left-Turn

Intersection / Movement	Available Storage (m)	AM Peak				PM Peak			
		LOS	Delay (s)	v/c	Queue (m)	LOS	Delay (s)	v/c	Queue (m)
Erie St S & Pulford Ave	-	**B**	**16**	-	-	**B**	**19**	-	-
EB Left	25	C	35	0.29	32	D	35	0.35	35
EB Through-Right		B	13	0.45	39	B	16	0.53	54
WB Left	25	D	52	0.65	34	E	74	0.84	41
WB Through-Right		C	25	0.39	42	C	23	0.45	46
NB Left	35	A	6	0.12	24	A	7	0.21	38
NB Through-Right		B	13	0.38	65	B	16	0.48	80
SB Left	45	A	6	0.12	27	A	7	0.18	33
SB Through-Right		B	13	0.34	48	B	15	0.41	56

Figure L3: Change in Measures of Effectiveness
2030 Northbound and Southbound Permitted & Protected Left-Turn

Intersection / Movement	Available Storage (m)	AM Peak				PM Peak			
		LOS	Delay (s)	v/c	Queue (m)	LOS	Delay (s)	v/c	Queue (m)
Erie St S & Pulford Ave	-		**4**	-	-		**6**	-	-
EB Left	25		3	0.01	4		2	0.01	2
EB Through-Right			1	0	5		2	0.02	6
WB Left	25		6	0.04	0		10	0.04	-4
WB Through-Right			2	0.01	3		2	0.02	-36
NB Left	35		-3	-0.05	3		-2	-0.09	12
NB Through-Right			6	-0.01	11		8	-0.02	26
SB Left	45		0	0	-1		0	0	-3
SB Through-Right			6	0.05	-4		7	0.06	0

Figure L4: 2030 4-Way Permitted & Protected Left-Turn

Intersection / Movement	Available Storage (m)	AM Peak				PM Peak			
		LOS	Delay (s)	v/c	Queue (m)	LOS	Delay (s)	v/c	Queue (m)
Erie St S & Pulford Ave	-	**B**	**19**	-	-	**C**	**23**	-	-
EB Left	25	C	28	0.17	25	C	28	0.22	35
EB Through-Right		B	17	0.53	48	C	31	0.69	62
WB Left	25	C	33	0.40	37	D	36	0.53	45
WB Through-Right		C	35	0.43	47	C	35	0.52	55
NB Left	35	A	9	0.14	27	B	10	0.24	49
NB Through-Right		B	18	0.40	78	C	20	0.50	95
SB Left	45	A	9	0.14	25	A	10	0.19	35
SB Through-Right		B	17	0.37	56	B	20	0.46	57

Figure L5: Change in Measures of Effectiveness
2030 4-Way Permitted & Protected Left-Turn

Intersection / Movement	Available Storage (m)	AM Peak				PM Peak			
		LOS	Delay (s)	v/c	Queue (m)	LOS	Delay (s)	v/c	Queue (m)
Erie St S & Pulford Ave	-		**7**	-	-		**10**	-	-
EB Left	25		-4	-0.11	-3		-5	-0.12	2
EB Through-Right			5	0.08	14		17	0.18	14
WB Left	25		-13	-0.21	3		-28	-0.27	0
WB Through-Right			12	0.05	8		14	0.09	-27
NB Left	35		0	-0.03	6		1	-0.06	23
NB Through-Right			11	0.01	24		12	0	41
SB Left	45		3	0.02	-3		3	0.01	-1
SB Through-Right			10	0.08	4		12	0.11	1

CAPACITY ANALYSIS REPORTS

McINTOSH PERRY

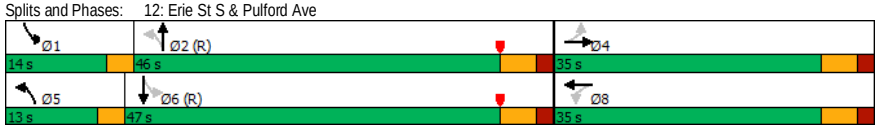
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Future Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	0.99		0.99	1.00	
Frt		0.885			0.936			0.977			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	1629	0	1770	1642	0	1770	3098	0	1641	3254	0
Flt Permitted	0.675			0.535			0.388			0.360		
Satd. Flow (perm)	1112	1629	0	994	1642	0	719	3098	0	616	3254	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		140			41			27			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		4	4		4	11		15	15		11
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	15%	2%	2%	2%	2%	15%	2%	15%	2%	10%	10%	10%
Adj. Flow (vph)	57	43	140	115	73	55	72	571	104	65	618	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	183	0	115	128	0	72	675	0	65	646	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		11.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		13.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		13.0	46.0		14.0	47.0	
Total Split (%)	36.8%	36.8%		36.8%	36.8%		13.7%	48.4%		14.7%	49.5%	
Maximum Green (s)	29.0	29.0		29.0	29.0		10.0	40.0		11.0	41.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0			10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			15.0			15.0	
Pedestrian Calls (#/hr)	4	4		4	4			14			11	
Act Effct Green (s)	17.0	17.0		17.0	17.0		65.8	54.8		67.4	55.6	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.69	0.58		0.71	0.59	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.45		0.65	0.39		0.12	0.38		0.12	0.34	
Control Delay	34.8	12.6		51.6	24.9		5.7	13.2		5.8	12.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.8	12.6		51.6	24.9		5.7	13.2		5.8	12.7	
LOS	C	B		D	C		A	B		A	B	
Approach Delay		17.8			37.6			12.5			12.0	
Approach LOS		B			D			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 16.1 Intersection LOS: B
Intersection Capacity Utilization 80.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



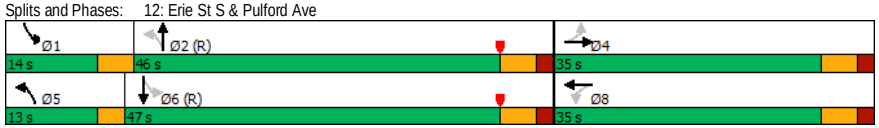
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	61	166	129	75	84	104	712	95	74	678	48
Future Volume (vph)	67	61	166	129	75	84	104	712	95	74	678	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99	1.00	
Frt		0.890			0.921			0.982			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1612	1641	0	1770	1617	0	1770	3173	0	1656	3271	0
Flt Permitted	0.591			0.431			0.326			0.275		
Satd. Flow (perm)	1000	1641	0	802	1617	0	605	3173	0	474	3271	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		149			61			19			10	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		2	2		4	10		26	26		10
Confl. Bikes (#/hr)						1						4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	12%	2%	2%	2%	2%	12%	2%	12%	2%	9%	9%	9%
Adj. Flow (vph)	71	64	175	136	79	88	109	749	100	78	714	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	239	0	136	167	0	109	849	0	78	765	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		10.0	10.0		10.0	24.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		13.0	31.0		14.0	45.0	
Total Split (s)	35.0	35.0		35.0	35.0		13.0	46.0		14.0	47.0	
Total Split (%)	36.8%	36.8%		36.8%	36.8%		13.7%	48.4%		14.7%	49.5%	
Maximum Green (s)	29.0	29.0		29.0	29.0		10.0	40.0		10.0	41.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		3.0	6.0		4.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	11.0	11.0		11.0	11.0			10.0			24.0	
Flash Dont Walk (s)	18.0	18.0		18.0	18.0			15.0			15.0	
Pedestrian Calls (#/hr)	2	2		4	4			16			7	
Act Effct Green (s)	19.1	19.1		19.1	19.1		63.7	52.7		63.5	53.5	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.67	0.55		0.67	0.56	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.35	0.53		0.84	0.45		0.21	0.48		0.18	0.41	
Control Delay	35.1	16.4		74.3	22.9		6.8	15.9		7.2	14.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.3		0.0	0.0	
Total Delay	35.1	16.4		74.3	22.9		6.8	16.2		7.2	14.6	
LOS	D	B		E	C		A	B		A	B	
Approach Delay		20.7			46.0			15.2			13.9	
Approach LOS		C			D			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



