


















## **Appendix L**

### **Existing Traffic Analysis**

Lanes, Volumes, Timings  
1: Main Street & Dundurn Street

Strathcona Existing Traffic  
Weekday AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	279	2448	48	0	0	0	0	447	135	211	267	0
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	0.0		20.0	75.0		0.0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00	0.91	0.91	1.00
Ped Bike Factor		1.00							0.96	0.99	1.00	
Frt		0.997							0.850			
Flt Protected		0.995								0.950	0.989	
Satd. Flow (prot)	0	7067	0	0	0	0	0	3323	1501	1542	3162	0
Flt Permitted		0.995								0.270	0.601	
Satd. Flow (perm)	0	7062	0	0	0	0	0	3323	1439	433	1917	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7							14			
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		142.9			212.1			83.4			274.6	
Travel Time (s)		8.6			12.7			6.0			19.8	
Confl. Peds. (#/hr)	8		20	20		8	51		19	19		51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	4%	2%	0%	0%	0%	0%	5%	4%	3%	5%	0%
Adj. Flow (vph)	303	2661	52	0	0	0	0	486	147	229	290	0
Shared Lane Traffic (%)										37%		
Lane Group Flow (vph)	0	3016	0	0	0	0	0	486	147	144	375	0
Turn Type	Perm								Perm	pm+pt		
Protected Phases		2						4		3	8	
Permitted Phases	2								4	8		
Detector Phase	2	2						4	4	3	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0						10.0	10.0	5.0	10.0	
Minimum Split (s)	38.7	38.7						22.7	22.7	8.0	22.7	
Total Split (s)	57.0	57.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	8.0	33.0	0.0
Total Split (%)	63.3%	63.3%	0.0%	0.0%	0.0%	0.0%	0.0%	27.8%	27.8%	8.9%	36.7%	0.0%
Maximum Green (s)	51.3	51.3						19.3	19.3	5.0	27.3	
Yellow Time (s)	3.3	3.3						3.3	3.3	3.0	3.3	
All-Red Time (s)	2.4	2.4						2.4	2.4	0.0	2.4	
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	0.0
Total Lost Time (s)	5.7	5.7	4.0	4.0	4.0	4.0	4.0	5.7	5.7	3.0	5.7	4.0
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max						Ped	Ped	Max	Ped	
Walk Time (s)	21.0	21.0						7.0	7.0		7.0	
Flash Dont Walk (s)	12.0	12.0						10.0	10.0		10.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		52.3						18.3	18.3	29.0	26.3	
Actuated g/C Ratio		0.58						0.20	0.20	0.32	0.29	
v/c Ratio		0.73						0.72	0.48	0.72	0.63	
Control Delay		15.3						40.0	34.3	41.7	29.9	

Lanes, Volumes, Timings  
1: Main Street & Dundurn Street

Strathcona Existing Traffic  
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.5						0.0	0.0	0.0	0.0	
Total Delay		15.8						40.0	34.3	41.7	29.9	
LOS		B						D	C	D	C	
Approach Delay		15.8						38.7			33.2	
Approach LOS		B						D			C	
Queue Length 50th (m)		88.7						41.1	20.2	18.7	27.2	
Queue Length 95th (m)		101.2						57.4	38.0	m#40.8	41.3	
Internal Link Dist (m)		118.9			188.1			59.4			250.6	
Turn Bay Length (m)									20.0	75.0		
Base Capacity (vph)		4105						713	320	201	613	
Starvation Cap Reductn		576						0	0	0	0	
Spillback Cap Reductn		0						0	0	0	0	
Storage Cap Reductn		0						0	0	0	0	
Reduced v/c Ratio		0.85						0.68	0.46	0.72	0.61	

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 68 (76%), Referenced to phase 2:EBTL and 6:, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 21.4      Intersection LOS: C  
 Intersection Capacity Utilization 63.9%      ICU Level of Service B  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Main Street & Dundurn Street



Lanes, Volumes, Timings  
3: Main Street & Locke Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		TTTTT						T	T			
Volume (vph)	101	2981	146	0	0	0	0	319	132	0	0	0
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	0.0		50.0	0.0		0.0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00							0.95			
Frt		0.993							0.850			
Flt Protected		0.998										
Satd. Flow (prot)	0	7083	0	0	0	0	0	1783	1377	0	0	0
Flt Permitted		0.998										
Satd. Flow (perm)	0	7076	0	0	0	0	0	1783	1314	0	0	0
Right Turn on Red	No		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25							1			
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		194.4			407.9			105.0			237.7	
Travel Time (s)		11.7			24.5			7.6			17.1	
Confl. Peds. (#/hr)	20		15	15		20	14		27	27		14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	2%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Parking (#/hr)									0			
Adj. Flow (vph)	110	3240	159	0	0	0	0	347	143	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3509	0	0	0	0	0	347	143	0	0	0
Turn Type	Perm								Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Detector Phase	2	2						4	4			
Switch Phase												
Minimum Initial (s)	10.0	10.0						1.0	1.0			
Minimum Split (s)	23.5	23.5						26.5	26.5			
Total Split (s)	63.0	63.0	0.0	0.0	0.0	0.0	0.0	27.0	27.0	0.0	0.0	0.0
Total Split (%)	70.0%	70.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	30.0%	0.0%	0.0%	0.0%
Maximum Green (s)	57.5	57.5						21.5	21.5			
Yellow Time (s)	3.3	3.3						3.3	3.3			
All-Red Time (s)	2.2	2.2						2.2	2.2			
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	0.0
Total Lost Time (s)	5.5	5.5	4.0	4.0	4.0	4.0	4.0	5.5	5.5	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0	3.0			
Recall Mode	C-Max	C-Max						Ped	Ped			
Walk Time (s)	7.0	7.0						10.0	10.0			
Flash Dont Walk (s)	9.0	9.0						11.0	11.0			
Pedestrian Calls (#/hr)	0	0						0	0			
Act Effct Green (s)		57.7						21.3	21.3			
Actuated g/C Ratio		0.64						0.24	0.24			
v/c Ratio		0.77						0.82	0.46			

Lanes, Volumes, Timings  
3: Main Street & Locke Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		10.8						50.2	34.8			
Queue Delay		0.0						0.0	0.0			
Total Delay		10.8						50.2	34.8			
LOS		B						D	C			
Approach Delay		10.8						45.7				
Approach LOS		B						D				
Queue Length 50th (m)		125.9						56.9	21.0			
Queue Length 95th (m)		143.5						#99.6	38.6			
Internal Link Dist (m)		170.4			383.9			81.0			213.7	
Turn Bay Length (m)									50.0			
Base Capacity (vph)		4546						426	315			
Starvation Cap Reductn		0						0	0			
Spillback Cap Reductn		0						0	0			
Storage Cap Reductn		0						0	0			
Reduced v/c Ratio		0.77						0.81	0.45			

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 8 (9%), Referenced to phase 2:EBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 15.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 64.5%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Main Street & Locke Street



Lanes, Volumes, Timings  
4: Main Street & Queen Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗								↖↑	
Volume (vph)	0	2553	343	0	0	0	0	0	0	83	290	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor			0.96								0.99	
Frt			0.850									
Flt Protected											0.989	
Satd. Flow (prot)	0	6134	1531	0	0	0	0	0	0	0	3297	0
Flt Permitted											0.989	
Satd. Flow (perm)	0	6134	1469	0	0	0	0	0	0	0	3249	0
Right Turn on Red			Yes			Yes			Yes	No		Yes
Satd. Flow (RTOR)			163									
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		407.9			265.5			151.7			199.5	
Travel Time (s)		24.5			15.9			10.9			14.4	
Confl. Peds. (#/hr)	17		17	17		17	13		51	51		13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	2%	0%	0%	0%	0%	0%	0%	7%	4%	0%
Parking (#/hr)												0
Adj. Flow (vph)	0	2775	373	0	0	0	0	0	0	90	315	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2775	373	0	0	0	0	0	0	0	405	0
Turn Type			Perm							Perm		
Protected Phases		2									4	
Permitted Phases			2							4		
Detector Phase		2	2							4	4	
Switch Phase												
Minimum Initial (s)		10.0	10.0							10.0	10.0	
Minimum Split (s)		21.3	21.3							26.8	26.8	
Total Split (s)	0.0	63.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	27.0	27.0	0.0
Total Split (%)	0.0%	70.0%	70.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	30.0%	0.0%
Maximum Green (s)		57.7	57.7							21.2	21.2	
Yellow Time (s)		3.3	3.3							3.3	3.3	
All-Red Time (s)		2.0	2.0							2.5	2.5	
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	0.0
Total Lost Time (s)	4.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0	5.8	5.8	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Recall Mode		C-Max	C-Max							Ped	Ped	
Walk Time (s)		7.0	7.0							9.0	9.0	
Flash Dont Walk (s)		9.0	9.0							12.0	12.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		57.9	57.9								21.0	
Actuated g/C Ratio		0.64	0.64								0.23	
v/c Ratio		0.70	0.37								0.53	
Control Delay		5.9	1.1								42.8	
Queue Delay		0.0	0.0								0.0	
Total Delay		5.9	1.1								42.8	

