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TECHNICAL MEMORANDUM

SUBJECT: Existing Traffic Analysis

This memorandum discusses the existing conditions traffic analysis that was conducted as part of the Woodstock Transportation Master Plan.

For the purposes of this study, an investigation was completed into the operation of existing signalized and unsignalized intersections throughout the City of Woodstock.

Signalized Intersection Traffic Operations:

Using existing balanced turning movement counts and existing lane geometries, traffic simulations were completed on many intersections in the City of Woodstock. The Synchro 7.0 software package and its associated SimTraffic simulation program were used to complete the LOS analysis.

Operating levels of service on urban road networks are generally governed by intersection delay and not by mid-block flow characteristics due to the restrictions on capacity at intersections. For that reason, intersection level of service (LOS) analysis was undertaken for the key intersections to identify existing operational issues. LOS ‘A’ through ‘C’ typically reflect adequate levels of service, ‘D’ reflects threshold acceptability, ‘E’ reflects increasing congestion and ‘F’ reflects long delays/queues, possible severe congestion (stop and go traffic) and the failure of the intersection. The level-of-service average vehicle delay ranges for signalized and unsignalized intersections are displayed in Table 1.

Table 1 – Signalized and Unsignalized Intersection Level of Service

LOS	Signalized Delay Range (s)	Unsignalized Delay Range (s)
A	0 – 10	0 – 10
B	10 – 20	10 – 15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	> 80	> 50

Taken from the Highway Capacity Manual

The analysis takes into consideration micro simulation of the traffic to model the dynamic operations of the road network. The simulations indicated that all intersections were operating at LOS C or better. Table 2 and Table 3 provide the results of the SimTraffic simulations for the signalized intersections.

Table 2 – Existing Signalized Intersection Conditions – AM Peak Hour

	Intersection			Critical Movement			
	Delay	LOS	95th Queue	Movement	Delay	LOS	95th Queue
Devonshire Avenue							
Devonshire & Vansittart	13.6	B	55.3	SBL	23.8	C	54.6
Devonshire & Wellington	13.5	B	71	NBL	24.1	C	19.4
Devonshire & Huron	14.7	B	84	WBL	24.5	C	36
Devonshire & Springbank	16.8	B	71.2	NBL	37.4	D	66.1
Devonshire & Lansdowne	13.4	B	41.7	NBL	20	C	41.7
Wilson Street							
Wilson & Dundas	17.7	B	66	SBT	27.2	C	66
Wilson & Peel	9.3	A	39.2	NBL	14.1	B	39.2
Wilson & Main/Hounsfield	12.7	B	42.7	WBL	18.9	B	22.4
Cedar & Norwich	1.1	A	19.1	SWBL	30.8	C	8.9
Wellington St							
Wellington & Princess	7.4	A	40.1	SBT	10.6	B	40.1
Wellington & Dundas	11.9	B	46.6	SBL	17.1	B	17.9
Wellington & Peel	12.5	B	34.9	NBL	17	B	20.4
Dundas St							
Dundas & Mill	11.7	B	46	NBL	25.4	C	46
Dundas & Springbank	18	B	43.4	EBT	20.4	C	33.3

Table 3 – Existing Signalized Intersection Conditions – PM Peak Hour

	Intersection			Critical Movement			
	Delay	LOS	95th Queue	Movement	Delay	LOS	95th Queue
Devonshire Avenue							
Devonshire & Vansittart	15.4	B	81.6	SBL	27.1	C	53
Devonshire & Wellington	12.4	B	82.6	NBL	24.1	C	23.9
Devonshire & Huron	16.5	B	87.2	WBL	28.8	C	37.3
Devonshire & Springbank	17.4	B	80.7	EBL	30.2	C	52.6
Devonshire & Lansdowne	14.4	B	50.6	NBL	19.8	B	50.6
Wilson Street							
Wilson & Dundas	22.5	C	116.4	SBT	30.6	C	75.1
Wilson & Peel	10.5	B	47.3	WBL	18.8	B	15
Wilson & Main/Hounsfield	14	B	52.6	WBL	20.3	C	34.6
Cedar & Norwich	1.6	A	22.5	SWBL	34	C	12.1
Wellington St							
Wellington & Princess	9.1	A	41.3	EBT	18.8	B	39.2
Wellington & Dundas	12.8	B	48.2	SBL	20.9	C	26.6
Wellington & Peel	13.7	B	42.2	EBL	20.8	C	19.3
Dundas St							
Dundas & Mill	12.5	B	47.2	WBL	21.4	C	41.9
Dundas & Springbank	22.4	C	92.5	NBT	27.6	C	92.5

There was one turning movement that indicated a LOS worse than C. The simulation indicated that northbound left turns at the intersection of Devonshire Ave. and Springbank Ave. had a 37 second average delay. However, an additional simulation was run where the left turn storage area was increased. This longer left turn storage area represents the commitment to alter the lane configuration of Springbank Ave. from the existing two lane configuration to a three lane roadway (one lane each direction with a middle turning lane), increasing the storage length for left turning vehicles at the intersection. The new simulation indicated that the northbound left turn movement will be reduced to an average delay of 33 seconds which is within the LOS C

designation. All other intersection and turning movements along Devonshire Ave. will have insignificant changes in average delay time.

Certain key unsignalized intersections were also monitored during the SimTraffic simulation process. Four out of the five unsignalized intersections are side-street stop controlled only. This means that the intersection delay and LOS is far lower than what a side street vehicle will experience. For these intersections it is most significant to observe the critical movement statistics. The only intersection that is all-way stop controlled is the intersection at Main St and Wellington St. Table 4 and Table 5 present the LOS results for the unsignalized intersections AM and PM peak periods.

Table 4 – Existing Unsignalized Intersection Conditions – AM Peak Hour

	Intersection		Highest 95th Queue		Highest Delay		
	Delay (Sec)	LOS	Queue Length (m)	Movement	Delay (Sec)	LOS	Movement
Main & Wellington	5.1	A	22.2	NBT	6.4	A	SBT
Vansittart & Dundas	3.0	A	28.3	EBL	16.1	C	SBL
Leinster & Devonshire	3.4	A	19.0	SBL	12.4	B	SBL
Clarke & Devonshire	2.8	A	19.0	WBL	14.8	B	NBL
Clarke & Nellis	4.3	A	30.0	EBT	10.4	B	EBT

Table 5 – Existing Unsignalized Intersection Conditions – PM Peak Hour

	Intersection		Highest 95th Queue		Highest Delay		
	Delay (Sec)	LOS	Queue Length (m)	Movement	Delay (Sec)	LOS	Movement
Main & Wellington	5.8	A	24.9	SBT	7.7	A	SBT
Vansittart & Dundas	5.1	A	36.8	EBL	28.6	D	SBL
Leinster & Devonshire	3.3	A	18.8	SBL	15.9	C	SBL
Clarke & Devonshire	3.4	A	18.7	NBR	19.4	C	NBL
Clarke & Nellis	3.5	A	25.2	EBT	9.2	A	EBT

As shown in the above tables, only one movement is displaying a LOS over C. This is the southbound left turn movement at Vansittart Avenue and Dundas Street. This is indicative of the low amounts of gaps that are able to be found on Dundas Street during these time periods. It was observed that many vehicles detour one street over to the east to the signalized intersection at Light St to make a left turn. However, generally most of the turning movements display acceptable delay times.

The following pages show the results from the Synchro analysis on the existing conditions.