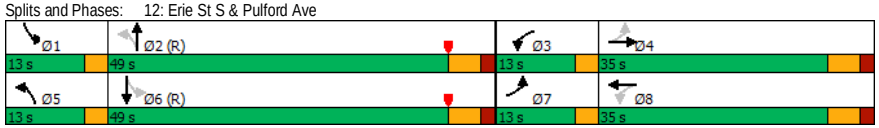
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Future Volume (vph)	54	40	132	108	69	52	68	537	98	61	581	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		0.99	0.99		0.99	1.00	
Frt		0.885			0.936			0.977			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	1628	0	1770	1641	0	1770	3096	0	1641	3253	0
Flt Permitted	0.675			0.405			0.364			0.349		
Satd. Flow (perm)	1111	1628	0	752	1641	0	674	3096	0	597	3253	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		140			33			22			5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		4	4		4	11		15	15		11
Confl. Bikes (#/hr)												4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	15%	2%	2%	2%	2%	15%	2%	15%	2%	10%	10%	10%
Adj. Flow (vph)	57	43	140	115	73	55	72	571	104	65	618	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	183	0	115	128	0	72	675	0	65	646	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	11.0		10.0	11.0		10.0	10.0		10.0	24.0	
Minimum Split (s)	13.0	35.0		13.0	35.0		13.0	31.0		13.0	45.0	
Total Split (s)	13.0	35.0		13.0	35.0		13.0	49.0		13.0	49.0	
Total Split (%)	11.8%	31.8%		11.8%	31.8%		11.8%	44.5%		11.8%	44.5%	
Maximum Green (s)	10.0	29.0		10.0	29.0		10.0	43.0		10.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		11.0			11.0			10.0			24.0	
Flash Dont Walk (s)		18.0			18.0			15.0			15.0	
Pedestrian Calls (#/hr)		4			4			14			11	
Act Effct Green (s)	28.4	15.4		29.0	18.0		70.2	59.2		70.2	59.2	
Actuated g/C Ratio	0.26	0.14		0.26	0.16		0.64	0.54		0.64	0.54	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.17	0.53		0.40	0.43		0.14	0.40		0.14	0.37	
Control Delay	28.3	17.0		32.7	35.0		8.9	17.3		9.0	17.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.4		0.0	0.0	
Total Delay	28.3	17.0		32.7	35.0		8.9	17.6		9.0	17.2	
LOS	C	B		C	C		A	B		A	B	
Approach Delay		19.7			33.9			16.8			16.4	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 19.2 Intersection LOS: B
Intersection Capacity Utilization 78.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



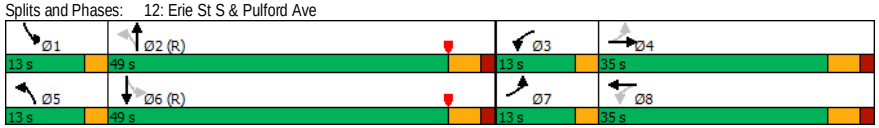
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	61	166	129	75	84	104	712	95	74	678	48
Future Volume (vph)	67	61	166	129	75	84	104	712	95	74	678	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	25.0		0.0	35.0		0.0	45.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	40.0			30.0			25.0			0.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99	1.00	
Frt		0.890			0.921			0.982			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1612	1641	0	1770	1616	0	1770	3170	0	1656	3271	0
Flt Permitted	0.601			0.281			0.286			0.275		
Satd. Flow (perm)	1016	1641	0	523	1616	0	531	3170	0	474	3271	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122			50			15			8	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		394.4			398.0			138.2			66.1	
Travel Time (s)		28.4			28.7			10.0			4.8	
Confl. Peds. (#/hr)	4		2	2		4	10		26	26		10
Confl. Bikes (#/hr)						1						4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	12%	2%	2%	2%	2%	12%	2%	12%	2%	9%	9%	9%
Adj. Flow (vph)	71	64	175	136	79	88	109	749	100	78	714	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	239	0	136	167	0	109	849	0	78	765	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	11.0		10.0	11.0		10.0	10.0		10.0	24.0	
Minimum Split (s)	13.0	35.0		13.0	35.0		13.0	31.0		13.0	45.0	
Total Split (s)	13.0	35.0		13.0	35.0		13.0	49.0		13.0	49.0	
Total Split (%)	11.8%	31.8%		11.8%	31.8%		11.8%	44.5%		11.8%	44.5%	
Maximum Green (s)	10.0	29.0		10.0	29.0		10.0	43.0		10.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		11.0			11.0			10.0			24.0	
Flash Dont Walk (s)		18.0			18.0			15.0			15.0	
Pedestrian Calls (#/hr)		2			4			16			7	
Act Effct Green (s)	29.4	16.4		30.0	19.0		69.2	58.2		68.6	55.6	
Actuated g/C Ratio	0.27	0.15		0.27	0.17		0.63	0.53		0.62	0.51	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.22	0.69		0.53	0.52		0.24	0.50		0.19	0.46	
Control Delay	28.2	30.7		36.1	34.5		10.1	19.7		9.9	19.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.6		0.0	0.0	
Total Delay	28.2	30.7		36.1	34.5		10.1	20.3		9.9	19.7	
LOS	C	C		D	C		B	C		A	B	
Approach Delay		30.2			35.2			19.1			18.8	
Approach LOS		C			D			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 22.5 Intersection LOS: C
Intersection Capacity Utilization 80.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: Erie St S & Pulford Ave



QUEUE ANALYSIS REPORTS

McINTOSH PERRY

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	38.3	49.1	41.1	50.0	35.7	82.2	84.6	43.0	50.3	48.5
Average Queue (m)	15.8	20.7	20.1	22.2	10.0	27.6	31.9	11.6	29.2	25.7
95th Queue (m)	32.2	38.9	34.3	41.7	24.3	60.3	64.5	26.7	48.4	47.8
Link Distance (m)		371.9		384.2		119.4	119.4		45.8	45.8
Upstream Blk Time (%)								0	1	1
Queuing Penalty (veh)								0	5	2
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	5	6	7	6	0	5		0	1	
Queuing Penalty (veh)	9	3	8	6	0	3		0	1	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	52.6	71.9	48.9	56.3	59.6	89.1	95.6	44.8	49.3	51.8
Average Queue (m)	16.2	28.7	23.8	26.2	16.8	38.4	43.5	15.0	38.2	30.5
95th Queue (m)	34.9	54.1	40.5	45.6	38.0	75.6	80.4	33.1	56.4	51.2
Link Distance (m)		371.7		384.2		119.4	119.4		45.8	45.8
Upstream Blk Time (%)						0		0	5	2
Queuing Penalty (veh)						0		0	20	8
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	4	11	11	8	0	10		0	5	
Queuing Penalty (veh)	8	7	17	11	0	10		0	4	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	30.7	55.0	46.0	58.4	46.9	79.7	86.6	39.1	50.2	51.4
Average Queue (m)	12.4	26.7	20.9	25.4	10.5	33.5	39.9	10.6	37.6	32.7
95th Queue (m)	24.6	47.6	37.3	46.9	26.6	68.6	77.7	25.4	55.6	53.8
Link Distance (m)		371.7		384.2		119.4	119.4		45.8	45.8
Upstream Blk Time (%)								0	5	2
Queuing Penalty (veh)								0	18	8
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	2	12	7	10	0	9		0	6	
Queuing Penalty (veh)	3	7	9	11	0	6		0	3	