Lanes, Volumes, Timings  
4: Main Street & Queen Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A	A									D
Approach Delay		5.3										42.8
Approach LOS		A										D
Queue Length 50th (m)		36.4	0.0									37.6
Queue Length 95th (m)		30.4	m0.0									52.4
Internal Link Dist (m)		383.9			241.5			127.7				175.5
Turn Bay Length (m)												
Base Capacity (vph)		3946	1003									765
Starvation Cap Reductn		0	0									0
Spillback Cap Reductn		0	0									0
Storage Cap Reductn		0	0									0
Reduced v/c Ratio		0.70	0.37									0.53

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 38 (42%), Referenced to phase 2:EBT and 6:, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 9.6  
 Intersection Capacity Utilization 63.7%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Main Street & Queen Street



Lanes, Volumes, Timings  
5: King Street & Dundurn Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑↑		↵	↕↕			↕↕	
Volume (vph)	0	0	0	123	1977	53	277	337	0	0	200	297
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	70.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	0.81	0.81	0.81	0.91	0.91	1.00	1.00	0.95	0.95
Ped Bike Factor					1.00		1.00	1.00			0.99	0.99
Frt					0.996						0.910	0.910
Flt Protected					0.997		0.950	0.989				
Satd. Flow (prot)	0	0	0	0	7098	0	1457	3194	0	0	2871	0
Flt Permitted					0.997		0.326	0.644				
Satd. Flow (perm)	0	0	0	0	7079	0	500	2080	0	0	2871	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8						18	18
Link Speed (k/h)		60			60			50			50	50
Link Distance (m)		152.9			186.7			274.6			683.6	683.6
Travel Time (s)		9.2			11.2			19.8			49.2	49.2
Confl. Peds. (#/hr)	29		35	35		29	1		52	52		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	4%	6%	9%	2%	0%	0%	8%	10%
Adj. Flow (vph)	0	0	0	134	2149	58	301	366	0	0	217	323
Shared Lane Traffic (%)							33%					
Lane Group Flow (vph)	0	0	0	0	2341	0	202	465	0	0	540	0
Turn Type				Perm			pm+pt					
Protected Phases					2		3	8				4
Permitted Phases				2			8					
Detector Phase				2	2		3	8				4
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	10.0
Minimum Split (s)				25.3	25.3		8.0	41.1			16.1	16.1
Total Split (s)	0.0	0.0	0.0	48.0	48.0	0.0	8.0	42.0	0.0	0.0	34.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	53.3%	53.3%	0.0%	8.9%	46.7%	0.0%	0.0%	37.8%	0.0%
Maximum Green (s)				42.7	42.7		5.0	35.9			27.9	27.9
Yellow Time (s)				3.3	3.3		3.0	3.3			3.3	3.3
All-Red Time (s)				2.0	2.0		0.0	2.8			2.8	2.8
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	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.3	5.3	4.0	3.0	6.1	4.0	4.0	6.1	4.0
Lead/Lag							Lead					Lag
Lead-Lag Optimize?							Yes					Yes
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	3.0
Recall Mode				C-Max	C-Max		Max	Ped			Max	Max
Walk Time (s)				7.0	7.0			24.0				
Flash Dont Walk (s)				13.0	13.0			11.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					42.7		39.0	35.9			27.9	27.9
Actuated g/C Ratio					0.47		0.43	0.40			0.31	0.31
v/c Ratio					0.70		0.75	0.55			0.60	0.60
Control Delay					13.4		32.9	20.3			21.6	21.6



Lanes, Volumes, Timings  
5: King Street & Dundurn Street

Strathcona Existing Traffic  
Weekday AM Peak Hour

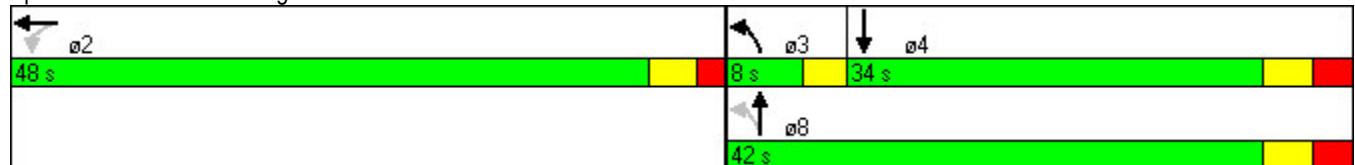


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					13.4		32.9	20.3			21.6	
LOS					B		C	C			C	
Approach Delay					13.4			24.1			21.6	
Approach LOS					B			C			C	
Queue Length 50th (m)					88.4		28.7	34.0			23.0	
Queue Length 95th (m)					93.9		m#48.2	48.4			40.7	
Internal Link Dist (m)		128.9			162.7			250.6			659.6	
Turn Bay Length (m)							70.0					
Base Capacity (vph)					3363		270	853			902	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					0.70		0.75	0.55			0.60	

Intersection Summary

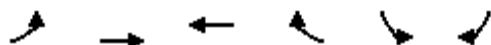
Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 37 (41%), Referenced to phase 2:WBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 16.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.9%  
 ICU Level of Service B  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: King Street & Dundurn Street



Lanes, Volumes, Timings  
6: King Street & Strathcona Ave N

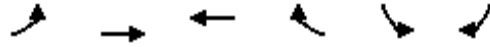
Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑↑↓			↑
Volume (vph)	0	0	1995	26	0	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.81	0.81	1.00	1.00
Ped Bike Factor			1.00			0.99
Frt			0.998			0.865
Flt Protected						
Satd. Flow (prot)	0	0	7129	0	0	1528
Flt Permitted						
Satd. Flow (perm)	0	0	7129	0	0	1508
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			5			4
Link Speed (k/h)		60	60		50	
Link Distance (m)		20.4	195.2		280.2	
Travel Time (s)		1.2	11.7		20.2	
Confl. Peds. (#/hr)				12		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	8%	0%	4%
Adj. Flow (vph)	0	0	2168	28	0	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	2196	0	0	77
Turn Type						custom
Protected Phases			2			
Permitted Phases						4
Detector Phase			2			4
Switch Phase						
Minimum Initial (s)			10.0			10.0
Minimum Split (s)			18.0			35.0
Total Split (s)	0.0	0.0	55.0	0.0	0.0	35.0
Total Split (%)	0.0%	0.0%	61.1%	0.0%	0.0%	38.9%
Maximum Green (s)			49.0			29.0
Yellow Time (s)			3.3			3.3
All-Red Time (s)			2.7			2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)			3.0			3.0
Recall Mode			C-Max			None
Walk Time (s)			7.0			19.0
Flash Dont Walk (s)			5.0			10.0
Pedestrian Calls (#/hr)			0			0
Act Effct Green (s)			71.3			11.1
Actuated g/C Ratio			0.79			0.12
v/c Ratio			0.39			0.41
Control Delay			1.8			40.8
Queue Delay			0.0			0.0
Total Delay			1.8			40.8
LOS			A			D

Lanes, Volumes, Timings  
 6: King Street & Strathcona Ave N

Strathcona Existing Traffic  
 Weekday AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay			1.8			
Approach LOS			A			
Queue Length 50th (m)			14.8			12.0
Queue Length 95th (m)			15.2			24.1
Internal Link Dist (m)		0.1	171.2		256.2	
Turn Bay Length (m)						
Base Capacity (vph)			5651			489
Starvation Cap Reductn			0			0
Spillback Cap Reductn			0			0
Storage Cap Reductn			0			0
Reduced v/c Ratio			0.39			0.16

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	20 (22%), Referenced to phase 2:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.41
Intersection Signal Delay:	3.1
Intersection LOS:	A
Intersection Capacity Utilization:	42.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 6: King Street & Strathcona Ave N