Existing Conditions Results
AM Peak Hour

1: Vansittart & Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Total Delay (hr)	0.6	0.2	0.8	0.3	1.7	0.8	4.3
Delay / Veh (s)	17.6	3.5	15.9	6.5	23.8	11.0	13.6
Total Stops	67	100	110	53	214	119	663
Travel Dist (km)	13.6	20.5	25.4	18.2	21.1	21.6	120.5
Travel Time (hr)	0.9	0.7	1.5	0.8	2.2	1.2	7.4
Avg Speed (kph)	15	28	17	23	9	17	16
Fuel Used (l)	1.2	1.1	3.7	2.3	2.7	2.2	13.1
HC Emissions (g)	2	2	11	9	3	4	31
CO Emissions (g)	52	61	422	318	100	131	1084
NOx Emissions (g)	4	6	42	32	11	14	110
Vehicles Entered	114	173	186	147	254	259	1133
Vehicles Exited	114	174	186	147	253	259	1133
Hourly Exit Rate	114	174	186	147	253	259	1133
Input Volume	113	180	182	142	248	252	1117
% of Volume	101	97	102	104	102	103	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Baseline

8: Wellington & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	1.6	0.1	0.5	1.0	0.0	0.2	0.1	0.1	0.1	0.2	0.1
Delay / Veh (s)	15.5	15.1	11.0	13.8	10.9	6.9	24.1	20.5	4.6	24.5	20.1	8.6
Total Stops	15	192	13	102	157	7	24	11	33	17	26	23
Travel Dist (km)	2.5	40.0	2.5	14.5	38.7	1.4	2.4	1.3	3.7	3.6	6.3	4.8
Travel Time (hr)	0.2	2.4	0.1	0.9	1.9	0.1	0.3	0.1	0.2	0.2	0.4	0.2
Avg Speed (kph)	15	16	17	17	21	22	9	11	22	15	17	23
Fuel Used (l)	0.2	3.8	0.2	1.3	3.3	0.1	0.3	0.1	0.2	0.5	0.9	0.6
HC Emissions (g)	0	7	0	2	7	0	0	0	1	1	2	3
CO Emissions (g)	13	155	5	72	169	4	11	4	28	59	116	107
NOx Emissions (g)	1	22	1	7	22	0	1	0	3	4	9	11
Vehicles Entered	23	380	24	132	346	13	30	16	46	22	39	30
Vehicles Exited	23	380	24	134	348	13	29	16	45	22	38	30
Hourly Exit Rate	23	380	24	134	348	13	29	16	45	22	38	30
Input Volume	20	371	22	137	346	11	29	15	41	21	39	28
% of Volume	115	102	109	98	101	118	100	107	110	105	97	107
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Wellington & Performance by movement

Movement	All
Total Delay (hr)	4.1
Delay / Veh (s)	13.5
Total Stops	620
Travel Dist (km)	121.7
Travel Time (hr)	6.9
Avg Speed (kph)	18
Fuel Used (l)	11.7
HC Emissions (g)	25
CO Emissions (g)	743
NOx Emissions (g)	81
Vehicles Entered	1101
Vehicles Exited	1102
Hourly Exit Rate	1102
Input Volume	1080
% of Volume	102
Denied Entry Before	0
Denied Entry After	0

Baseline

14: Huron & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	1.5	0.2	0.9	1.6	0.0	0.2	0.1	0.1	0.3	0.2	0.1
Delay / Veh (s)	20.8	15.0	11.3	24.5	14.0	8.2	19.7	12.6	5.3	19.6	14.6	6.3
Total Stops	11	205	37	102	215	9	29	12	59	32	30	21
Travel Dist (km)	1.7	39.5	6.1	12.7	41.4	1.8	5.5	3.2	12.2	2.8	3.0	2.1
Travel Time (hr)	0.1	2.4	0.4	1.2	2.5	0.1	0.4	0.2	0.5	0.3	0.3	0.1
Avg Speed (kph)	13	17	17	11	17	20	14	19	24	8	11	16
Fuel Used (l)	0.2	3.6	0.5	1.5	4.1	0.1	0.9	0.5	1.6	0.4	0.3	0.1
HC Emissions (g)	0	7	1	2	8	0	2	1	8	0	0	0
CO Emissions (g)	11	158	23	67	189	4	98	56	273	11	17	8
NOx Emissions (g)	1	22	3	6	26	0	8	4	26	1	1	1
Vehicles Entered	16	370	58	127	414	18	42	25	94	47	50	36
Vehicles Exited	15	369	57	128	415	17	42	24	94	47	50	36
Hourly Exit Rate	15	369	57	128	415	17	42	24	94	47	50	36
Input Volume	17	355	60	124	415	14	44	23	91	50	52	36
% of Volume	88	104	95	103	100	121	95	104	103	94	96	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Huron & Performance by movement

Movement	All
Total Delay (hr)	5.3
Delay / Veh (s)	14.7
Total Stops	762
Travel Dist (km)	131.9
Travel Time (hr)	8.4
Avg Speed (kph)	16
Fuel Used (l)	13.8
HC Emissions (g)	30
CO Emissions (g)	916
NOx Emissions (g)	100
Vehicles Entered	1297
Vehicles Exited	1294
Hourly Exit Rate	1294
Input Volume	1281
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

22: Clarke & Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	0.2	0.0	0.2	0.2	0.1	0.1	0.9
Delay / Veh (s)	1.8	1.4	5.5	1.4	14.8	8.0	2.5
Total Stops	0	1	56	0	24	64	145
Travel Dist (km)	94.6	15.0	30.5	128.2	3.1	8.3	279.7
Travel Time (hr)	2.2	0.4	1.0	3.2	0.2	0.4	7.3
Avg Speed (kph)	43	39	31	40	17	25	39
Fuel Used (l)	6.3	0.9	3.3	14.1	0.4	1.2	26.1
HC Emissions (g)	17	2	11	52	1	6	91
CO Emissions (g)	291	39	397	1645	54	207	2633
NOx Emissions (g)	46	6	39	178	4	19	293
Vehicles Entered	398	62	143	606	24	64	1297
Vehicles Exited	397	62	143	608	24	64	1298
Hourly Exit Rate	397	62	143	608	24	64	1298
Input Volume	387	64	142	604	25	61	1283
% of Volume	103	97	101	101	96	105	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

23: Springbank & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.9	0.7	0.2	0.1	0.7	0.1	3.0	0.8	0.1	0.2	0.7	0.4
Delay / Veh (s)	22.0	11.4	6.2	15.2	11.4	7.0	37.4	16.1	9.0	20.9	17.4	5.9
Total Stops	115	105	54	19	120	34	303	124	30	29	99	186
Travel Dist (km)	30.6	45.0	20.8	2.4	22.6	5.3	22.4	14.5	3.2	2.4	9.0	15.1
Travel Time (hr)	1.6	1.6	0.7	0.2	1.2	0.3	3.6	1.1	0.2	0.3	0.9	0.9
Avg Speed (kph)	19	28	30	15	19	21	6	13	16	8	10	17
Fuel Used (l)	2.9	3.8	1.6	0.2	1.9	0.3	4.0	1.8	0.3	0.3	1.1	1.0
HC Emissions (g)	7	11	7	0	5	1	6	4	1	0	2	1
CO Emissions (g)	225	299	161	8	106	16	147	116	18	9	64	43
NOx Emissions (g)	22	33	19	1	14	2	16	12	2	1	7	4
Vehicles Entered	144	210	97	24	228	53	288	187	41	37	142	235
Vehicles Exited	143	208	97	24	228	53	288	187	42	37	143	235
Hourly Exit Rate	143	208	97	24	228	53	288	187	42	37	143	235
Input Volume	139	206	94	27	233	53	287	182	43	45	145	227
% of Volume	103	101	103	89	98	100	100	103	98	82	99	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

23: Springbank & Performance by movement

Movement	All
Total Delay (hr)	7.8
Delay / Veh (s)	16.8
Total Stops	1218
Travel Dist (km)	193.3
Travel Time (hr)	12.5
Avg Speed (kph)	15
Fuel Used (l)	19.3
HC Emissions (g)	44
CO Emissions (g)	1213
NOx Emissions (g)	133
Vehicles Entered	1686
Vehicles Exited	1685
Hourly Exit Rate	1685
Input Volume	1681
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