Intersection: 12: Erie St S & Pulford Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (m)	52.1	81.8	53.6	67.3	59.8	104.2	108.6	44.5	50.8	53.5
Average Queue (m)	16.0	33.1	23.5	30.7	19.8	48.2	51.4	14.7	41.0	38.0
95th Queue (m)	34.7	61.9	44.6	54.9	48.9	91.7	94.9	35.0	56.7	56.5
Link Distance (m)		371.9		384.2		119.4	119.4		45.8	45.8
Upstream Blk Time (%)						0	0	0	7	5
Queuing Penalty (veh)						0	1	0	29	22
Storage Bay Dist (m)	25.0		25.0		35.0			45.0		
Storage Blk Time (%)	4	17	10	16	1	15		0	8	
Queuing Penalty (veh)	10	11	15	20	2	15		0	6	

APPENDIX M – SEACLIFF DRIVE EAST AT CHERRY LANE TIS

McINTOSH PERRY

SEACLIFF DRIVE EAST AT CHERRY LANE

TRAFFIC IMPACT STUDY

Prepared for:

Municipality of Leamington
live | play | work

Prepared by:

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File No.: 19-880

Revised August 2019

SEACLIFF DRIVE EAST AT CHERRY LANE

TRAFFIC IMPACT STUDY

MUNICIPALITY OF LEAMINGTON

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Figure 2: Recommended EA Design Plan
Figure 3: Existing Traffic (AM / PM Peak)
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Appendix A: Traffic Counts

- Seacliff Drive East at Cherry Lane
- Seacliff Drive East at Danforth Avenue

Appendix B: Signal Warrant Analysis

- Seacliff Drive East at Cherry Lane

Appendix C: Other Design Alternatives

- Alternative 2
- Alternative 3A
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- Seacliff Drive East at Cherry Lane
- Seacliff Drive East at Danforth Avenue

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- Seacliff Drive East at Cherry Lane
- Seacliff Drive East at Danforth Avenue

INTRODUCTION AND BACKGROUND

Seacliff Drive East is an east/west arterial road in the southern part of Leamington and is an extension of County Road 20, which runs between Windsor and Leamington. County Road 20 is a principal means of access to the Town of Kingsville to the west and to Point Pelee National Park via County Road 33 to the east. Within the urban area of Leamington, it is a "connecting link", which means that its operation and maintenance are the responsibility of the Municipality of Leamington.

Cherry Lane is a north/south collector road which links Seacliff Drive East to Robson Road, providing access to numerous residential and commercial land uses along Cherry Lane itself as well as access to the Leamington Municipal Marina and to Lake Erie via Robson Road to the south. The area plan is illustrated on Figure 1A, and the study area is shown in greater detail on Figure 1B. It is noted that the intersection of Cherry Lane with Seacliff Drive East is also the location of a driveway access to the Leamington Curling Club on the north side of the intersection. Although the driveway is slightly offset to the west, its operation is an integral part of the intersection and creates a four directional all-way stop under existing conditions.

In 2012, an Environmental Assessment report was prepared for the Municipality of Leamington for the widening and improvement of Seacliff Drive East from Cherry Lane easterly to County Road 33. This report was required because of identified problems with existing road conditions and drainage, anticipated changes in the patterns of traffic flow, and projected increases in overall traffic volumes brought about by planned residential and commercial developments in the area. The recommended plan from the EA is shown on Figure 2.

In 2016, the municipality approved an Active Transportation Master Plan which recommended implementation of various kinds of pedestrian and bicycle infrastructure, including a multi-use trail and on-street bicycle facilities in the vicinity of Seacliff Drive East. This plan has resulted in a recommendation for a multi-use trail on the north side of Seacliff Drive East from Cherry Lane to the Leamington Trail to the west and a transition at Cherry Lane to an on-street bicycle facility on Seacliff Drive East to County Road 33.

In 2018, the intersection of Seacliff Drive East at Cherry Lane was included in a list of intersections being considered for pedestrian crossovers (PXOs) in accordance with the new provincial standards for protected pedestrian crossing traffic controls. At this time, based on a detailed traffic analysis, it was determined that traffic signals were warranted. As a result, all-way stop control was implemented as a temporary traffic control strategy until intersection signalization could be implemented.

Based on all of this background work, the municipality has decided to proceed with the final design of Seacliff Drive East from Cherry Lane easterly to Regatta Drive, including underground infrastructure, roadway and drainage, the traffic control components (signals, signs, and pavement markings), and the identified active transportation infrastructure. This design must be based on the latest traffic projections and operational requirements, and it must incorporate traffic movements to and from Danforth Avenue, which intersects with Seacliff Drive East at approximately 60m to the east.

The purpose of this study is to examine existing traffic conditions on Seacliff Drive East from Cherry Lane to Regatta Drive (including the intersection of Danforth Avenue), to assess future traffic projections and to examine alternative geometric design and traffic control strategies to accommodate future travel needs. The study will recommend a preferred plan that will serve as a basis for the final design and construction tender scheduled for December 2019.

EXISTING CONDITIONS

Turning movement counts were obtained by RC Spencer Associates Inc. on 4 June 2019 for the all-way stop-controlled intersection of Seacliff Drive East at Cherry Lane and the Curling Club driveway access. Counts were also obtained by RC Spencer Associates Inc. on 12 June for the stop-controlled intersection of Seacliff Drive East at Danforth Avenue.

All turning movement counts are provided in Appendix A. Existing peak hour traffic volumes are illustrated on Figure 3 – Existing Traffic (AM / PM Peak). These counts were analyzed using the Synchro 10 program, which calculates various parameters of intersection performance, such as level of service (LOS), intersection capacity utilization (ICU), and control delay.

The results of the analysis for existing traffic conditions show that the all-way stop-controlled intersection of Seacliff Drive East at Cherry Lane is performing satisfactorily in all peak time periods, with an overall LOS B during the AM peak hour, LOS B during the mid-day peak hour, and LOS C during the PM peak hour. The respective overall intersection average control delays are 10.1 seconds in the AM peak hour, 12.9 seconds in the mid-day peak hour, and 16.9 seconds in the PM peak hour.

In order to analyze possible future traffic conditions, traffic projections were made for horizon years 2025 and 2030. Background traffic was increased by 1% per year compounded annually up to the horizon years to obtain these future traffic volumes. This growth represents a realistic estimated growth rate for the study area since the area is approaching full buildout.