Lanes, Volumes, Timings  
7: King Street & Locke Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑		↖	↑				↗
Volume (vph)	0	0	0	0	1858	36	196	166	0	0	0	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt					0.997							0.865
Flt Protected							0.950					
Satd. Flow (prot)	0	0	0	0	6039	0	1728	1818	0	0	0	1349
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	0	0	6039	0	1728	1818	0	0	0	1349
Right Turn on Red			Yes			Yes	No		Yes			Yes
Satd. Flow (RTOR)					8							13
Link Speed (k/h)		60			60			50				50
Link Distance (m)		195.2			409.8			237.7				547.4
Travel Time (s)		11.7			24.6			17.1				39.4
Confl. Peds. (#/hr)	27		23	23		27			23	23		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	4%	11%	1%	1%	0%	0%	0%	6%
Parking (#/hr)						0						0
Adj. Flow (vph)	0	0	0	0	2020	39	213	180	0	0	0	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2059	0	213	180	0	0	0	107
Turn Type							Perm					custom
Protected Phases					2			4				
Permitted Phases							4					8
Detector Phase					2		4	4				8
Switch Phase												
Minimum Initial (s)					10.0		10.0	10.0				10.0
Minimum Split (s)					22.0		26.6	26.6				15.6
Total Split (s)	0.0	0.0	0.0	0.0	63.0	0.0	27.0	27.0	0.0	0.0	0.0	27.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	70.0%	0.0%	30.0%	30.0%	0.0%	0.0%	0.0%	30.0%
Maximum Green (s)					58.0		21.4	21.4				21.4
Yellow Time (s)					3.3		3.3	3.3				3.3
All-Red Time (s)					1.7		2.3	2.3				2.3
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	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.0	4.0	5.6	5.6	4.0	4.0	4.0	5.6
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Recall Mode					C-Max		Ped	Ped				Max
Walk Time (s)					7.0		13.0	13.0				
Flash Dont Walk (s)					10.0		8.0	8.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					58.0		21.4	21.4				21.4
Actuated g/C Ratio					0.64		0.24	0.24				0.24
v/c Ratio					0.53		0.52	0.42				0.32

Lanes, Volumes, Timings  
7: King Street & Locke Street

Strathcona Existing Traffic  
Weekday AM Peak Hour

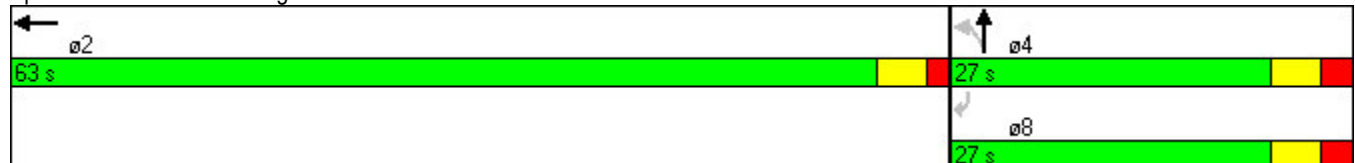


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay					7.3		49.9	48.2				34.8
Queue Delay					0.0		0.0	0.0				0.0
Total Delay					7.3		49.9	48.2				34.8
LOS					A		D	D				C
Approach Delay					7.3			49.1				
Approach LOS					A			D				
Queue Length 50th (m)					68.6		34.1	28.8				13.2
Queue Length 95th (m)					83.4		m44.0	m37.2				m28.7
Internal Link Dist (m)		171.2			385.8			213.7			523.4	
Turn Bay Length (m)												
Base Capacity (vph)					3895		411	432				331
Starvation Cap Reductn					0		0	0				0
Spillback Cap Reductn					0		0	0				0
Storage Cap Reductn					0		0	0				0
Reduced v/c Ratio					0.53		0.52	0.42				0.32

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 7 (8%), Referenced to phase 2:WBT and 6:, Start of Green  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.53  
 Intersection Signal Delay: 14.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 64.5%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: King Street & Locke Street



Lanes, Volumes, Timings  
8: King Street & Queen Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					←←←←						→	↗
Volume (vph)	0	0	0	76	1518	0	0	0	0	0	236	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor					1.00						1.00	0.98
Frt											0.987	0.850
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	6043	0	0	0	0	0	1658	1348
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	6040	0	0	0	0	0	1658	1315
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					18						6	19
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		409.8			250.1			199.5			402.3	
Travel Time (s)		24.6			15.0			14.4			29.0	
Confl. Peds. (#/hr)	28		6	6		28	13		47	47		13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	11%	4%	0%	0%	0%	0%	0%	3%	10%
Parking (#/hr)						0				0		
Adj. Flow (vph)	0	0	0	83	1650	0	0	0	0	0	257	251
Shared Lane Traffic (%)												10%
Lane Group Flow (vph)	0	0	0	0	1733	0	0	0	0	0	282	226
Turn Type				Perm								Perm
Protected Phases					2						4	
Permitted Phases				2								4
Detector Phase				2	2						4	4
Switch Phase												
Minimum Initial (s)				10.0	10.0						10.0	10.0
Minimum Split (s)				20.4	20.4						32.4	32.4
Total Split (s)	0.0	0.0	0.0	57.0	57.0	0.0	0.0	0.0	0.0	0.0	33.0	33.0
Total Split (%)	0.0%	0.0%	0.0%	63.3%	63.3%	0.0%	0.0%	0.0%	0.0%	0.0%	36.7%	36.7%
Maximum Green (s)				51.6	51.6						27.6	27.6
Yellow Time (s)				3.3	3.3						3.3	3.3
All-Red Time (s)				2.1	2.1						2.1	2.1
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	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.4	5.4	4.0	4.0	4.0	4.0	4.0	5.4	5.4
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0						3.0	3.0
Recall Mode				C-Max	C-Max						Ped	Ped
Walk Time (s)				7.0	7.0						14.0	14.0
Flash Dont Walk (s)				8.0	8.0						13.0	13.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)					52.1						27.1	27.1
Actuated g/C Ratio					0.58						0.30	0.30
v/c Ratio					0.49						0.56	0.55

Lanes, Volumes, Timings  
8: King Street & Queen Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay					11.7						19.9	18.8
Queue Delay					0.0						0.0	0.0
Total Delay					11.7						19.9	18.8
LOS					B						B	B
Approach Delay					11.7						19.4	
Approach LOS					B						B	
Queue Length 50th (m)					46.8						24.9	18.1
Queue Length 95th (m)					56.6						m51.2	m26.5
Internal Link Dist (m)		385.8			226.1			175.5			378.3	
Turn Bay Length (m)												
Base Capacity (vph)					3503						513	416
Starvation Cap Reductn					0						0	0
Spillback Cap Reductn					0						0	0
Storage Cap Reductn					0						0	0
Reduced v/c Ratio					0.49						0.55	0.54

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 67 (74%), Referenced to phase 2:WBTL and 6:, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 13.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 56.3%  
 ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: King Street & Queen Street



Lanes, Volumes, Timings  
9: York Boulevard & Dundurn Street

Strathcona Existing Traffic  
Weekday AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↘	↑↑	↖↗	↗
Volume (vph)	1538	236	293	1000	233	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		100.0	55.0		0.0	0.0
Storage Lanes		1	1		2	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	0.91	1.00	1.00	0.95	0.97	1.00
Ped Bike Factor		0.98	1.00			0.99
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4868	1501	1616	3355	3351	1501
Flt Permitted			0.084		0.950	
Satd. Flow (perm)	4868	1467	143	3355	3351	1480
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		238				201
Link Speed (k/h)	60			60	50	
Link Distance (m)	299.6			423.3	683.6	
Travel Time (s)	18.0			25.4	49.2	
Confl. Peds. (#/hr)		5	5			8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	8%	4%	1%	4%
Adj. Flow (vph)	1672	257	318	1087	253	201
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1672	257	318	1087	253	201
Turn Type		Free	pm+pt			Free
Protected Phases	2		1	6	4	
Permitted Phases		Free	6			Free
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	35.4		8.0	15.4	35.2	
Total Split (s)	36.0	0.0	18.0	54.0	36.0	0.0
Total Split (%)	40.0%	0.0%	20.0%	60.0%	40.0%	0.0%
Maximum Green (s)	30.6		15.0	48.6	29.8	
Yellow Time (s)	3.3		3.0	3.3	3.3	
All-Red Time (s)	2.1		0.0	2.1	2.9	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	4.0	3.0	5.4	6.2	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Min		Min	C-Min	Min	
Walk Time (s)	22.0				10.0	
Flash Dont Walk (s)	8.0				19.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	44.7	90.0	68.4	66.0	12.4	90.0
Actuated g/C Ratio	0.50	1.00	0.76	0.73	0.14	1.00
v/c Ratio	0.69	0.18	0.78	0.44	0.55	0.14
Control Delay	20.8	0.3	28.6	2.6	51.7	0.2