35: Devonshire & Lansdowne Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.5	0.4	0.1	0.1	0.4	0.0	0.3	0.6	0.0	0.1	0.4	0.2
Delay / Veh (s)	18.0	13.8	4.9	17.9	14.5	4.5	20.0	15.3	2.1	20.0	14.8	6.7
Total Stops	63	49	36	12	49	6	42	82	7	8	59	63
Travel Dist (km)	4.9	5.0	3.3	1.7	8.6	1.2	3.6	9.7	0.9	1.6	15.9	17.2
Travel Time (hr)	0.6	0.5	0.2	0.1	0.6	0.1	0.4	0.8	0.0	0.1	0.8	0.7
Avg Speed (kph)	8	11	16	12	16	23	9	12	24	16	20	30
Fuel Used (l)	0.7	0.6	0.2	0.2	0.8	0.1	0.4	1.1	0.0	0.2	2.3	2.2
HC Emissions (g)	1	1	0	0	1	0	0	2	0	0	7	11
CO Emissions (g)	20	32	10	5	32	2	13	49	3	25	282	380
NOx Emissions (g)	2	3	1	0	4	0	1	6	0	2	25	34
Vehicles Entered	95	92	62	18	91	12	53	141	13	10	103	112
Vehicles Exited	96	92	62	18	91	13	53	140	13	11	104	112
Hourly Exit Rate	96	92	62	18	91	13	53	140	13	11	104	112
Input Volume	101	90	63	17	91	15	57	138	12	11	102	111
% of Volume	95	102	98	106	100	87	93	101	108	100	102	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

35: Devonshire & Lansdowne Performance by movement

Movement	All
Total Delay (hr)	3.0
Delay / Veh (s)	13.4
Total Stops	476
Travel Dist (km)	73.7
Travel Time (hr)	4.9
Avg Speed (kph)	16
Fuel Used (l)	8.9
HC Emissions (g)	23
CO Emissions (g)	855
NOx Emissions (g)	80
Vehicles Entered	802
Vehicles Exited	805
Hourly Exit Rate	805
Input Volume	808
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

48: Leinster & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.2	0.0	0.1
Delay / Veh (s)	4.7	1.3	1.3	5.9	2.7	2.3	8.7	12.8	5.9	12.4	11.3	5.0
Total Stops	13	0	0	1	0	1	2	3	8	64	9	54
Travel Dist (km)	8.0	113.9	0.6	0.6	232.2	17.7	0.1	0.2	0.5	9.7	1.2	8.1
Travel Time (hr)	0.2	2.6	0.0	0.0	5.2	0.4	0.0	0.0	0.0	0.5	0.1	0.3
Avg Speed (kph)	36	44	39	40	44	41	15	14	17	20	21	26
Fuel Used (l)	0.5	7.7	0.0	0.0	15.9	1.1	0.0	0.0	0.0	1.3	0.2	1.0
HC Emissions (g)	1	21	0	0	40	4	0	0	0	3	0	4
CO Emissions (g)	18	362	1	1	736	70	0	0	0	159	20	163
NOx Emissions (g)	3	59	0	0	112	10	0	0	0	12	1	14
Vehicles Entered	33	475	2	1	501	39	2	3	8	65	8	54
Vehicles Exited	34	477	2	1	501	38	2	3	8	64	9	54
Hourly Exit Rate	34	477	2	1	501	38	2	3	8	64	9	54
Input Volume	31	463	2	2	501	39	2	3	8	64	6	49
% of Volume	110	103	100	50	100	97	100	100	100	100	150	110
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

48: Leinster & Performance by movement

Movement	All
Total Delay (hr)	1.0
Delay / Veh (s)	2.9
Total Stops	155
Travel Dist (km)	392.9
Travel Time (hr)	9.4
Avg Speed (kph)	42
Fuel Used (l)	27.8
HC Emissions (g)	75
CO Emissions (g)	1531
NOx Emissions (g)	212
Vehicles Entered	1191
Vehicles Exited	1193
Hourly Exit Rate	1193
Input Volume	1170
% of Volume	102
Denied Entry Before	0
Denied Entry After	0

Queuing and Blocking Report - DEVONSHIRE CORRIDOR
Baseline

5/7/2010

Intersection: 1: Vansittart &

Movement	WB	WB	NB	SB	SB	B3
Directions Served	L	R	TR	L	T	T
Maximum Queue (m)	36.1	33.9	61.0	66.2	72.1	1.7
Average Queue (m)	14.7	12.2	30.0	32.7	26.8	0.1
95th Queue (m)	29.1	23.7	55.3	54.6	50.5	1.2
Link Distance (m)		108.0	136.3		73.1	49.6
Upstream Blk Time (%)				0	0	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (m)	100.0			68.0		
Storage Blk Time (%)				0	0	
Queuing Penalty (veh)				1	0	

Intersection: 8: Wellington &

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	R	LTR
Maximum Queue (m)	13.7	86.7	33.6	72.4	25.4	17.0	30.8
Average Queue (m)	4.0	36.6	14.7	28.0	8.3	6.5	13.3
95th Queue (m)	11.5	71.0	29.1	59.3	19.4	14.9	24.9
Link Distance (m)		93.9		97.4	71.2	71.2	160.9
Upstream Blk Time (%)		0					
Queuing Penalty (veh)		0					
Storage Bay Dist (m)	100.0		100.0				
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 14: Huron &

Movement	EB	EB	B13	WB	WB	B17	NB	NB	SB	SB
Directions Served	L	TR	T	L	TR	T	L	TR	L	TR
Maximum Queue (m)	12.1	96.0	5.8	50.0	77.6	8.6	20.1	24.6	24.9	26.5
Average Queue (m)	3.1	42.5	0.2	18.9	42.0	0.3	7.6	11.5	8.1	11.3
95th Queue (m)	10.3	84.0	4.1	36.0	67.4	6.0	17.0	20.4	19.2	23.6
Link Distance (m)		96.2	310.2		88.8	228.8	128.8	128.8		48.5
Upstream Blk Time (%)		0		0	0					
Queuing Penalty (veh)		1		0	1					
Storage Bay Dist (m)	100.0			100.0					50.0	
Storage Blk Time (%)		0		0	0					
Queuing Penalty (veh)		0		0	0					

Intersection: 22: Clarke &

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (m)	5.3	25.0	14.5	18.5
Average Queue (m)	0.4	9.5	4.8	8.2
95th Queue (m)	3.2	19.0	12.0	14.4
Link Distance (m)	231.1		128.7	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)		90.0		25.0
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 23: Springbank &

Movement	EB	EB	WB	WB	NB	NB	B25	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	T	L	T	R
Maximum Queue (m)	47.7	53.8	17.3	64.0	64.7	86.6	44.3	20.6	39.4	37.6
Average Queue (m)	19.8	23.4	5.0	26.3	40.8	31.8	5.2	6.4	17.8	16.6
95th Queue (m)	38.3	41.7	14.2	46.7	66.1	71.2	30.8	16.2	32.0	29.7
Link Distance (m)		199.6	88.9	88.9		67.1	54.7		52.9	52.9
Upstream Blk Time (%)				0	4	4	2		0	0
Queuing Penalty (veh)				0	0	0	0		0	0
Storage Bay Dist (m)	95.0				55.0			45.0		
Storage Blk Time (%)					10	0			0	
Queuing Penalty (veh)					23	1			0	

Intersection: 35: Devonshire & Lansdowne

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	R	LT	R
Maximum Queue (m)	29.1	33.8	10.8	29.6	50.8	9.1	31.5	19.1
Average Queue (m)	12.1	13.4	2.7	10.2	23.7	1.8	14.8	8.5
95th Queue (m)	24.7	26.9	8.5	23.1	41.7	7.8	26.9	15.4
Link Distance (m)	39.3	39.3		80.4	58.6		153.0	
Upstream Blk Time (%)		0			0			
Queuing Penalty (veh)		0			0			
Storage Bay Dist (m)			55.0			25.0		45.0
Storage Blk Time (%)					5			
Queuing Penalty (veh)					1			