SIGNAL WARRANT ANALYSIS

A signal warrant analysis was completed for the intersection of Seacliff Drive East at Cherry Lane. Based on existing volumes and using the provincial OTM Book 12 traffic signal warrant methodology, warrants are 80% satisfied for both Justification 1 (Minimum Vehicle Volume) and Justification 2 (Delay to Cross Traffic). Accordingly, the combined warrant (Justification 3) is met since both exceed the 80% threshold. Appendix B provides the warrant justification templates developed for this analysis.

These results are based on updated traffic data and confirm the 2018 analysis. It is further noted that OTM Book 5 states that all-way stop controls should be considered *"as an interim measure, where traffic control signals are warranted but cannot be implemented immediately."*

ALTERNATIVE DESIGN OPTIONS

The 2012 EA report proposed a preferred plan for the section of Seacliff Drive East from Cherry Lane to Regatta Drive, as illustrated on Figure 2. The plan shows a widening of Seacliff Drive East from the three-lane cross-section west of Cherry Lane to a four-lane cross-section (a through/right turning lane and an exclusive left turn lane in each direction) at Cherry Lane and at Danforth Avenue, returning to a three-lane cross-section east of Danforth Avenue to Regatta Drive and beyond. Separate left and right turning lanes were proposed for all four southbound/ northbound tee intersection approaches to Seacliff Drive East, namely Cherry Lane, Danforth Avenue, Iroquois Road and Regatta Drive. The plan noted that traffic signal infrastructure be provided at Cherry Lane with consideration of future signal control at Danforth Avenue.

In the EA report, the Curling Club's easterly driveway access at Cherry Lane was retained. Based on traffic counts and considering that the property is serviced by a second driveway only a few metres to the west, this easterly driveway was eliminated from all future scenarios analyzed.

The recommended plan from the environmental assessment has formed the basis of Alternative 1, which has been adapted as illustrated in Figure 4. This alternative comprised the same basic traffic configuration, although the channelization has been fine-tuned and the easterly access to the Curling Club has been eliminated.

For completeness, other alternatives were considered conceptually to ensure that a comprehensive review of all possibilities was carried out. These alternatives included:

- A direct roadway connection between Danforth Avenue and Cherry Lane by realigning Cherry Lane from the south, diverting it across the existing private parking lot south and east of the Hydro One transformer station (Alternative 2);

- Traffic circle alternatives:
    - a standard traffic circle at the existing Cherry Lane intersection (Alternative 3A);
    - a "peanut" traffic circle surrounding the Hydro One transformer station and incorporating the intersection of Danforth Avenue (Alternative 3B).

Upon review, it was concluded that Alternative 1 would be pursued and thoroughly investigated; the other alternatives would only be investigated if serious operational problems with standard signal control were identified. As may be observed from the preliminary plans in Appendix C, Alternative 2 (road diversion) and Alternatives 3A and 3B (traffic circles) were determined to be impractical and costly, mostly due to the adjacent utility constraints. Furthermore, Alternative 1 is based on the preferred plan from the approved EA; it is the engineers' opinion that compelling reasons would be required to change the basic concept of the design.

FUTURE TRAFFIC CAPACITY AND LEVEL OF SERVICE ANALYSIS

Per the plan shown in Figure 4 as the basis for review, detailed analysis using the Synchro 10 analysis program was carried out for the intersection for AM, mid-day and PM peak time periods. Since the intersection meets warrants for traffic signalization under existing conditions, traffic signal control was incorporated into the analysis for the following scenarios:

- Existing Traffic
- Background Traffic 2025
- Background Traffic 2030

Volume projections at each specific intersection can be found in Appendix D – Traffic Projection Figures. These values were transcribed onto Figures 5 and 6, which were used in the Synchro analysis of intersection performance. The analysis incorporated both the Cherry Lane and Danforth Avenue intersections. For comparison to the status quo, the analysis was completed for both the existing all-way stop controls and the proposed traffic signalization at Cherry Lane for the horizon years. Traffic signal timings were optimized for a standard two-phase operation, but a dedicated westbound left turn phase could be incorporated into the infrastructure to accommodate future potential needs.

The results from the Synchro reports are summarized in Tables 1 through 3, and the detailed Synchro results are provided in Appendix E.

Table 1: Overall Intersection Level of Service – Seacliff Drive East at Cherry Lane

Scenario	Seacliff Drive East at Cherry Lane					
	AM Peak Hour		MD Peak Hour		PM Peak Hour	
	Non-Signalized	Signalized	Non-Signalized	Signalized	Non-Signalized	Signalized
Existing Traffic	B	A	B	A	C	A
Background Traffic 2025	B	A	B	A	C	A
Background Traffic 2030	B	A	B	A	C	A

Table 2A: Level of Service by Approach – Seacliff Drive East at Cherry Lane (Non-Signalized)

Scenario	Seacliff Drive East at Cherry Lane								
	AM Peak Hour			MD Peak Hour			PM Peak Hour		
	E/B	W/B	N/B	E/B	W/B	N/B	E/B	W/B	N/B
Existing Traffic	B	B	A	B	B	B	C	B	B
Background Traffic 2025	B	B	A	C	B	B	C	B	B
Background Traffic 2030	B	B	B	C	B	B	D	C	B

Table 2B: Level of Service by Approach – Seacliff Drive East at Cherry Lane (Signalized)

Scenario	Seacliff Drive East at Cherry Lane								
	AM Peak Hour			MD Peak Hour			PM Peak Hour		
	E/B	W/B	N/B	E/B	W/B	N/B	E/B	W/B	N/B
Existing Traffic	A	A	A	A	A	A	A	A	A
Background Traffic 2025	A	A	A	A	A	A	A	A	A
Background Traffic 2030	A	A	A	A	A	A	A	A	A

Table 3: Level of Service by Approach – Seacliff Drive East at Danforth Avenue (Non-Signalized)

Scenario	Seacliff Drive East at Danforth Avenue								
	AM Peak Hour			MD Peak Hour			PM Peak Hour		
	E/B	W/B	S/B	E/B	W/B	S/B	E/B	W/B	S/B
Existing Traffic	A	A	B	A	A	B	A	A	B
Background Traffic 2025	A	A	B	A	A	B	A	A	B
Background Traffic 2030	A	A	B	A	A	B	A	A	B

The following observations may be made from a review of the results of Tables 1, 2, and 3:

- The existing level of service (LOS) of all-way stop control at Seacliff Drive East and Cherry Lane is acceptable; however, it deteriorates over time in comparison to signal control, which provides a better LOS for all horizon year scenarios;
- The eastbound Seacliff Drive East approach is near capacity by the 2030 horizon year without roadway widening and signalization;
- The intersection at Danforth Avenue operates effectively under stop control during all time periods for the foreseeable future;
- As noted earlier in this report, Seacliff Drive East at Cherry Lane already meets warrants for signalization under existing traffic conditions.

Accordingly, it is concluded that the final design of Seacliff Drive East within the study area should incorporate a widening of Seacliff Drive East from a three-lane cross-section west of Cherry Lane to a four-lane cross-section (a through/right turning lane and an exclusive left turning lane in each direction) at Cherry Lane and at Danforth Avenue; the cross-section should return to three lanes east of Danforth Avenue to Regatta Drive and beyond. As indicated in the environmental assessment, separate left and right turning lanes are recommended for all four tee intersection approaches to Seacliff Drive East, namely Cherry Lane, Danforth Avenue, Iroquois Road and Regatta Drive. Traffic signal control is only required at the intersection of Seacliff Drive East at Cherry Lane (and not at Danforth Avenue). The signal control at Cherry Lane also facilitates a safe and effective transition between the active transportation infrastructure east and west of Cherry Lane.