Lanes, Volumes, Timings  
 9: York Boulevard & Dundurn Street

Strathcona Existing Traffic  
 Weekday AM Peak Hour

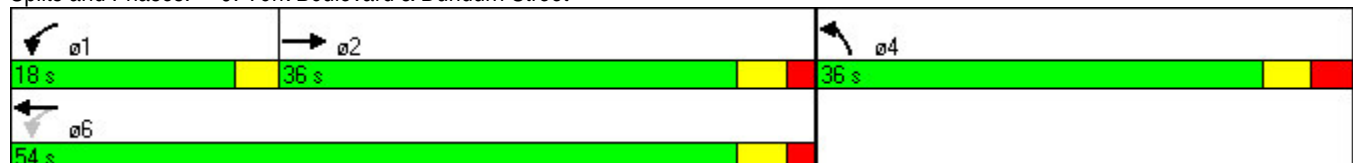


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	0.3	28.6	2.6	51.7	0.2
LOS	C	A	C	A	D	A
Approach Delay	18.1			8.5	28.9	
Approach LOS	B			A	C	
Queue Length 50th (m)	77.3	0.0	22.2	6.0	19.6	0.0
Queue Length 95th (m)	116.2	0.0	57.8	14.0	m27.2	m0.0
Internal Link Dist (m)	275.6			399.3	659.6	
Turn Bay Length (m)		100.0	55.0			
Base Capacity (vph)	2417	1467	420	2461	1110	1480
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.18	0.76	0.44	0.23	0.14

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 15.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.0%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: York Boulevard & Dundurn Street



Lanes, Volumes, Timings  
10: York Boulevard & Locke Street

Strathcona Existing Traffic  
Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	1536	15	55	1107	12	87	45	74	10	54	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	22.0		0.0	45.0		0.0	0.0		5.0	0.0		10.0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00			0.99	0.97		1.00	0.98
Frt		0.999			0.998				0.850			0.850
Flt Protected	0.950			0.950				0.968			0.992	
Satd. Flow (prot)	1646	4863	0	1662	4761	0	0	1778	1351	0	1765	1364
Flt Permitted	0.199			0.105				0.759			0.944	
Satd. Flow (perm)	343	4863	0	183	4761	0	0	1384	1308	0	1675	1332
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			3				15			49
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		423.3			448.5			547.4			176.7	
Travel Time (s)		25.4			26.9			39.4			12.7	
Confl. Peds. (#/hr)	26		10	10		26	9		16	16		9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	3%	0%	5%	5%	8%	0%	0%	4%	10%	2%	3%
Parking (#/hr)									0			0
Adj. Flow (vph)	74	1670	16	60	1203	13	95	49	80	11	59	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	1686	0	60	1216	0	0	144	80	0	70	168
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4		4	8		8
Detector Phase	2	2		6	6		4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	35.2	35.2		35.2	35.2		27.9	27.9	27.9	27.9	27.9	27.9
Total Split (s)	55.0	55.0	0.0	55.0	55.0	0.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	61.1%	61.1%	0.0%	61.1%	61.1%	0.0%	38.9%	38.9%	38.9%	38.9%	38.9%	38.9%
Maximum Green (s)	48.8	48.8		48.8	48.8		28.1	28.1	28.1	28.1	28.1	28.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		3.6	3.6	3.6	3.6	3.6	3.6
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	0.0
Total Lost Time (s)	6.2	6.2	4.0	6.2	6.2	4.0	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max		Max	Max		Ped	Ped	Ped	Ped	Ped	Ped
Walk Time (s)	19.0	19.0		19.0	19.0		12.0	12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		9.0	9.0	9.0	9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	55.9	55.9		55.9	55.9		21.0	21.0			21.0	21.0
Actuated g/C Ratio	0.62	0.62		0.62	0.62		0.23	0.23			0.23	0.23
v/c Ratio	0.35	0.56		0.53	0.41		0.45	0.25			0.18	0.48

Lanes, Volumes, Timings  
10: York Boulevard & Locke Street

Strathcona Existing Traffic  
Weekday AM Peak Hour

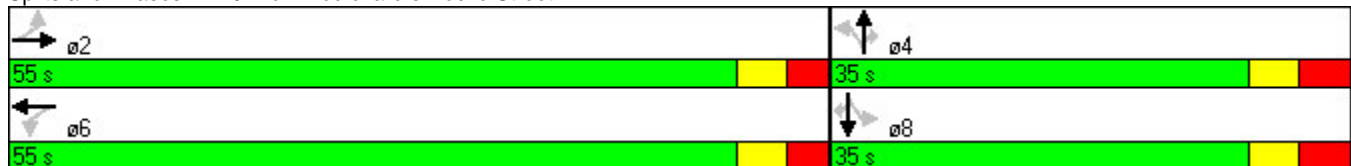


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	7.0	3.8		36.1	8.6			36.7	28.3		29.1	26.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	7.0	3.8		36.1	8.6			36.7	28.3		29.1	26.2
LOS	A	A		D	A			D	C		C	C
Approach Delay		4.0			9.9			33.7			27.1	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.5	13.5		4.9	33.6			25.5	9.0		9.7	17.4
Queue Length 95th (m)	m3.9	24.8		#20.5	41.3			43.5	m24.7		20.5	36.7
Internal Link Dist (m)		399.3			424.5			523.4			152.7	
Turn Bay Length (m)	22.0			45.0					5.0			10.0
Base Capacity (vph)	213	3021		114	2958			432	419		523	450
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.35	0.56		0.53	0.41			0.33	0.19		0.13	0.37

Intersection Summary
























Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 2 (2%), Referenced to phase 2:EBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 9.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 81.7%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: York Boulevard & Locke Street



Lanes, Volumes, Timings  
11: York Boulevard & Queen Street

Strathcona Existing Traffic  
Weekday AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  						 	
Volume (vph)	0	1562	103	284	1124	0	0	0	0	54	190	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	93.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	0.91	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor		0.99		0.99						0.94	0.99	
Frt		0.991									0.968	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	4759	0	3134	4686	0	0	0	0	1572	3130	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	4759	0	3100	4686	0	0	0	0	1483	3130	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15									36	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		448.5			307.5			402.3			157.2	
Travel Time (s)		26.9			18.5			29.0			11.3	
Confl. Peds. (#/hr)	151		36	36		151	39		42	42		39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	1%	8%	7%	0%	0%	0%	0%	11%	6%	8%
Adj. Flow (vph)	0	1698	112	309	1222	0	0	0	0	59	207	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1810	0	309	1222	0	0	0	0	59	264	0
Turn Type				Prot						Perm		
Protected Phases		2		1	6							4
Permitted Phases										4		
Detector Phase		2		1	6					4		4
Switch Phase												
Minimum Initial (s)		10.0		5.0	10.0					10.0	10.0	
Minimum Split (s)		17.4		10.2	19.2					26.8	26.8	
Total Split (s)	0.0	46.0	0.0	17.0	63.0	0.0	0.0	0.0	0.0	27.0	27.0	0.0
Total Split (%)	0.0%	51.1%	0.0%	18.9%	70.0%	0.0%	0.0%	0.0%	0.0%	30.0%	30.0%	0.0%
Maximum Green (s)		40.6		11.8	57.8					20.2	20.2	
Yellow Time (s)		3.3		3.3	3.3					3.3	3.3	
All-Red Time (s)		2.1		1.9	1.9					3.5	3.5	
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	0.0
Total Lost Time (s)	4.0	5.4	4.0	5.2	5.2	4.0	4.0	4.0	4.0	6.8	6.8	4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		C-Max		Max	Max					Ped	Ped	
Walk Time (s)		7.0			7.0					12.0	12.0	
Flash Dont Walk (s)		5.0			7.0					8.0	8.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		40.6		12.0	58.0					20.0	20.0	
Actuated g/C Ratio		0.45		0.13	0.64					0.22	0.22	
v/c Ratio		0.84		0.74	0.40					0.18	0.36	
Control Delay		15.8		49.4	8.2					30.1	27.1	

Lanes, Volumes, Timings  
 11: York Boulevard & Queen Street

Strathcona Existing Traffic  
 Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0		0.0	0.0					0.0	0.0	
Total Delay		15.8		49.4	8.2					30.1	27.1	
LOS		B		D	A					C	C	
Approach Delay		15.8			16.5						27.7	
Approach LOS		B			B						C	
Queue Length 50th (m)		37.0		26.8	33.2					8.3	17.5	
Queue Length 95th (m)		78.2		#43.8	41.3					18.5	28.5	
Internal Link Dist (m)		424.5			283.5			378.3			133.2	
Turn Bay Length (m)				93.0								
Base Capacity (vph)		2155		418	3020					333	730	
Starvation Cap Reductn		0		0	0					0	0	
Spillback Cap Reductn		0		0	0					0	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.84		0.74	0.40					0.18	0.36	