Intersection: 48: Leinster &

Movement	EB	WB	WB	NB	SB	SB
Directions Served	L	L	TR	LTR	L	TR
Maximum Queue (m)	13.1	3.7	4.2	10.5	23.2	21.4
Average Queue (m)	3.6	0.2	0.2	3.6	9.9	9.0
95th Queue (m)	11.1	2.3	2.0	10.9	19.0	16.9
Link Distance (m)			451.1	57.2	149.9	149.9
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	35.0	35.0				
Storage Blk Time (%)						
Queuing Penalty (veh)						

1: Dundas St & Oxford St Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBT	SBR	All
Total Delay (hr)	1.2	0.2	0.7	0.7	1.2	0.3	0.0	0.5	0.1	4.9
Delay / Veh (s)	11.8	5.7	20.4	9.5	25.4	3.8	21.9	16.4	2.8	11.7
Total Stops	179	53	102	90	137	165	2	61	54	843
Travel Dist (km)	56.7	16.8	41.5	82.3	10.7	16.8	0.5	16.9	13.5	255.6
Travel Time (hr)	2.6	0.7	1.7	2.5	1.5	0.9	0.0	0.9	0.5	11.3
Avg Speed (kph)	22	25	24	32	7	20	16	19	29	23
Fuel Used (l)	8.1	2.1	3.9	7.6	1.7	0.9	0.1	2.5	1.6	28.5
HC Emissions (g)	27	6	10	25	1	1	0	7	8	85
CO Emissions (g)	1077	271	315	739	46	30	8	320	290	3096
NOx Emissions (g)	97	22	31	78	5	3	1	27	27	290
Vehicles Entered	366	109	130	257	171	271	3	107	86	1500
Vehicles Exited	365	108	130	258	171	272	3	107	86	1500
Hourly Exit Rate	365	108	130	258	171	272	3	107	86	1500
Input Volume	367	105	139	262	172	254	4	114	82	1499
% of Volume	99	103	94	98	99	107	75	94	105	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

9: Vansittart Ave & Performance by movement

Movement	EBL	EBT	WBL	WBT	WBR	SBL2	SBR	All
Total Delay (hr)	0.5	0.1	0.0	0.0	0.0	0.1	0.2	0.9
Delay / Veh (s)	5.5	1.6	1.9	0.8	0.2	16.1	3.0	3.0
Total Stops	78	2	2	2	2	18	185	289
Travel Dist (km)	101.2	97.1	0.3	6.1	1.5	1.2	12.5	219.9
Travel Time (hr)	2.8	2.3	0.0	0.2	0.1	0.1	0.6	6.1
Avg Speed (kph)	36	42	21	36	23	11	22	36
Fuel Used (l)	9.0	9.3	0.0	0.6	0.1	0.1	0.6	19.7
HC Emissions (g)	33	28	0	1	0	0	1	64
CO Emissions (g)	943	897	1	46	2	3	25	1918
NOx Emissions (g)	108	95	0	5	0	0	3	211
Vehicles Entered	307	333	8	189	47	18	185	1087
Vehicles Exited	307	333	8	188	47	18	185	1086
Hourly Exit Rate	307	333	8	188	47	18	185	1086
Input Volume	297	328	9	196	51	21	186	1088
% of Volume	103	102	89	96	92	86	99	100
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

46: Springbank & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.4	1.5	0.3	0.5	1.5	0.0	0.4	0.8	0.2	0.3	1.3	0.3
Delay / Veh (s)	18.8	20.4	14.5	17.4	20.7	3.1	17.9	20.5	7.5	19.6	19.9	12.0
Total Stops	53	171	48	67	159	6	65	89	84	44	144	72
Travel Dist (km)	12.3	46.3	12.0	15.7	42.9	4.7	14.7	23.8	11.4	4.6	17.7	7.9
Travel Time (hr)	0.7	2.5	0.6	0.8	2.4	0.1	0.8	1.4	0.5	0.4	1.7	0.6
Avg Speed (kph)	19	18	20	19	18	35	18	17	31	10	11	13
Fuel Used (l)	1.1	4.4	1.0	1.3	3.8	0.3	2.1	3.6	1.5	0.5	2.1	0.7
HC Emissions (g)	1	9	3	3	7	1	5	10	4	0	4	1
CO Emissions (g)	44	246	59	64	161	16	251	412	212	18	108	30
NOx Emissions (g)	5	29	7	8	19	3	20	37	17	2	11	3
Vehicles Entered	73	272	71	94	256	35	88	144	85	61	232	104
Vehicles Exited	73	271	71	93	255	34	88	143	84	60	234	104
Hourly Exit Rate	73	271	71	93	255	34	88	143	84	60	234	104
Input Volume	72	278	78	92	267	33	92	156	87	58	228	103
% of Volume	101	97	91	101	96	103	96	92	97	103	103	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

46: Springbank & Performance by movement

Movement	All
Total Delay (hr)	7.5
Delay / Veh (s)	18.0
Total Stops	1002
Travel Dist (km)	214.0
Travel Time (hr)	12.6
Avg Speed (kph)	17
Fuel Used (l)	22.4
HC Emissions (g)	49
CO Emissions (g)	1621
NOx Emissions (g)	162
Vehicles Entered	1515
Vehicles Exited	1510
Hourly Exit Rate	1510
Input Volume	1544
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

Queuing and Blocking Report - DUNDAS CORRIDOR
Baseline

4/15/2010

Intersection: 1: Dundas St & Oxford St

Movement	EB	EB	WB	WB	NB	NB	B5	SB	SB	SB
Directions Served	T	TR	LT	T	L	R	T	L	T	R
Maximum Queue (m)	36.6	39.5	44.7	31.0	57.8	43.3	6.0	7.3	35.6	19.3
Average Queue (m)	21.1	19.3	18.5	12.7	26.8	15.9	0.2	0.8	14.3	8.5
95th Queue (m)	35.4	35.8	33.3	25.1	46.0	29.3	4.2	5.0	28.4	16.4
Link Distance (m)	154.0	154.0	308.7	308.7	44.5	44.5	108.6	156.8	156.8	156.8
Upstream Blk Time (%)					1	0				
Queuing Penalty (veh)					0	0				
Storage Bay Dist (m)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 9: Vansittart Ave &

Movement	EB	EB	WB	SB	SB
Directions Served	L	TR	LTR	<	R
Maximum Queue (m)	38.6	11.5	12.8	11.3	22.9
Average Queue (m)	13.0	0.4	1.4	3.3	11.0
95th Queue (m)	28.3	4.2	7.5	9.5	17.8
Link Distance (m)	308.7	308.7	17.8		53.6
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			0		
Storage Bay Dist (m)				49.0	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report - DUNDAS CORRIDOR
Baseline

4/15/2010

Intersection: 46: Springbank &

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	L	T	R	L	T	TR
Maximum Queue (m)	30.4	39.7	46.2	35.2	33.9	37.9	25.4	49.7	8.2	27.9	42.0	51.4
Average Queue (m)	11.1	18.0	24.8	13.2	15.2	19.4	12.7	20.2	0.3	10.4	16.8	25.3
95th Queue (m)	22.7	33.3	40.4	27.7	29.6	33.5	23.7	39.4	5.8	23.0	33.3	43.4
Link Distance (m)		176.7	176.7		156.7	156.7	165.2	165.2			65.6	65.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	48.0			52.0					35.0	60.0		
Storage Blk Time (%)						0		2	0			
Queuing Penalty (veh)						0		1	0			