QUEUING ANALYSIS

Cherry Lane and Danforth Avenue are separated by only 60m of distance along Seacliff Drive East; therefore, storage space for left turning vehicles from westbound Seacliff Drive East to Cherry Lane and from eastbound Seacliff Drive East to Danforth Avenue is at a premium. The Synchro analysis completed for the proposed traffic signal control, as summarized in Appendix D, provides an estimate of 95th percentile queue lengths for the highest traffic volume, i.e. Total Traffic 2030, PM Peak Hour. As noted, the 95th percentile westbound left turn queue length at Cherry Lane is estimated to be 26.2m, while the through lane queue is estimated as 39.5m.

The recommended plan from the EA provides approximately 45m of space between the westbound stop bar and the curb extension of southbound Danforth Avenue; therefore, the projected maximum queue lengths may be fully accommodated in the available space.

A raised centre median is recommended to separate eastbound and westbound traffic between Cherry Lane and Danforth Avenue; the two main reasons are as follows:

- A raised median provides clear visual separation of traffic in the left turn lanes;
- The median could be extended to create a "right-in-right-out" intersection at Danforth Avenue if future westbound queues were to extend beyond 40m and interfere with the southbound turning movements; however, the extended median is not warranted based on the horizon year analysis completed as part of this study.

The eastbound queue length at Danforth Avenue is estimated at no more than one vehicle for the future condition; therefore, potential queuing at Danforth Avenue poses no constraints on the design of the intersection under existing or horizon year conditions. As a result of the limited space, however, it is the engineers' opinion that a centre median be included in the design to separate eastbound and westbound traffic.

The EA report notes the possible need for traffic signal control at Danforth Avenue. Based on the technical results summarized above, it is the engineers' opinion that future signalization will not likely be required.

The presence of westbound queued vehicles on Seacliff Drive west of Danforth Avenue has the potential to interfere with sight lines for southbound vehicles (i.e. vehicles turning left to eastbound Seacliff Drive). Generally, these queues would only propagate when the Seacliff Drive signal is red, such that the only conflicting traffic for these left turns would be right turns onto Seacliff Drive from Cherry Lane.

It is the engineers' opinion that this problem is not of sufficient magnitude to warrant a change in the recommended plan; this constraint should be monitored to determine if remedial action (such as a raised median extension) is required in the future.

ACTIVE TRANSPORTATION

The approved plan from the EA illustrated on Figure 2 provides for a signal-controlled pedestrian crossing only on the west side of the intersection at Cherry Lane. This location would accommodate all active transportation crossings and act as the connection between the proposed multi-use trails. From a demand point of view, there is no need for a pedestrian crossing on the east side of the intersection, and the space required for such a crossing is better used to maximize queueing storage for westbound traffic.

The approved plan from the EA also incorporates on-road bicycle lanes on both sides of Seacliff Drive East through the study area, as does the municipality's approved Active Transportation Master Plan. However, best practices for active transportation are changing rapidly, and the industry is generally migrating away from on-road bicycle lanes towards separated facilities.

Accordingly, it is the engineers' recommendation that the on-road bicycle lanes on Seacliff Drive be replaced by a multi-use pathway for use by bicycles and pedestrians. Given the nature of adjacent land uses and connections in the area, it is recommended that a multi-use pathway on the north side of Seacliff Drive East be implemented between the Leamington Trail and a new traffic signal at Cherry Lane, transitioning to a multi-use trail on the south side of Seacliff Drive East between Cherry Lane and Regatta / Bevel Line / County Road 33, whereby future linkages to the CWATS system of County facilities could occur.

Cherry Lane is currently a "shared" facility without dedicated bicycle infrastructure, but a transition could be accommodated into the design of the proposed signal to safely facilitate northbound and southbound bicycle access to and from Seacliff Drive East. It is proposed that cyclists be accommodated to cross at the west and south sides of the proposed signal via "crossride" infrastructure as detailed in OTM Book 18 and illustrated on the preferred plan.

SUMMARY AND CONCLUSIONS

The plan from the environmental assessment shown in Figure 2 has formed the basis for a detailed review in light of current conditions and industry practices; the review resulted in the following recommendations, as illustrated on Figure 4:

- widening of Seacliff Drive East from a three-lane cross-section west of Cherry Lane to a four-lane cross-section (a through/right turning lane and an exclusive left turning lane in each direction) at Cherry Lane and at Danforth Avenue; the cross-section should return to three lanes east of Danforth Avenue to Regatta Drive and beyond;
- signalization of the Seacliff Drive East / Cherry Lane intersection;
- relocation/rerouting of the existing driveway to the Curling Club opposite Cherry Lane;
- property acquisition may be required on the north side, opposite Cherry Lane;
- separate left and right turning lanes for all four tee intersection approaches to Seacliff Drive East, namely Cherry Lane, Danforth Avenue, Iroquois Road and Regatta Drive;
- multi-use active transportation pathway on the north side of Seacliff Drive East between the Leamington Trail and Cherry Lane and on the south side of Seacliff Drive East between Cherry Lane / Regatta Drive / Bevel Line / County Road 33;
- signalized crossride at the west and south legs of the proposed signalized intersection;
- centre median separating eastbound and westbound traffic between Cherry Lane and Danforth Avenue.