Intersection Summary


















Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 25 (28%), Referenced to phase 2:EBT, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 17.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.9%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 11: York Boulevard & Queen Street



Lanes, Volumes, Timings  
1: Main Street & Dundurn Street

Strathcona Existing Traffic  
Weekday PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	312	2484	126	0	0	0	0	347	119	358	382	0
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	0.0		20.0	75.0		0.0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00	0.91	0.91	1.00
Ped Bike Factor		0.99							0.92	0.97	0.99	
Frt		0.994							0.850			
Flt Protected		0.995								0.950	0.987	
Satd. Flow (prot)	0	7129	0	0	0	0	0	3388	1531	1572	3243	0
Flt Permitted		0.995								0.379	0.650	
Satd. Flow (perm)	0	7096	0	0	0	0	0	3388	1407	606	2116	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20							6			
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		142.9			215.9			83.4			274.6	
Travel Time (s)		8.6			13.0			6.0			19.8	
Confl. Peds. (#/hr)	52		53	53		52	91		44	44		91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	2%	0%	0%	0%	0%	3%	2%	1%	2%	0%
Adj. Flow (vph)	339	2700	137	0	0	0	0	377	129	389	415	0
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	0	3176	0	0	0	0	0	377	129	233	571	0
Turn Type	Perm								Perm	pm+pt		
Protected Phases		2						4		3	8	
Permitted Phases	2								4	8		
Detector Phase	2	2						4	4	3	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0						10.0	10.0	5.0	10.0	
Minimum Split (s)	38.7	38.7						22.7	22.7	8.0	22.7	
Total Split (s)	57.0	57.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	8.0	33.0	0.0
Total Split (%)	63.3%	63.3%	0.0%	0.0%	0.0%	0.0%	0.0%	27.8%	27.8%	8.9%	36.7%	0.0%
Maximum Green (s)	51.3	51.3						19.3	19.3	5.0	27.3	
Yellow Time (s)	3.3	3.3						3.3	3.3	3.0	3.3	
All-Red Time (s)	2.4	2.4						2.4	2.4	0.0	2.4	
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	0.0
Total Lost Time (s)	5.7	5.7	4.0	4.0	4.0	4.0	4.0	5.7	5.7	3.0	5.7	4.0
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max						Ped	Ped	Max	Ped	
Walk Time (s)	21.0	21.0						7.0	7.0		7.0	
Flash Dont Walk (s)	12.0	12.0						10.0	10.0		10.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		51.9						18.7	18.7	29.4	26.7	
Actuated g/C Ratio		0.58						0.21	0.21	0.33	0.30	
v/c Ratio		0.77						0.54	0.43	0.92	0.87	
Control Delay		16.3						34.8	34.6	65.0	42.3	

Lanes, Volumes, Timings  
1: Main Street & Dundurn Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



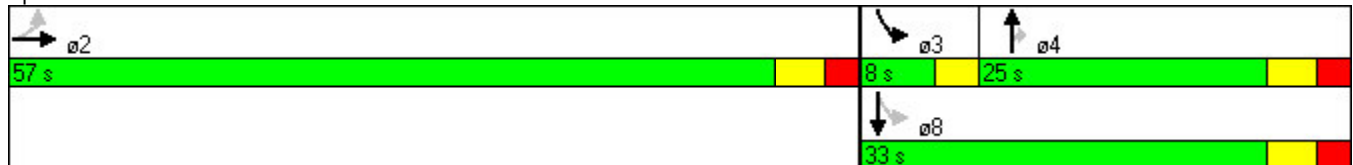
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.8						0.0	0.0	0.0	0.0	
Total Delay		17.1						34.8	34.6	65.0	42.3	
LOS		B						C	C	E	D	
Approach Delay		17.1						34.7			48.9	
Approach LOS		B						C			D	
Queue Length 50th (m)		97.3						30.5	18.4	36.5	47.8	
Queue Length 95th (m)		109.8						44.2	34.9	m#58.2	m#60.4	
Internal Link Dist (m)		118.9			191.9			59.4			250.6	
Turn Bay Length (m)									20.0	75.0		
Base Capacity (vph)		4100						727	306	252	671	
Starvation Cap Reductn		556						0	0	0	0	
Spillback Cap Reductn		0						0	0	0	0	
Storage Cap Reductn		0						0	0	0	0	
Reduced v/c Ratio		0.90						0.52	0.42	0.92	0.85	

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 89 (99%), Referenced to phase 2:EBTL and 6:, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 24.8  
 Intersection Capacity Utilization 73.5%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Main Street & Dundurn Street



Lanes, Volumes, Timings  
3: Main Street & Locke Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		TTTTT						T	T			
Volume (vph)	92	2762	189	0	0	0	0	256	125	0	0	0
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	0.0		50.0	0.0		0.0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99							0.97			
Frt		0.991							0.850			
Flt Protected		0.998										
Satd. Flow (prot)	0	7236	0	0	0	0	0	1801	1516	0	0	0
Flt Permitted		0.998										
Satd. Flow (perm)	0	7232	0	0	0	0	0	1801	1473	0	0	0
Right Turn on Red	No		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37							1			
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		190.6			407.9			105.0			237.7	
Travel Time (s)		11.4			24.5			7.6			17.1	
Confl. Peds. (#/hr)	10		33	33		10	24		13	13		24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	0%	2%	3%	0%	0%	0%
Adj. Flow (vph)	100	3002	205	0	0	0	0	278	136	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3307	0	0	0	0	0	278	136	0	0	0
Turn Type	Perm								Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Detector Phase	2	2						4	4			
Switch Phase												
Minimum Initial (s)	10.0	10.0						1.0	1.0			
Minimum Split (s)	23.5	23.5						26.5	26.5			
Total Split (s)	63.0	63.0	0.0	0.0	0.0	0.0	0.0	27.0	27.0	0.0	0.0	0.0
Total Split (%)	70.0%	70.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	30.0%	0.0%	0.0%	0.0%
Maximum Green (s)	57.5	57.5						21.5	21.5			
Yellow Time (s)	3.3	3.3						3.3	3.3			
All-Red Time (s)	2.2	2.2						2.2	2.2			
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	0.0
Total Lost Time (s)	5.5	5.5	4.0	4.0	4.0	4.0	4.0	5.5	5.5	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0	3.0			
Recall Mode	C-Max	C-Max						Ped	Ped			
Walk Time (s)	7.0	7.0						10.0	10.0			
Flash Dont Walk (s)	9.0	9.0						11.0	11.0			
Pedestrian Calls (#/hr)	0	0						0	0			
Act Effct Green (s)		57.8						21.2	21.2			
Actuated g/C Ratio		0.64						0.24	0.24			
v/c Ratio		0.71						0.66	0.39			
Control Delay		4.8						39.4	32.7			



Lanes, Volumes, Timings  
3: Main Street & Locke Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0						0.0	0.0			
Total Delay		4.8						39.4	32.7			
LOS		A						D	C			
Approach Delay		4.8						37.2				
Approach LOS		A						D				
Queue Length 50th (m)		26.7						43.7	19.8			
Queue Length 95th (m)		28.7						69.2	36.0			
Internal Link Dist (m)		166.6			383.9			81.0			213.7	
Turn Bay Length (m)									50.0			
Base Capacity (vph)		4658						430	353			
Starvation Cap Reductn		0						0	0			
Spillback Cap Reductn		0						0	0			
Storage Cap Reductn		0						0	0			
Reduced v/c Ratio		0.71						0.65	0.39			

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	19 (21%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	8.4
Intersection Capacity Utilization	81.1%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	D