Baseline

4: Main & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.0	0.2	0.0	0.1	0.2	0.0	0.1	0.3	0.0	0.0	0.2	0.0
Delay / Veh (s)	3.9	6.0	2.5	4.6	6.2	2.4	3.9	5.3	3.3	4.7	6.4	3.2
Total Stops	13	118	57	41	87	15	69	214	34	5	107	13
Travel Dist (km)	0.5	4.9	1.5	2.4	5.3	0.9	1.9	5.8	0.9	0.2	5.0	0.6
Travel Time (hr)	0.0	0.3	0.1	0.1	0.3	0.0	0.1	0.4	0.1	0.0	0.3	0.0
Avg Speed (kph)	17	16	17	20	20	21	14	13	13	18	17	17
Fuel Used (l)	0.0	0.3	0.1	0.1	0.3	0.0	0.1	0.5	0.1	0.0	0.3	0.0
HC Emissions (g)	0	0	0	0	0	0	0	0	0	0	0	0
CO Emissions (g)	1	10	4	3	8	1	3	14	3	0	8	1
NOx Emissions (g)	0	1	0	0	1	0	0	2	0	0	1	0
Vehicles Entered	13	118	57	41	87	15	69	215	35	5	107	13
Vehicles Exited	13	119	57	41	87	15	69	215	34	5	107	13
Hourly Exit Rate	13	119	57	41	87	15	69	215	34	5	107	13
Input Volume	15	118	55	39	87	16	69	217	33	6	114	12
% of Volume	87	101	104	105	100	94	100	99	103	83	94	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Main & Performance by movement

Movement	All
Total Delay (hr)	1.1
Delay / Veh (s)	5.1
Total Stops	773
Travel Dist (km)	29.9
Travel Time (hr)	1.8
Avg Speed (kph)	16
Fuel Used (l)	2.0
HC Emissions (g)	2
CO Emissions (g)	56
NOx Emissions (g)	6
Vehicles Entered	775
Vehicles Exited	775
Hourly Exit Rate	775
Input Volume	781
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

17: Peel & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.2	0.0	0.0	0.4	0.0	0.3	0.6	0.0	0.0	0.4	0.0
Delay / Veh (s)	15.4	11.8	3.4	14.7	13.7	6.0	17.0	11.7	5.7	18.9	14.6	4.6
Total Stops	21	30	10	4	57	10	42	83	5	6	55	16
Travel Dist (km)	1.6	3.1	0.9	0.4	6.4	1.1	2.2	6.2	0.3	0.4	4.9	1.5
Travel Time (hr)	0.2	0.3	0.1	0.0	0.5	0.1	0.4	0.7	0.0	0.1	0.5	0.1
Avg Speed (kph)	9	11	18	10	12	16	6	9	12	7	9	16
Fuel Used (l)	0.2	0.4	0.1	0.0	0.7	0.1	0.4	0.9	0.0	0.1	0.7	0.1
HC Emissions (g)	0	1	0	0	2	0	0	1	0	0	1	0
CO Emissions (g)	5	30	1	1	38	2	11	35	1	1	38	7
NOx Emissions (g)	1	3	0	0	5	0	1	4	0	0	3	1
Vehicles Entered	34	62	19	6	108	18	62	172	10	9	107	31
Vehicles Exited	33	62	19	6	108	18	62	173	10	9	106	31
Hourly Exit Rate	33	62	19	6	108	18	62	173	10	9	106	31
Input Volume	38	57	20	6	104	15	64	174	10	10	112	30
% of Volume	87	109	95	100	104	120	97	99	100	90	95	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Peel & Performance by movement

Movement	All
Total Delay (hr)	2.2
Delay / Veh (s)	12.5
Total Stops	339
Travel Dist (km)	29.0
Travel Time (hr)	2.9
Avg Speed (kph)	10
Fuel Used (l)	3.6
HC Emissions (g)	6
CO Emissions (g)	171
NOx Emissions (g)	18
Vehicles Entered	638
Vehicles Exited	637
Hourly Exit Rate	637
Input Volume	640
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

22: Dundas & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	1.0	0.1	0.1	1.0	0.1	0.1	0.4	0.0	0.3	0.3	0.0
Delay / Veh (s)	21.5	13.7	7.7	19.6	13.2	7.0	9.5	9.2	4.0	17.1	10.5	5.0
Total Stops	14	134	13	14	121	20	20	69	26	35	35	13
Travel Dist (km)	0.7	9.1	0.9	0.6	7.8	1.2	1.5	6.8	2.1	3.5	5.1	1.7
Travel Time (hr)	0.1	1.2	0.1	0.1	1.1	0.1	0.1	0.5	0.1	0.4	0.4	0.1
Avg Speed (kph)	5	8	10	5	7	9	11	13	16	8	13	16
Fuel Used (l)	0.1	1.6	0.1	0.1	1.6	0.2	0.2	0.8	0.2	0.5	0.6	0.1
HC Emissions (g)	0	3	0	0	2	0	0	1	0	0	1	0
CO Emissions (g)	3	71	5	4	62	6	6	46	9	14	39	4
NOx Emissions (g)	0	10	1	0	9	1	1	5	1	2	3	0
Vehicles Entered	19	262	27	21	263	41	33	148	45	68	99	33
Vehicles Exited	19	261	26	21	264	42	33	148	45	68	99	33
Hourly Exit Rate	19	261	26	21	264	42	33	148	45	68	99	33
Input Volume	17	265	26	20	259	40	33	154	41	68	106	30
% of Volume	112	98	100	105	102	105	100	96	110	100	93	110
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

22: Dundas & Performance by movement

Movement	All
Total Delay (hr)	3.5
Delay / Veh (s)	11.9
Total Stops	514
Travel Dist (km)	40.9
Travel Time (hr)	4.5
Avg Speed (kph)	9
Fuel Used (l)	6.1
HC Emissions (g)	9
CO Emissions (g)	271
NOx Emissions (g)	33
Vehicles Entered	1059
Vehicles Exited	1059
Hourly Exit Rate	1059
Input Volume	1059
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

Baseline

32: Princess St & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.5	0.1
Delay / Veh (s)	15.4	14.8	3.9	14.2	14.0	2.6	8.1	3.7	1.1	9.1	10.6	4.4
Total Stops	5	9	43	1	10	6	20	20	3	3	79	27
Travel Dist (km)	1.0	1.8	7.6	0.4	3.8	1.6	1.7	4.1	0.5	0.2	7.8	2.8
Travel Time (hr)	0.1	0.1	0.3	0.0	0.2	0.1	0.1	0.2	0.0	0.0	0.7	0.2
Avg Speed (kph)	15	16	23	22	23	32	12	21	22	12	12	16
Fuel Used (l)	0.2	0.3	1.0	0.0	0.5	0.2	0.2	0.4	0.0	0.0	1.0	0.2
HC Emissions (g)	0	1	3	0	1	0	0	1	0	0	1	0
CO Emissions (g)	15	30	138	5	55	21	7	29	1	1	42	8
NOx Emissions (g)	1	2	13	0	4	1	1	3	0	0	5	1
Vehicles Entered	9	16	69	2	19	8	42	101	12	5	169	60
Vehicles Exited	9	16	69	2	19	8	42	101	12	5	168	60
Hourly Exit Rate	9	16	69	2	19	8	42	101	12	5	168	60
Input Volume	10	13	71	3	20	6	46	97	12	6	176	64
% of Volume	90	123	97	67	95	133	91	104	100	83	95	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

32: Princess St & Performance by movement

Movement	All
Total Delay (hr)	1.0
Delay / Veh (s)	7.4
Total Stops	226
Travel Dist (km)	33.3
Travel Time (hr)	2.0
Avg Speed (kph)	17
Fuel Used (l)	4.0
HC Emissions (g)	8
CO Emissions (g)	352
NOx Emissions (g)	32
Vehicles Entered	512
Vehicles Exited	511
Hourly Exit Rate	511
Input Volume	524
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