All of which is respectfully submitted,

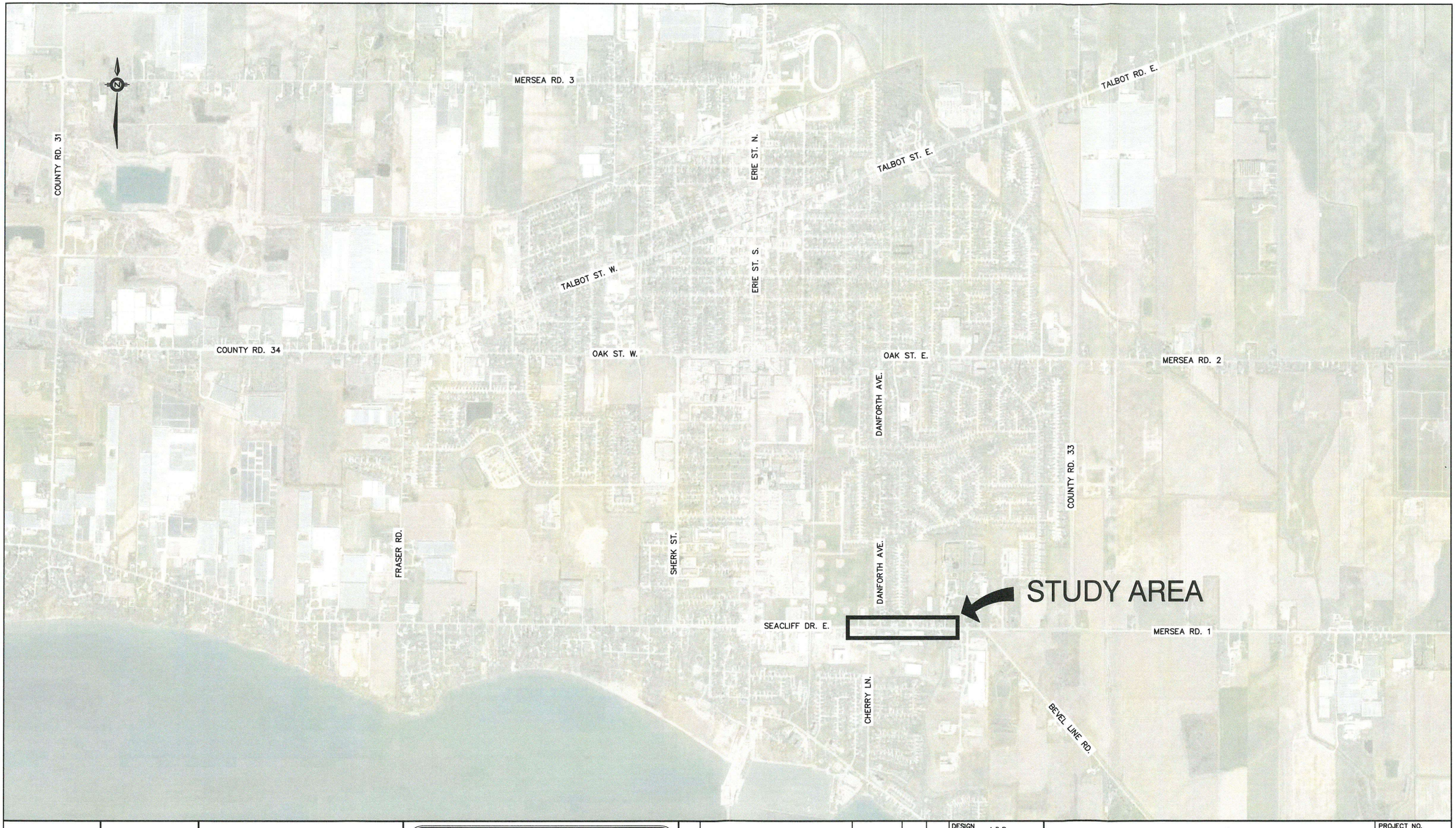
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46617015
7 Aug 2019
PROVINCE OF ONTARIO

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Traffic Engineer



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SEACLIFF AT CHERRY / DANFORTH – T.I.S.

AREA PLAN

PROJECT NO. 19-880

FIGURE NO. 1A

OF 6



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STUDY AREA

PROJECT NO. 19-880

FIGURE NO. 1B

OF 6

SEACLIFF DRIVE EAST

DANFORTH AVE

REGATTA DRIVE

HERRY LANE

QUOIS ROAD

SENECA ROAD

SELKIRK DRAIN

3706270000001000000
SUN PARLOUR CURLING CLUB

MUN NO 151
3706290000072000000
JOHAN & LUELLA RUTH DYCK

3706290000073000000
DAVID JAMES & SHERRI LEE AUGUSTINE

MUN NO 152
3706290000075000000
LUIGI & LUIGIA CARNEVALE
3706290000075000002
DANIELE FRANCO FLORENO

3706290000074000000
ANTONIOS TOMMY SLEIMAN
BETTY THERESA TAWIL

3706290000073900020
PETER & GERTRUDA KNELSON

3706290000073740000
MAHBOUBE AZIZ
3706290000073740000
ABRAHAM & MARIE BANMAN

KRISTA KAREN AZIZ

ELIAS AZIZ
3706290000
JOHN & KA
3706290000
ELIAS & KR

MUN. NO 55

MUN. NO 153

MUN. NO 154

MUN. NO 401

MUN. NO 407

MUN NO 415

MUN NO 800

MUN NO 2

MUN NO 1

POSSIBLE PROPERTY ACQUISITION REQUIRED

PROPERTY REQUIRED FOR DAYLIGHT CORNER

FUTURE TRAFFIC SIGNALS

3706330000001000000
1762690 ONTARIO INC.
MUN. No. 24

3706370000073000000
ONTARIO HYDRO SERVICES CO.
ASSESSMENT & TAXATION DEPT.

UNDERGROUND INFRASTRUCTURE DUCTS FOR FUTURE TRAFFIC SIGNALS

MH 1

MH 2

375 ST

PHASE 1

PHASE 2

KRISTA KAREN AZIZ

ELIAS AZIZ
3706290000073200010
JOHN & KATHERINA FRIESEN
3706290000073200020
ELIAS & KRISTA KAREN AZIZ

3706290000073040000
MICHAEL FREDERICH & LINDA DARLETTE McINNIS

3706290000073020000
MAR-LIN DISTRIBUTING LTD.

3706350000007000000
JOHN QUIRING & TINA LORWEN NEUDORF

3706350000007010000
ABRAM & HELENA PENNER

MUNICIPALITY OF LEAMINGTON

MUN. NO 417

MUN. NO 425

MUN NO 427

MUN NO 429

MUN NO 431

MUN NO 820

MUN NO 824

MUN NO 828

MH 2

MH 3

150 ST

525 ST

525 ST

750 ST

750 ST

Union Gas Easement per Inst. No. R265392

3706400000001000000
VITO & DANIELA LASALA

3706400000002000000
BERNARD LOEWEN & AGANETHA

3706400000003000000
ONTARIO HYDRO SERVICE

3706400000004000000
ELRING CLINGER SEALING

PHASE 1

PHASE 2

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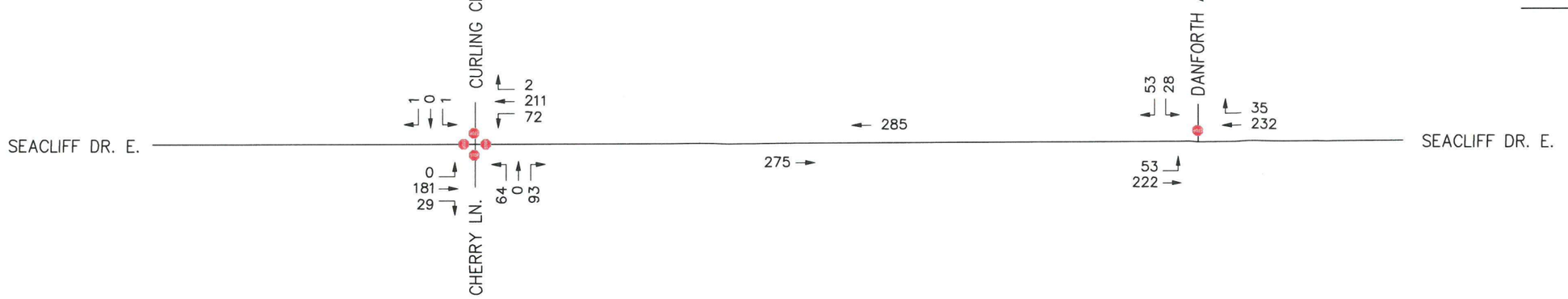
RECOMMENDED EA DESIGN PLAN