Splits and Phases: 3: Main Street & Locke Street



Lanes, Volumes, Timings  
4: Main Street & Queen Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗								↖↑↑	
Volume (vph)	0	2305	529	0	0	0	0	0	0	128	609	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Ped Bike Factor			0.93								0.99	
Frt			0.850									
Flt Protected											0.991	
Satd. Flow (prot)	0	6134	1561	0	0	0	0	0	0	0	4863	0
Flt Permitted											0.991	
Satd. Flow (perm)	0	6134	1455	0	0	0	0	0	0	0	4824	0
Right Turn on Red			Yes			Yes			Yes	No		Yes
Satd. Flow (RTOR)			65									
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		407.9			265.5			151.7			199.5	
Travel Time (s)		24.5			15.9			10.9			14.4	
Confl. Peds. (#/hr)	36		34	34		36	11		50	50		11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%
Adj. Flow (vph)	0	2505	575	0	0	0	0	0	0	139	662	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2505	575	0	0	0	0	0	0	0	801	0
Turn Type			Perm							Perm		
Protected Phases		2									4	
Permitted Phases			2							4		
Detector Phase		2	2							4	4	
Switch Phase												
Minimum Initial (s)		10.0	10.0							10.0	10.0	
Minimum Split (s)		21.3	21.3							34.8	34.8	
Total Split (s)	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	35.0	35.0	0.0
Total Split (%)	0.0%	61.1%	61.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.9%	38.9%	0.0%
Maximum Green (s)		49.7	49.7							29.2	29.2	
Yellow Time (s)		3.3	3.3							3.3	3.3	
All-Red Time (s)		2.0	2.0							2.5	2.5	
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	0.0
Total Lost Time (s)	4.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0	5.8	5.8	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Recall Mode		C-Max	C-Max							Ped	Ped	
Walk Time (s)		7.0	7.0							17.0	17.0	
Flash Dont Walk (s)		9.0	9.0							12.0	12.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		49.9	49.9								29.0	
Actuated g/C Ratio		0.55	0.55								0.32	
v/c Ratio		0.74	0.69								0.52	
Control Delay		26.3	26.5								16.6	
Queue Delay		0.0	0.0								0.0	
Total Delay		26.3	26.5								16.6	
LOS		C	C								B	

Lanes, Volumes, Timings  
4: Main Street & Queen Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		26.4										16.6
Approach LOS		C										B
Queue Length 50th (m)		102.8	74.8									34.2
Queue Length 95th (m)		118.2	105.6									41.3
Internal Link Dist (m)		383.9			241.5			127.7				175.5
Turn Bay Length (m)												
Base Capacity (vph)		3401	836									1565
Starvation Cap Reductn		0	0									0
Spillback Cap Reductn		0	0									0
Storage Cap Reductn		0	0									0
Reduced v/c Ratio		0.74	0.69									0.51

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	4 (4%), Referenced to phase 2:EBT and 6:, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	24.4
Intersection LOS:	C
Intersection Capacity Utilization:	69.2%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 4: Main Street & Queen Street



Lanes, Volumes, Timings  
5: King Street & Dundurn Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑↑		↖	↕			↑↑	
Volume (vph)	0	0	0	194	3070	74	331	266	0	0	294	318
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	70.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	0.81	0.81	0.81	0.91	0.91	1.00	1.00	0.95	0.95
Ped Bike Factor					0.99							
Frt					0.997						0.922	
Flt Protected					0.997		0.950	0.982				
Satd. Flow (prot)	0	0	0	0	7238	0	1542	3187	0	0	3123	0
Flt Permitted					0.997		0.197	0.549				
Satd. Flow (perm)	0	0	0	0	7174	0	320	1782	0	0	3123	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8						4	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		152.9			181.5			274.6			683.6	
Travel Time (s)		9.2			10.9			19.8			49.2	
Confl. Peds. (#/hr)	69		112	112		69			123	123		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	2%	1%	3%	3%	0%	0%	2%	4%
Adj. Flow (vph)	0	0	0	211	3337	80	360	289	0	0	320	346
Shared Lane Traffic (%)							46%					
Lane Group Flow (vph)	0	0	0	0	3628	0	194	455	0	0	666	0
Turn Type				Perm			pm+pt					
Protected Phases					2		3	8			4	
Permitted Phases				2			8					
Detector Phase				2	2		3	8			4	
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)				25.3	25.3		8.0	36.1			16.1	
Total Split (s)	0.0	0.0	0.0	53.0	53.0	0.0	8.0	37.0	0.0	0.0	29.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.9%	58.9%	0.0%	8.9%	41.1%	0.0%	0.0%	32.2%	0.0%
Maximum Green (s)				47.7	47.7		5.0	30.9			22.9	
Yellow Time (s)				3.3	3.3		3.0	3.3			3.3	
All-Red Time (s)				2.0	2.0		0.0	2.8			2.8	
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	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.3	5.3	4.0	3.0	6.1	4.0	4.0	6.1	4.0
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				C-Max	C-Max		Max	Ped			Max	
Walk Time (s)				7.0	7.0			19.0				
Flash Dont Walk (s)				13.0	13.0			11.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					47.7		34.0	30.9			22.9	
Actuated g/C Ratio					0.53		0.38	0.34			0.25	
v/c Ratio					0.95		1.03	1.17dl			0.88dr	
Control Delay					16.8		89.4	27.3			33.2	

Lanes, Volumes, Timings  
5: King Street & Dundurn Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					16.8		89.4	27.3			33.2	
LOS					B		F	C			C	
Approach Delay					16.8			45.9			33.2	
Approach LOS					B			D			C	
Queue Length 50th (m)					141.7		~21.2	32.0			61.2	
Queue Length 95th (m)					#116.9		m#69.2	m#46.6			m#84.0	
Internal Link Dist (m)		128.9			157.5			250.6			659.6	
Turn Bay Length (m)							70.0					
Base Capacity (vph)					3806		189	641			798	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					0.95		1.03	0.71			0.83	

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 34 (38%), Referenced to phase 2:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 22.8  
 Intersection Capacity Utilization 73.5%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.  
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: King Street & Dundurn Street



Lanes, Volumes, Timings  
6: King Street & Strathcona Ave N

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑↑↓			↗
Volume (vph)	0	0	3105	37	0	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.81	0.81	1.00	1.00
Ped Bike Factor			1.00			
Frt			0.998			0.865
Flt Protected						
Satd. Flow (prot)	0	0	7197	0	0	1589
Flt Permitted						
Satd. Flow (perm)	0	0	7197	0	0	1589
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			5			
Link Speed (k/h)		60	60		50	
Link Distance (m)		25.6	195.2		280.2	
Travel Time (s)		1.5	11.7		20.2	
Confl. Peds. (#/hr)	36			36	19	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%
Adj. Flow (vph)	0	0	3375	40	0	154
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	3415	0	0	154
Turn Type						custom
Protected Phases			2			
Permitted Phases						4
Detector Phase			2			4
Switch Phase						
Minimum Initial (s)			10.0			10.0
Minimum Split (s)			18.0			32.0
Total Split (s)	0.0	0.0	58.0	0.0	0.0	32.0
Total Split (%)	0.0%	0.0%	64.4%	0.0%	0.0%	35.6%
Maximum Green (s)			52.0			26.0
Yellow Time (s)			3.3			3.3
All-Red Time (s)			2.7			2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	6.0	4.0	4.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)			3.0			3.0
Recall Mode			C-Max			None
Walk Time (s)			7.0			16.0
Flash Dont Walk (s)			5.0			10.0
Pedestrian Calls (#/hr)			0			0
Act Effct Green (s)			63.7			14.3
Actuated g/C Ratio			0.71			0.16
v/c Ratio			0.67			0.61
Control Delay			3.5			44.9
Queue Delay			0.0			0.0
Total Delay			3.5			44.9
LOS			A			D

Lanes, Volumes, Timings  
 6: King Street & Strathcona Ave N

Strathcona Existing Traffic  
 Weekday PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay			3.5			
Approach LOS			A			
Queue Length 50th (m)			28.9			25.2
Queue Length 95th (m)			32.8			41.3
Internal Link Dist (m)		1.6	171.2		256.2	
Turn Bay Length (m)						
Base Capacity (vph)			5092			459
Starvation Cap Reductn			0			0
Spillback Cap Reductn			0			0
Storage Cap Reductn			0			0
Reduced v/c Ratio			0.67			0.34

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	20 (22%), Referenced to phase 2:WBT, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	5.3
Intersection LOS:	A
Intersection Capacity Utilization	55.3%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: King Street & Strathcona Ave N