Intersection: 4: Main &

Movement	EB	EB	EB	WB	WB	NB	NB	B5	SB	SB
Directions Served	L	T	R	L	TR	L	TR	T	L	TR
Maximum Queue (m)	7.3	20.4	13.7	14.4	17.9	17.2	27.9	2.7	8.1	20.0
Average Queue (m)	2.5	10.1	1.2	5.5	6.7	8.9	13.9	0.1	1.4	10.2
95th Queue (m)	8.1	16.0	9.6	11.8	12.7	14.2	22.2	1.5	6.3	17.8
Link Distance (m)	30.6	30.6		46.4	46.4	17.6	17.6	19.0	34.6	34.6
Upstream Blk Time (%)		0				0	2			0
Queuing Penalty (veh)		0				0	0			0
Storage Bay Dist (m)			21.0							
Storage Blk Time (%)		0	0							
Queuing Penalty (veh)		0	0							

Intersection: 17: Peel &

Movement	EB	EB	WB	WB	NB	NB	B7	SB	SB
Directions Served	L	TR	L	TR	L	TR	T	L	TR
Maximum Queue (m)	19.2	26.8	9.2	32.1	24.2	40.8	17.3	15.2	34.9
Average Queue (m)	5.3	9.2	1.3	14.4	9.4	18.4	0.6	2.0	14.8
95th Queue (m)	15.0	20.6	6.5	27.9	20.4	34.9	7.5	10.3	29.5
Link Distance (m)	39.6	39.6	48.6	48.6	25.2	25.2	185.1		36.4
Upstream Blk Time (%)					0	3		0	0
Queuing Penalty (veh)					1	4		0	0
Storage Bay Dist (m)								38.0	
Storage Blk Time (%)								0	0
Queuing Penalty (veh)								0	0

Queuing and Blocking Report - WELLINGTON CORRIDOR
Baseline

1/11/2010

Intersection: 22: Dundas &

Movement	EB	EB	B24	WB	WB	B23	NB	NB	B8	SB	SB
Directions Served	L	TR	T	L	TR	T	L	TR	T	L	TR
Maximum Queue (m)	13.0	43.6	31.7	13.5	37.9	38.4	27.1	48.4	7.7	20.0	30.2
Average Queue (m)	4.1	30.0	5.4	3.8	28.3	8.8	5.5	19.1	0.3	8.1	10.6
95th Queue (m)	12.3	46.6	19.9	11.4	40.9	28.3	16.9	36.2	3.1	17.9	23.1
Link Distance (m)	23.9	23.9	73.6	18.0	18.0	97.6		35.3	36.4		40.3
Upstream Blk Time (%)		12		0	18		0	1			
Queuing Penalty (veh)		0		0	0		0	1			
Storage Bay Dist (m)							40.0			39.0	
Storage Blk Time (%)							0	1			0
Queuing Penalty (veh)							0	0			0

Intersection: 32: Princess St &

Movement	EB	WB	NB	NB	SB	SB	B35
Directions Served	LTR	LTR	L	TR	L	TR	T
Maximum Queue (m)	25.7	15.5	17.7	18.3	9.1	46.5	1.5
Average Queue (m)	10.0	4.7	5.2	6.4	0.8	21.8	0.1
95th Queue (m)	19.8	12.8	13.8	15.8	5.2	40.1	1.5
Link Distance (m)	110.2	195.7		29.9		35.9	34.1
Upstream Blk Time (%)				0		1	
Queuing Penalty (veh)				0		0	
Storage Bay Dist (m)			30.0		38.0		
Storage Blk Time (%)				0		1	
Queuing Penalty (veh)				0		0	

18: Dundas & Wilson Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.2	0.8	0.0	0.2	1.1	0.1	0.6	1.3	0.2	0.4	1.5	0.4
Delay / Veh (s)	12.3	12.7	1.9	13.4	15.3	10.4	24.3	19.9	14.7	19.6	27.2	18.7
Total Stops	38	111	23	33	138	20	85	147	38	61	158	64
Travel Dist (km)	3.1	12.8	2.4	6.6	36.6	5.2	6.8	17.2	4.0	5.7	15.9	6.1
Travel Time (hr)	0.3	1.0	0.1	0.4	2.0	0.3	0.8	1.6	0.3	0.5	1.9	0.6
Avg Speed (kph)	12	12	23	19	19	20	8	10	12	10	8	10
Fuel Used (l)	0.3	1.5	0.1	0.9	5.6	0.7	0.9	2.2	0.4	0.6	2.4	0.7
HC Emissions (g)	0	2	0	2	18	4	1	4	1	0	3	1
CO Emissions (g)	12	65	8	105	671	110	32	135	17	15	93	30
NOx Emissions (g)	1	8	1	8	65	11	3	13	2	1	10	3
Vehicles Entered	53	219	42	46	251	36	93	231	54	73	204	78
Vehicles Exited	53	219	42	45	251	36	91	232	53	73	205	78
Hourly Exit Rate	53	219	42	45	251	36	91	232	53	73	205	78
Input Volume	48	221	41	48	260	38	93	227	55	77	220	75
% of Volume	110	99	102	94	97	95	98	102	96	95	93	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: Dundas & Wilson Performance by movement

Movement	All
Total Delay (hr)	6.8
Delay / Veh (s)	17.7
Total Stops	916
Travel Dist (km)	122.5
Travel Time (hr)	9.8
Avg Speed (kph)	12
Fuel Used (l)	16.3
HC Emissions (g)	37
CO Emissions (g)	1292
NOx Emissions (g)	128
Vehicles Entered	1380
Vehicles Exited	1378
Hourly Exit Rate	1378
Input Volume	1403
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

24: Peel & Wilson Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.1	0.0	0.0	0.1	0.0	0.2	1.0	0.0	0.0	0.5	0.0
Delay / Veh (s)	13.7	12.8	3.0	15.2	11.8	3.4	14.1	10.2	5.0	6.6	7.7	4.5
Total Stops	9	20	27	6	23	6	39	162	5	1	98	17
Travel Dist (km)	1.0	2.4	2.3	0.5	2.7	0.6	4.4	28.2	1.1	0.0	10.5	1.5
Travel Time (hr)	0.1	0.2	0.1	0.0	0.2	0.0	0.3	1.6	0.1	0.0	0.8	0.1
Avg Speed (kph)	11	13	21	10	14	20	13	18	20	12	14	15
Fuel Used (l)	0.1	0.2	0.1	0.0	0.3	0.0	0.4	2.6	0.1	0.0	1.2	0.1
HC Emissions (g)	0	0	0	0	1	0	1	5	0	0	2	0
CO Emissions (g)	3	13	7	1	18	1	18	126	2	0	63	3
NOx Emissions (g)	0	1	1	0	2	0	2	16	0	0	7	0
Vehicles Entered	16	38	37	8	44	10	56	352	14	1	253	37
Vehicles Exited	16	38	38	8	43	10	56	352	14	1	253	37
Hourly Exit Rate	16	38	38	8	43	10	56	352	14	1	253	37
Input Volume	18	40	36	8	45	9	50	347	12	1	271	37
% of Volume	89	95	106	100	96	111	112	101	117	100	93	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

24: Peel & Wilson Performance by movement

Movement	All
Total Delay (hr)	2.2
Delay / Veh (s)	9.3
Total Stops	413
Travel Dist (km)	55.2
Travel Time (hr)	3.5
Avg Speed (kph)	16
Fuel Used (l)	5.2
HC Emissions (g)	9
CO Emissions (g)	256
NOx Emissions (g)	31
Vehicles Entered	866
Vehicles Exited	866
Hourly Exit Rate	866
Input Volume	874
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