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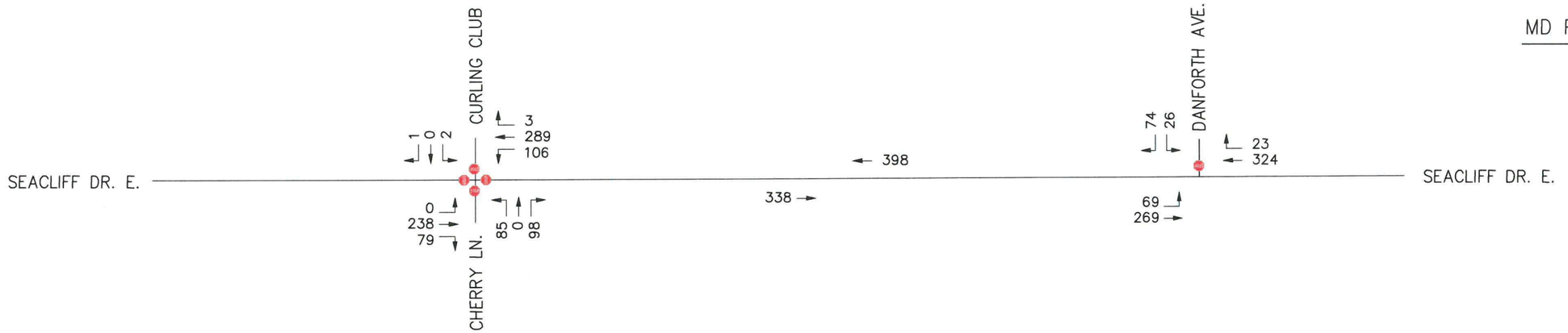
FIGURE NO. 2

OF 6

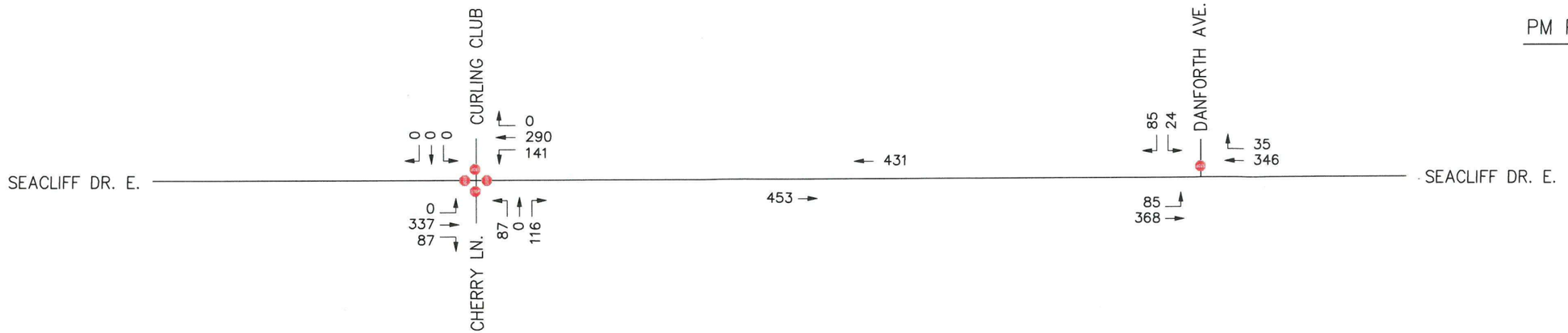
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SEACLIFF AT CHERRY / DANFORTH – T.I.S.

EXISTING TRAFFIC (AM/MD/PM PEAK)

PROJECT NO. 19-880

FIGURE NO. 3

OF 6

ACTIVE TRANSPORTATION JUNCTION

TWO–WAY MULTI–USE PATH ON NORTH SIDE OF SEACLIFF DRIVE

"KEEP RIGHT" SIGNS ON ISLANDS

CYCLISTS SHARE THE ROAD

DANFORTH AVENUE

SEACLIFF DRIVE EAST

SEACLIFF DRIVE EAST

CROSS–RIDES TO LINK NORTH/ SOUTH SIDE MULTI–USE PATHS

DEDICATED BICYCLE PUSHBUTTON

TWO–WAY MULTI–USE PATH ON SOUTH SIDE OF SEACLIFF DRIVE

DEDICATED BICYCLE SIGNALS

CHERRY LANE

FUTURE TWO–WAY MULTI–USE PATH ON WEST SIDE OF CHERRY LANE WITH TRANSITION TO "SHARED" ON–STREET FACILITIES

TRANSITION FROM "SHARED" ON–STREET FACILITY TO CYCLE TRACK

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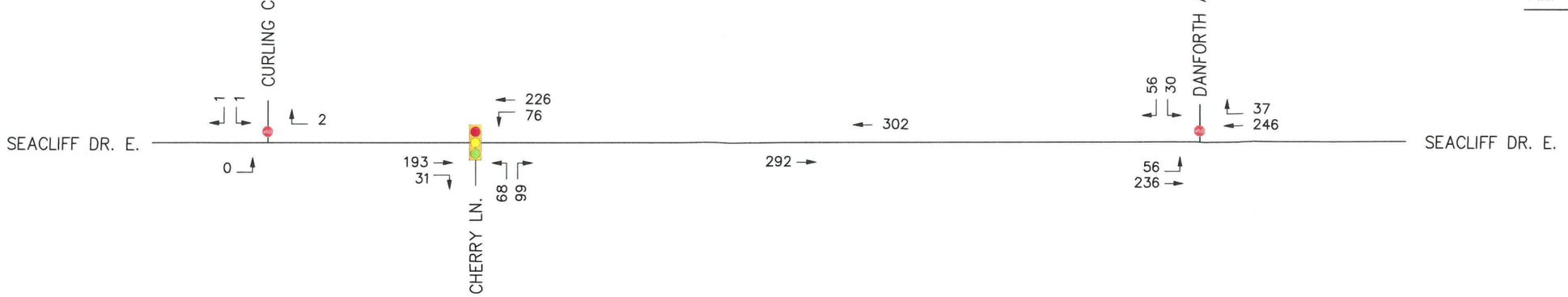
RECOMMENDED DESIGN PLAN (ALTERNATIVE 1)