Lanes, Volumes, Timings  
7: King Street & Locke Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑		↖	↑				↗
Volume (vph)	0	0	0	0	2681	16	168	174	0	0	0	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt					0.999							0.865
Flt Protected							0.950					
Satd. Flow (prot)	0	0	0	0	6066	0	1711	1801	0	0	0	1573
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	0	0	6066	0	1711	1801	0	0	0	1573
Right Turn on Red			Yes			Yes	No		Yes			Yes
Satd. Flow (RTOR)					2							2
Link Speed (k/h)		60			60			50				50
Link Distance (m)		195.2			409.8			237.7				547.4
Travel Time (s)		11.7			24.6			17.1				39.4
Confl. Peds. (#/hr)	44		16	16		44			42	42		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	4%	0%	2%	2%	0%	0%	0%	1%
Parking (#/hr)						0						
Adj. Flow (vph)	0	0	0	0	2914	17	183	189	0	0	0	337
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2931	0	183	189	0	0	0	337
Turn Type							Perm					custom
Protected Phases					2			4				
Permitted Phases							4					8
Detector Phase					2		4	4				8
Switch Phase												
Minimum Initial (s)					10.0		10.0	10.0				10.0
Minimum Split (s)					22.0		26.6	26.6				15.6
Total Split (s)	0.0	0.0	0.0	0.0	63.0	0.0	27.0	27.0	0.0	0.0	0.0	27.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	70.0%	0.0%	30.0%	30.0%	0.0%	0.0%	0.0%	30.0%
Maximum Green (s)					58.0		21.4	21.4				21.4
Yellow Time (s)					3.3		3.3	3.3				3.3
All-Red Time (s)					1.7		2.3	2.3				2.3
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	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	5.0	4.0	5.6	5.6	4.0	4.0	4.0	5.6
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Recall Mode					C-Max		Ped	Ped				Max
Walk Time (s)					7.0		13.0	13.0				
Flash Dont Walk (s)					10.0		8.0	8.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					58.0		21.4	21.4				21.4
Actuated g/C Ratio					0.64		0.24	0.24				0.24
v/c Ratio					0.75		0.45	0.44				0.90
Control Delay					11.9		53.1	52.8				29.6
Queue Delay					0.0		0.0	0.0				0.0
Total Delay					11.9		53.1	52.8				29.6



Lanes, Volumes, Timings  
7: King Street & Locke Street

Strathcona Existing Traffic  
Weekday PM Peak Hour

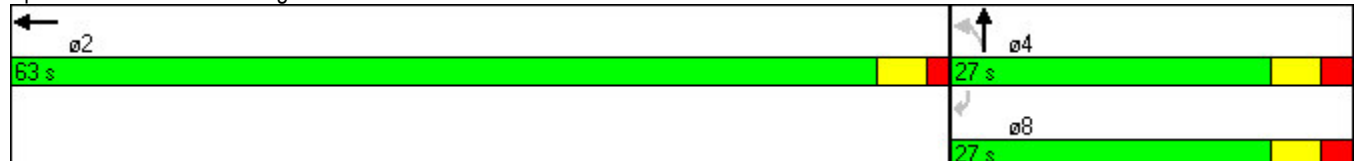


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					B		D	D				C
Approach Delay					11.9			52.9				
Approach LOS					B			D				
Queue Length 50th (m)					124.5		33.5	34.6				39.3
Queue Length 95th (m)					143.4		m51.0	m52.6				m41.3
Internal Link Dist (m)		171.2			385.8			213.7			523.4	
Turn Bay Length (m)												
Base Capacity (vph)					3910		407	428				376
Starvation Cap Reductn					0		0	0				0
Spillback Cap Reductn					0		0	0				0
Storage Cap Reductn					0		0	0				0
Reduced v/c Ratio					0.75		0.45	0.44				0.90

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 10 (11%), Referenced to phase 2:WBT and 6:, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 17.8      Intersection LOS: B  
 Intersection Capacity Utilization 81.1%      ICU Level of Service D  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: King Street & Locke Street



Lanes, Volumes, Timings  
8: King Street & Queen Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					←↑↑↑						↑↑	↗
Volume (vph)	0	0	0	208	2060	0	0	0	0	0	491	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Ped Bike Factor					1.00						0.99	0.97
Frt											0.953	0.850
Flt Protected					0.995							
Satd. Flow (prot)	0	0	0	0	6114	0	0	0	0	0	3119	1393
Flt Permitted					0.995							
Satd. Flow (perm)	0	0	0	0	6084	0	0	0	0	0	3119	1357
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					43						4	4
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		409.8			250.1			199.5			402.3	
Travel Time (s)		24.6			15.0			14.4			29.0	
Confl. Peds. (#/hr)	46		30	30		46	14		27	27		14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	3%	0%	0%	0%	0%	0%	1%	2%
Parking (#/hr)						0						
Adj. Flow (vph)	0	0	0	226	2239	0	0	0	0	0	534	588
Shared Lane Traffic (%)												41%
Lane Group Flow (vph)	0	0	0	0	2465	0	0	0	0	0	775	347
Turn Type				Perm								Perm
Protected Phases					2						4	
Permitted Phases				2								4
Detector Phase				2	2						4	4
Switch Phase												
Minimum Initial (s)				10.0	10.0						10.0	10.0
Minimum Split (s)				20.4	20.4						32.4	32.4
Total Split (s)	0.0	0.0	0.0	57.0	57.0	0.0	0.0	0.0	0.0	0.0	33.0	33.0
Total Split (%)	0.0%	0.0%	0.0%	63.3%	63.3%	0.0%	0.0%	0.0%	0.0%	0.0%	36.7%	36.7%
Maximum Green (s)				51.6	51.6						27.6	27.6
Yellow Time (s)				3.3	3.3						3.3	3.3
All-Red Time (s)				2.1	2.1						2.1	2.1
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	0.0
Total Lost Time (s)	4.0	4.0	4.0	5.4	5.4	4.0	4.0	4.0	4.0	4.0	5.4	5.4
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0						3.0	3.0
Recall Mode				C-Max	C-Max						Ped	Ped
Walk Time (s)				7.0	7.0						14.0	14.0
Flash Dont Walk (s)				8.0	8.0						13.0	13.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)					51.8						27.4	27.4
Actuated g/C Ratio					0.58						0.30	0.30
v/c Ratio					0.70						0.81	0.84
Control Delay					14.7						27.8	36.4
Queue Delay					0.0						0.0	0.0
Total Delay					14.7						27.8	36.4

Lanes, Volumes, Timings  
8: King Street & Queen Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					B						C	D
Approach Delay					14.7						30.5	
Approach LOS					B						C	
Queue Length 50th (m)					80.7						49.1	43.7
Queue Length 95th (m)					93.7						m61.6	m57.0
Internal Link Dist (m)		385.8			226.1			175.5			378.3	
Turn Bay Length (m)												
Base Capacity (vph)					3523						959	419
Starvation Cap Reductn					0						0	0
Spillback Cap Reductn					0						0	0
Storage Cap Reductn					0						0	0
Reduced v/c Ratio					0.70						0.81	0.83

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 70 (78%), Referenced to phase 2:WBTL and 6:, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 19.6      Intersection LOS: B  
 Intersection Capacity Utilization 66.2%      ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: King Street & Queen Street



Lanes, Volumes, Timings  
9: York Boulevard & Dundurn Street

Strathcona Existing Traffic  
Weekday PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↘	↑↑	↖↗	↗
Volume (vph)	1421	344	298	1486	170	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		100.0	55.0		0.0	0.0
Storage Lanes		1	1		2	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	0.91	1.00	1.00	0.95	0.97	1.00
Ped Bike Factor		0.96	1.00			0.97
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4916	1546	1678	3421	3385	1531
Flt Permitted			0.127		0.950	
Satd. Flow (perm)	4916	1483	224	3421	3385	1491
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		374				177
Link Speed (k/h)	60			60	50	
Link Distance (m)	299.6			423.3	683.6	
Travel Time (s)	18.0			25.4	49.2	
Confl. Peds. (#/hr)		13	13			15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	1%	4%	2%	0%	2%
Adj. Flow (vph)	1545	374	324	1615	185	177
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1545	374	324	1615	185	177
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Minimum Split (s)	33.4	33.4	8.0	15.4	35.2	35.2
Total Split (s)	34.0	34.0	20.0	54.0	36.0	36.0
Total Split (%)	37.8%	37.8%	22.2%	60.0%	40.0%	40.0%
Maximum Green (s)	28.6	28.6	17.0	48.6	29.8	29.8
Yellow Time (s)	3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.1	2.1	0.0	2.1	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	3.0	5.4	6.2	6.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Walk Time (s)	20.0	20.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			19.0	19.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	28.6	28.6	51.0	48.6	29.8	29.8
Actuated g/C Ratio	0.32	0.32	0.57	0.54	0.33	0.33
v/c Ratio	0.99	0.52	0.81	0.87	0.17	0.29
Control Delay	51.9	5.4	31.7	31.0	28.7	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.9	5.4	31.7	31.0	28.7	16.0
LOS	D	A	C	C	C	B
Approach Delay	42.8			31.1	22.5	
Approach LOS	D			C	C	