28: Hounsfield & Wilson Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.4	0.1	0.4	0.3	0.0	0.1	1.5	0.2	0.0	1.0	0.0
Delay / Veh (s)	17.6	15.1	6.9	18.9	14.3	6.4	19.1	11.7	7.8	29.4	12.5	11.5
Total Stops	10	59	17	45	47	2	20	210	41	2	145	7
Travel Dist (km)	0.9	6.1	1.6	4.5	5.8	0.3	3.1	53.4	9.5	0.2	25.4	1.1
Travel Time (hr)	0.1	0.6	0.1	0.5	0.5	0.0	0.2	2.6	0.4	0.0	1.5	0.1
Avg Speed (kph)	9	11	15	9	12	17	15	20	22	10	17	15
Fuel Used (l)	0.1	0.7	0.1	0.5	0.6	0.0	0.3	4.4	0.6	0.0	2.3	0.1
HC Emissions (g)	0	1	0	1	2	0	0	9	1	0	5	0
CO Emissions (g)	3	33	8	22	40	1	10	213	27	0	126	2
NOx Emissions (g)	0	4	1	2	4	0	1	27	3	0	16	0
Vehicles Entered	15	103	28	68	87	5	25	467	78	2	284	12
Vehicles Exited	15	102	28	68	86	5	26	466	78	2	283	12
Hourly Exit Rate	15	102	28	68	86	5	26	466	78	2	283	12
Input Volume	13	99	25	77	81	6	28	457	74	3	301	11
% of Volume	115	103	112	88	106	83	93	102	105	67	94	109
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

28: Hounsfield & Wilson Performance by movement

Movement	All
Total Delay (hr)	4.1
Delay / Veh (s)	12.7
Total Stops	605
Travel Dist (km)	111.9
Travel Time (hr)	6.6
Avg Speed (kph)	17
Fuel Used (l)	9.8
HC Emissions (g)	19
CO Emissions (g)	484
NOx Emissions (g)	59
Vehicles Entered	1174
Vehicles Exited	1171
Hourly Exit Rate	1171
Input Volume	1175
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

34: Cedar & Norwich Performance by movement

Movement	SEL	SET	NWT	NWR	SWL	SWR	All
Total Delay (hr)	0.0	0.1	0.1	0.0	0.1	0.0	0.3
Delay / Veh (s)	2.7	0.8	0.7	0.6	30.8	3.4	1.1
Total Stops	1	19	30	2	12	7	71
Travel Dist (km)	0.2	19.2	17.3	0.5	0.3	0.1	37.6
Travel Time (hr)	0.0	0.5	0.5	0.0	0.1	0.0	1.1
Avg Speed (kph)	24	40	37	22	2	10	34
Fuel Used (l)	0.0	1.3	1.3	0.0	0.1	0.0	2.8
HC Emissions (g)	0	4	3	0	0	0	7
CO Emissions (g)	0	70	65	0	2	0	138
NOx Emissions (g)	0	11	10	0	0	0	21
Vehicles Entered	3	378	565	15	13	8	982
Vehicles Exited	3	378	565	15	13	8	982
Hourly Exit Rate	3	378	565	15	13	8	982
Input Volume	3	400	553	15	16	6	993
% of Volume	100	94	102	100	81	133	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Queuing and Blocking Report - WILSON CORRIDOR
Baseline

3/10/2010

Intersection: 18: Dundas & Wilson

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	B13
Directions Served	L	T	R	L	TR	L	T	TR	L	TR	T
Maximum Queue (m)	24.1	43.4	30.3	19.4	54.0	35.6	35.0	42.7	46.8	76.0	6.6
Average Queue (m)	6.3	21.5	5.3	7.6	30.5	14.6	13.3	20.4	12.7	39.9	0.2
95th Queue (m)	16.4	40.3	16.7	17.1	52.2	29.6	29.5	37.1	29.7	66.0	4.6
Link Distance (m)		46.8		145.2	145.2		61.8	61.8	68.0	68.0	263.0
Upstream Blk Time (%)	0	0	0						0	1	
Queuing Penalty (veh)	0	0	0						0	0	
Storage Bay Dist (m)	45.0		45.0			60.0					
Storage Blk Time (%)	0	0	0								
Queuing Penalty (veh)	0	0	0								

Intersection: 24: Peel & Wilson

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	LT	TR	LT	TR
Maximum Queue (m)	12.7	22.9	17.2	9.2	20.5	48.3	51.5	30.5	35.8
Average Queue (m)	2.8	6.0	7.8	1.9	6.9	18.4	15.8	9.2	14.5
95th Queue (m)	9.9	16.3	18.4	7.8	17.3	39.2	38.2	24.0	29.3
Link Distance (m)		50.7			51.6	67.0	67.0	30.9	30.9
Upstream Blk Time (%)						0		0	1
Queuing Penalty (veh)						0		0	1
Storage Bay Dist (m)	50.0		13.0	43.0					
Storage Blk Time (%)		1	1						
Queuing Penalty (veh)		1	1						

Intersection: 28: Hounsfeld & Wilson

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (m)	14.0	39.8	28.9	28.4	54.4	49.4	31.1	36.2
Average Queue (m)	3.0	15.8	10.0	11.3	25.3	24.3	12.8	17.6
95th Queue (m)	10.5	31.1	22.4	22.0	42.7	41.6	27.9	32.7
Link Distance (m)		49.2		55.9	111.9	111.9	79.3	79.3
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		0						
Storage Bay Dist (m)	39.0		50.0					
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 34: Cedar & Norwich

Movement	SE	SE	NW	NW	B38	SW	SW
Directions Served	LT	T	T	TR	T	L	R
Maximum Queue (m)	22.7	30.1	19.4	28.7	44.8	11.5	8.4
Average Queue (m)	2.0	3.6	2.9	5.2	1.5	2.9	1.8
95th Queue (m)	10.5	15.8	12.3	19.1	31.6	8.9	7.3
Link Distance (m)	42.5	42.5	21.0	21.0	219.4	12.9	12.9
Upstream Blk Time (%)		0	0	1	0	0	0
Queuing Penalty (veh)		0	0	0	0	0	0
Storage Bay Dist (m)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Existing Conditions Results
PM Peak Hour

1: Vansittart & Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Total Delay (hr)	0.5	0.4	1.4	0.7	1.7	0.6	5.3
Delay / Veh (s)	17.0	5.5	21.2	11.7	27.1	10.7	15.4
Total Stops	66	147	172	102	201	97	785
Travel Dist (km)	13.7	28.8	32.6	24.8	18.5	17.6	135.9
Travel Time (hr)	0.9	1.2	2.2	1.4	2.1	1.0	8.8
Avg Speed (kph)	16	25	15	18	9	18	16
Fuel Used (l)	1.2	1.6	4.8	3.3	2.5	1.7	15.0
HC Emissions (g)	1	2	14	11	2	5	36
CO Emissions (g)	57	70	493	370	86	121	1197
NOx Emissions (g)	4	7	52	41	8	14	127
Vehicles Entered	115	244	239	201	222	211	1232
Vehicles Exited	117	244	237	200	221	211	1230
Hourly Exit Rate	117	244	237	200	221	211	1230
Input Volume	116	244	231	196	233	203	1223
% of Volume	101	100	103	102	95	104	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Baseline

8: Wellington & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.2	1.8	0.1	0.3	1.1	0.0	0.2	0.2	0.1	0.1	0.1	0.0
Delay / Veh (s)	17.8	14.9	9.5	12.8	9.7	5.3	24.1	18.2	4.8	24.6	21.3	4.9
Total Stops	30	238	14	57	164	9	29	24	71	7	14	8
Travel Dist (km)	4.3	45.1	2.9	8.0	43.7	2.5	3.0	3.1	8.9	1.5	3.4	2.3
Travel Time (hr)	0.3	2.7	0.2	0.5	2.0	0.1	0.3	0.3	0.4	0.1	0.2	0.1
Avg Speed (kph)	14	17	19	17	22	23	9	12	21	15	16	27
Fuel Used (l)	0.4	4.4	0.2	0.7	3.6	0.2	0.3	0.3	0.5	0.2	0.5	0.3
HC Emissions (g)	1	8	1	1	7	1	0	1	1	0	1	1
CO Emissions (g)	30	172	14	47	168	16	14	24	35	24	58	37
NOx Emissions (g)	3	25	2	4	23	2	1	2	3	2	4	2
Vehicles Entered	41	427	28	72	391	22	37	38	108	10	21	14
Vehicles Exited	42	428	28	73	393	23	36	38	109	9	21	14
Hourly Exit Rate	42	428	28	73	393	23	36	38	109	9	21	14
Input Volume	44	439	28	78	394	28	31	42	97	10	21	14
% of Volume	95	97	100	94	100	82	116	90	112	90	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Wellington & Performance by movement