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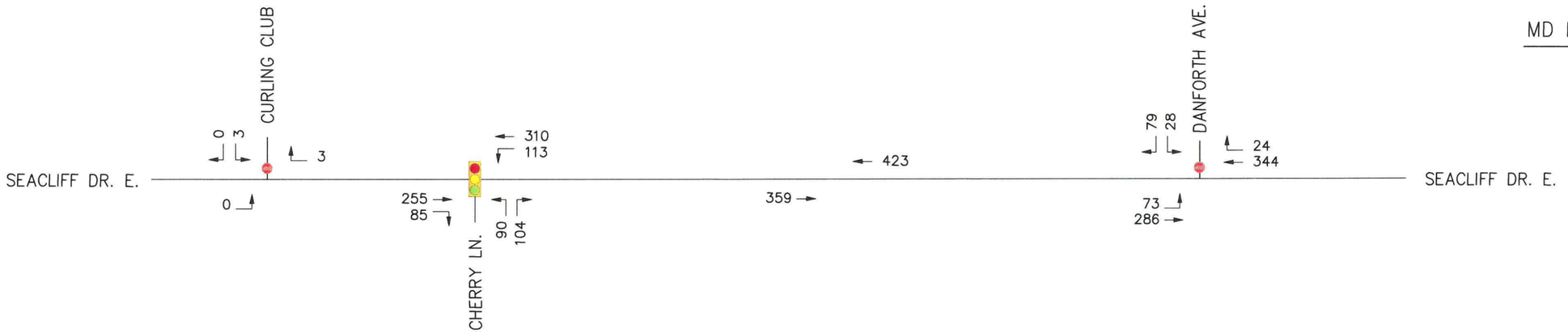
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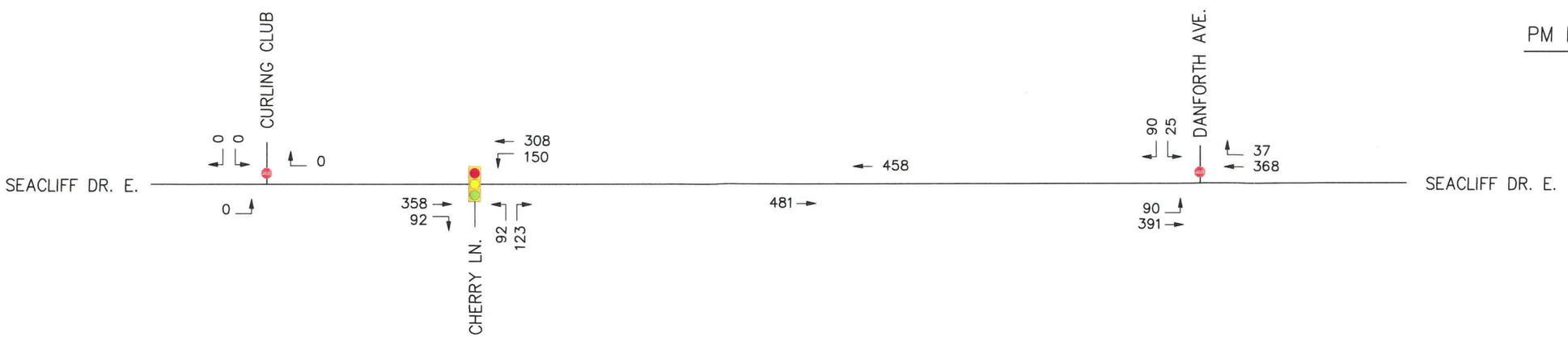
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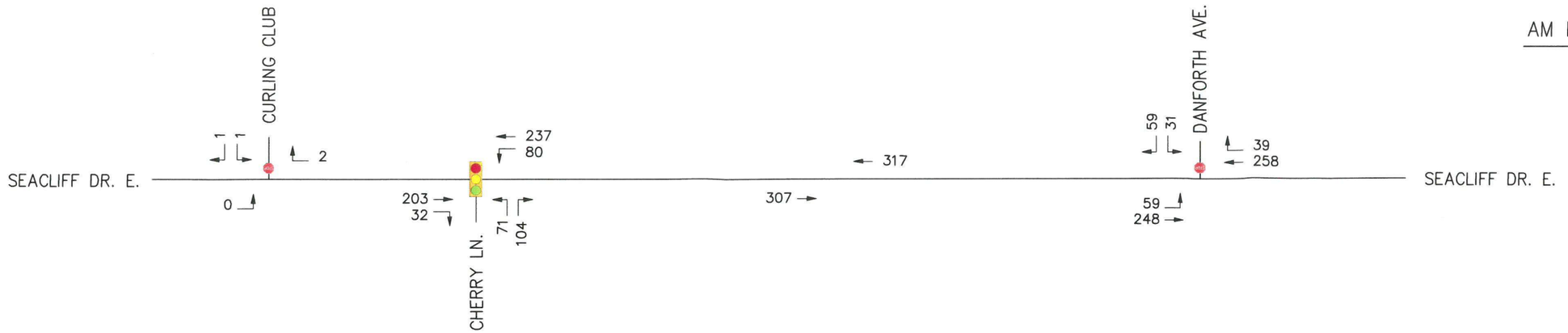
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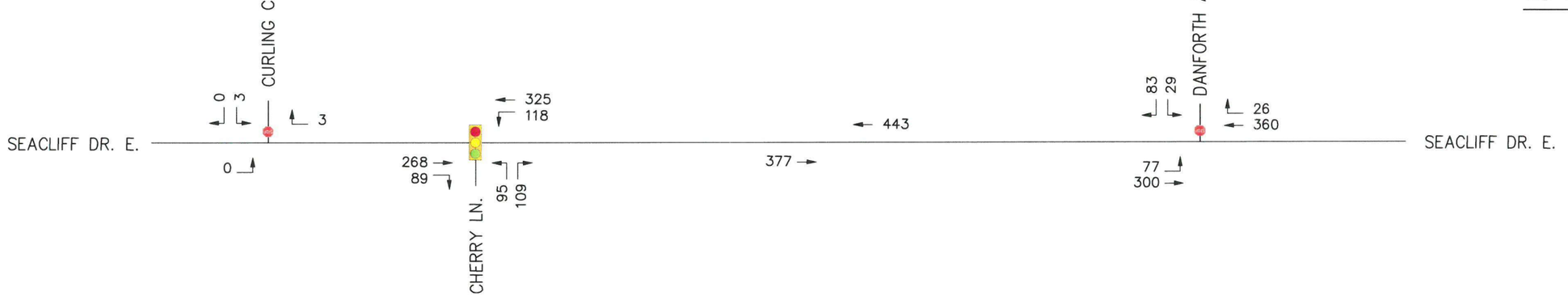
BACKGROUND TRAFFIC 2025 (AM/MD/PM PEAK)

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FIGURE NO. 5
OF 6

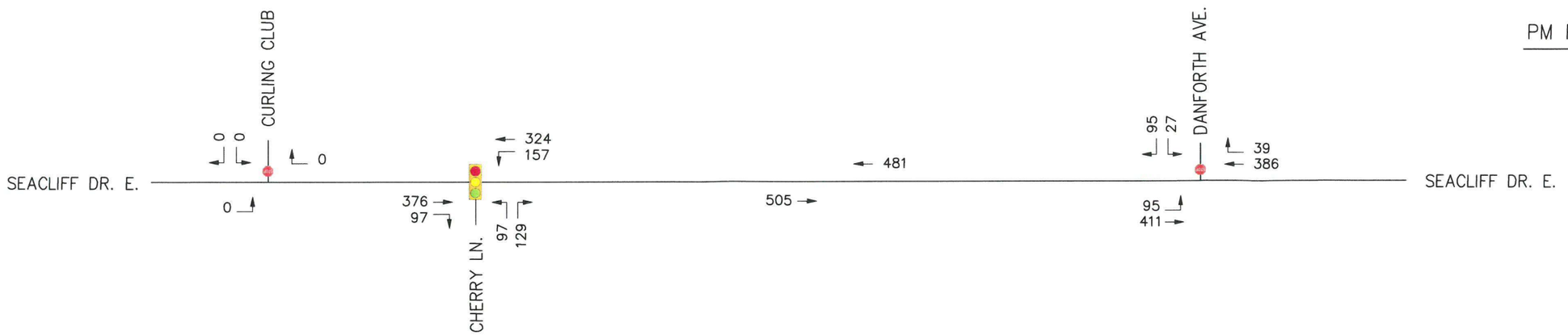
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BACKGROUND TRAFFIC 2030 (AM/MD/PM PEAK)

PROJECT NO.	19-880
FIGURE NO.	6
OF	6