Lanes, Volumes, Timings  
 9: York Boulevard & Dundurn Street

Strathcona Existing Traffic  
 Weekday PM Peak Hour

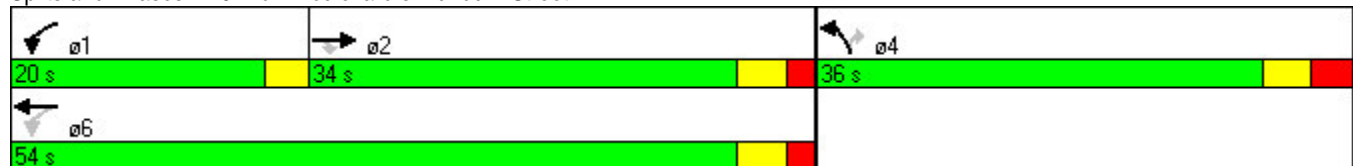


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Length 50th (m)	96.5	0.0	51.2	136.9	15.3	15.6
Queue Length 95th (m)	#130.1	18.6	#79.6	170.9	m20.8	m23.8
Internal Link Dist (m)	275.6			399.3	659.6	
Turn Bay Length (m)		100.0	55.0			
Base Capacity (vph)	1562	726	402	1847	1121	612
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.52	0.81	0.87	0.17	0.29

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 54 (60%), Referenced to phase 2:EBT and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Pretimed  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 35.7 Intersection LOS: D  
 Intersection Capacity Utilization 81.1% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: York Boulevard & Dundurn Street



Lanes, Volumes, Timings  
10: York Boulevard & Locke Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	1385	19	200	1582	10	54	50	38	13	154	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	22.0		0.0	45.0		0.0	0.0		5.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99	0.97		1.00	0.97
Frt		0.998			0.999				0.850			0.850
Flt Protected	0.950			0.950				0.975			0.996	
Satd. Flow (prot)	1662	4904	0	1711	4910	0	0	1791	1561	0	1829	1531
Flt Permitted	0.095			0.128				0.751			0.973	
Satd. Flow (perm)	166	4904	0	230	4910	0	0	1371	1507	0	1784	1489
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			2				23			12
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		423.3			448.5			547.4			176.7	
Travel Time (s)		25.4			26.9			39.4			12.7	
Confl. Peds. (#/hr)	24		18	18		24	12		18	18		12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	2%	0%	2%	2%	0%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	71	1505	21	217	1720	11	59	54	41	14	167	277
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	1526	0	217	1731	0	0	113	41	0	181	277
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			6			4				8
Permitted Phases	2			6			4		4	8		8
Detector Phase	2	2		6	6		4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	35.2	35.2		35.2	35.2		27.9	27.9	27.9	27.9	27.9	27.9
Total Split (s)	55.0	55.0	0.0	55.0	55.0	0.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	61.1%	61.1%	0.0%	61.1%	61.1%	0.0%	38.9%	38.9%	38.9%	38.9%	38.9%	38.9%
Maximum Green (s)	48.8	48.8		48.8	48.8		28.1	28.1	28.1	28.1	28.1	28.1
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		3.6	3.6	3.6	3.6	3.6	3.6
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	0.0
Total Lost Time (s)	6.2	6.2	4.0	6.2	6.2	4.0	6.9	6.9	6.9	6.9	6.9	6.9
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max		Max	Max		Ped	Ped	Ped	Ped	Ped	Ped
Walk Time (s)	19.0	19.0		19.0	19.0		12.0	12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		9.0	9.0	9.0	9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	53.8	53.8		53.8	53.8		23.1	23.1	23.1	23.1	23.1	23.1
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.26	0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.72	0.52		1.57	0.59		0.32	0.10	0.32	0.10	0.39	0.71
Control Delay	31.8	0.8		310.4	16.2		21.0	12.4	21.0	12.4	29.8	39.2

Lanes, Volumes, Timings  
10: York Boulevard & Locke Street

Strathcona Existing Traffic  
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	31.8	0.8		310.4	16.2			21.0	12.4		29.8	39.2
LOS	C	A		F	B			C	B		C	D
Approach Delay		2.2			49.0			18.7			35.5	
Approach LOS		A			D			B			D	
Queue Length 50th (m)	2.7	1.3		-54.9	91.3			20.9	3.0		26.8	43.2
Queue Length 95th (m)	m3.9	m1.2		#87.3	126.9			m36.2	m12.9		40.7	63.5
Internal Link Dist (m)		399.3			424.5			523.4			152.7	
Turn Bay Length (m)	22.0			45.0					5.0			
Base Capacity (vph)	99	2930		138	2933			428	486		557	473
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.72	0.52		1.57	0.59			0.26	0.08		0.32	0.59

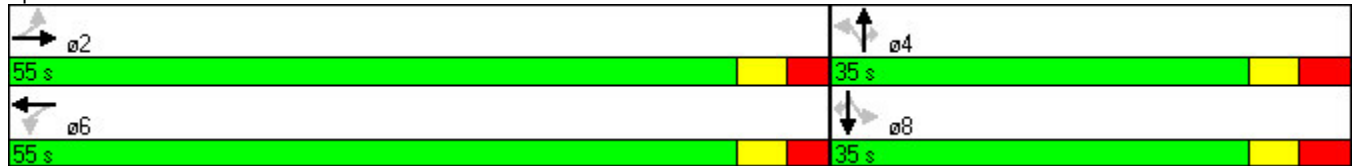
Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 76 (84%), Referenced to phase 2:EBTL, Start of Green  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.57  
 Intersection Signal Delay: 28.4  
 Intersection Capacity Utilization 96.0%  
 Analysis Period (min) 15

Intersection LOS: C  
 ICU Level of Service F

























- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: York Boulevard & Locke Street



Lanes, Volumes, Timings  
11: York Boulevard & Queen Street

Strathcona Existing Traffic  
Weekday PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  						 	
Volume (vph)	0	1164	199	617	1725	0	0	0	0	66	297	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	93.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	0.91	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor		0.98		0.98						0.92	0.98	
Frt		0.978									0.977	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	4705	0	3286	4916	0	0	0	0	1745	3249	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	4705	0	3229	4916	0	0	0	0	1597	3249	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40									7	
Link Speed (k/h)		60			60				50		50	
Link Distance (m)		448.5			307.5				402.3		157.2	
Travel Time (s)		26.9			18.5				29.0		11.3	
Confl. Peds. (#/hr)	98		61	61		98	104		66	66		104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	2%	3%	2%	0%	0%	0%	0%	0%	2%	6%
Adj. Flow (vph)	0	1265	216	671	1875	0	0	0	0	72	323	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1481	0	671	1875	0	0	0	0	72	382	0
Turn Type				Prot						Perm		
Protected Phases		2		1	6							4
Permitted Phases										4		
Detector Phase		2		1	6					4		4
Switch Phase												
Minimum Initial (s)		10.0		5.0	10.0					10.0	10.0	
Minimum Split (s)		17.4		10.2	19.2					27.8	27.8	
Total Split (s)	0.0	36.0	0.0	20.0	56.0	0.0	0.0	0.0	0.0	34.0	34.0	0.0
Total Split (%)	0.0%	40.0%	0.0%	22.2%	62.2%	0.0%	0.0%	0.0%	0.0%	37.8%	37.8%	0.0%
Maximum Green (s)		30.6		14.8	50.8					27.2	27.2	
Yellow Time (s)		3.3		3.3	3.3					3.3	3.3	
All-Red Time (s)		2.1		1.9	1.9					3.5	3.5	
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	0.0
Total Lost Time (s)	4.0	5.4	4.0	5.2	5.2	4.0	4.0	4.0	4.0	6.8	6.8	4.0
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		C-Max		Max	Max					Ped	Ped	
Walk Time (s)		7.0			7.0					13.0	13.0	
Flash Dont Walk (s)		5.0			7.0					8.0	8.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		30.6		21.0	57.0					21.0	21.0	
Actuated g/C Ratio		0.34		0.23	0.63					0.23	0.23	
v/c Ratio		0.91		0.87	0.60					0.19	0.50	
Control Delay		39.6		47.4	10.8					29.4	32.0	



Lanes, Volumes, Timings  
 11: York Boulevard & Queen Street

Strathcona Existing Traffic  
 Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0		0.0	0.0					0.0	0.0	
Total Delay		39.6		47.4	10.8					29.4	32.0	
LOS		D		D	B					C	C	
Approach Delay		39.6			20.5							31.6
Approach LOS		D			C							C
Queue Length 50th (m)		101.3		57.8	63.2					10.0	29.7	
Queue Length 95th (m)		#120.5		#86.6	76.1					21.1	43.4	
Internal Link Dist (m)		424.5			283.5			378.3				133.2
Turn Bay Length (m)				93.0								
Base Capacity (vph)		1626		767	3113					483	987	
Starvation Cap Reductn		0		0	0					0	0	
Spillback Cap Reductn		0		0	0					0	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.91		0.87	0.60					0.15	0.39	

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 49 (54%), Referenced to phase 2:EBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 27.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 77.2%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 11: York Boulevard & Queen Street