Movement	All
Total Delay (hr)	4.2
Delay / Veh (s)	12.4
Total Stops	665
Travel Dist (km)	128.7
Travel Time (hr)	7.1
Avg Speed (kph)	18
Fuel Used (l)	11.7
HC Emissions (g)	23
CO Emissions (g)	639
NOx Emissions (g)	74
Vehicles Entered	1209
Vehicles Exited	1214
Hourly Exit Rate	1214
Input Volume	1226
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

Baseline

14: Huron & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.3	2.0	0.2	1.0	1.5	0.1	0.6	0.3	0.4	0.2	0.2	0.0
Delay / Veh (s)	22.1	16.1	12.6	28.8	14.9	10.7	21.5	19.4	9.1	21.6	15.3	7.0
Total Stops	34	234	32	109	198	28	76	36	100	22	26	10
Travel Dist (km)	4.6	47.4	5.7	12.5	36.9	4.5	13.2	7.4	20.8	1.7	2.5	0.9
Travel Time (hr)	0.4	3.0	0.4	1.3	2.3	0.3	1.0	0.5	1.1	0.2	0.2	0.1
Avg Speed (kph)	12	16	16	10	16	17	13	15	20	8	11	15
Fuel Used (l)	0.5	4.7	0.5	1.6	3.7	0.4	2.2	1.2	2.9	0.2	0.3	0.1
HC Emissions (g)	1	7	1	3	8	2	4	2	11	0	1	0
CO Emissions (g)	39	185	20	79	192	30	209	121	401	9	22	2
NOx Emissions (g)	3	26	2	7	24	4	17	10	39	1	2	0
Vehicles Entered	43	443	53	125	370	45	102	57	161	29	42	16
Vehicles Exited	45	446	54	125	368	45	102	57	162	29	42	16
Hourly Exit Rate	45	446	54	125	368	45	102	57	162	29	42	16
Input Volume	40	447	59	127	385	39	100	65	151	27	42	15
% of Volume	112	100	92	98	96	115	102	88	107	107	100	107
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Huron & Performance by movement

Movement	All
Total Delay (hr)	6.8
Delay / Veh (s)	16.5
Total Stops	905
Travel Dist (km)	158.2
Travel Time (hr)	10.7
Avg Speed (kph)	15
Fuel Used (l)	18.1
HC Emissions (g)	40
CO Emissions (g)	1310
NOx Emissions (g)	137
Vehicles Entered	1486
Vehicles Exited	1491
Hourly Exit Rate	1491
Input Volume	1497
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

22: Clarke & Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	0.4	0.0	0.2	0.3	0.2	0.3	1.5
Delay / Veh (s)	2.5	1.5	7.5	1.5	19.4	11.2	3.4
Total Stops	0	1	60	0	34	112	207
Travel Dist (km)	150.8	15.5	22.2	132.0	4.5	14.5	339.4
Travel Time (hr)	3.6	0.4	0.8	3.3	0.3	0.8	9.2
Avg Speed (kph)	41	38	29	40	15	22	37
Fuel Used (l)	10.9	1.0	2.3	14.0	0.7	2.1	31.0
HC Emissions (g)	30	2	5	57	2	6	102
CO Emissions (g)	620	52	221	1669	88	265	2914
NOx Emissions (g)	85	6	21	187	8	22	329
Vehicles Entered	634	64	104	618	34	112	1566
Vehicles Exited	635	64	104	618	34	112	1567
Hourly Exit Rate	635	64	104	618	34	112	1567
Input Volume	625	59	103	606	37	105	1535
% of Volume	102	108	101	102	92	107	102
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

23: Springbank & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.8	1.7	0.6	0.4	1.0	0.1	1.7	1.1	0.1	0.3	1.0	0.3
Delay / Veh (s)	30.2	17.5	12.9	26.5	11.9	7.9	28.1	15.5	10.0	23.3	18.0	5.7
Total Stops	198	228	117	47	166	26	208	168	36	37	144	146
Travel Dist (km)	45.1	76.3	36.3	5.0	31.0	3.7	16.3	19.3	4.0	2.6	13.3	12.5
Travel Time (hr)	2.9	3.4	1.5	0.5	1.7	0.2	2.1	1.5	0.3	0.3	1.3	0.7
Avg Speed (kph)	16	23	24	10	18	20	8	13	15	8	10	17
Fuel Used (l)	4.9	7.0	3.0	0.5	2.7	0.3	2.4	2.3	0.4	0.4	1.7	0.8
HC Emissions (g)	12	15	8	1	6	0	3	5	0	0	2	2
CO Emissions (g)	362	463	218	18	144	12	97	144	14	10	71	40
NOx Emissions (g)	38	53	24	1	18	1	11	17	2	1	9	5
Vehicles Entered	213	359	171	51	310	37	215	254	53	41	209	195
Vehicles Exited	214	358	168	52	311	37	216	255	53	41	208	195
Hourly Exit Rate	214	358	168	52	311	37	216	255	53	41	208	195
Input Volume	210	352	163	50	302	37	210	257	56	49	194	197
% of Volume	102	102	103	104	103	100	103	99	95	84	107	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

23: Springbank & Performance by movement

Movement	All
Total Delay (hr)	10.2
Delay / Veh (s)	17.4
Total Stops	1521
Travel Dist (km)	265.4
Travel Time (hr)	16.5
Avg Speed (kph)	16
Fuel Used (l)	26.4
HC Emissions (g)	54
CO Emissions (g)	1592
NOx Emissions (g)	180
Vehicles Entered	2108
Vehicles Exited	2108
Hourly Exit Rate	2108
Input Volume	2077
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

35: Devonshire & Lansdowne Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.9	0.4	0.1	0.1	0.4	0.0	0.4	0.9	0.0	0.1	0.7	0.3
Delay / Veh (s)	19.9	14.7	5.8	16.1	13.3	8.6	19.8	18.1	2.2	21.7	15.6	7.0
Total Stops	122	59	47	14	56	11	58	117	8	9	80	85
Travel Dist (km)	8.7	5.8	4.5	1.9	10.3	1.8	5.1	12.3	1.2	1.8	23.3	23.7
Travel Time (hr)	1.2	0.6	0.3	0.1	0.6	0.1	0.5	1.2	0.0	0.1	1.2	1.0
Avg Speed (kph)	7	10	15	13	16	18	9	11	24	16	19	29
Fuel Used (l)	1.3	0.8	0.3	0.2	0.9	0.1	0.6	1.6	0.1	0.3	3.5	3.0
HC Emissions (g)	1	1	1	0	2	0	0	3	0	0	9	11
CO Emissions (g)	41	41	20	5	55	3	16	69	4	22	389	441
NOx Emissions (g)	5	4	2	0	6	0	2	9	0	2	37	38
Vehicles Entered	168	108	83	22	112	19	74	178	17	12	151	154
Vehicles Exited	168	110	83	22	112	19	74	178	17	11	151	155
Hourly Exit Rate	168	110	83	22	112	19	74	178	17	11	151	155
Input Volume	171	109	80	18	108	23	69	181	19	10	144	159
% of Volume	98	101	104	122	104	83	107	98	89	110	105	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	1

35: Devonshire & Lansdowne Performance by movement

Movement	All
Total Delay (hr)	4.4
Delay / Veh (s)	14.4
Total Stops	666
Travel Dist (km)	100.3
Travel Time (hr)	7.0
Avg Speed (kph)	15
Fuel Used (l)	12.8
HC Emissions (g)	29
CO Emissions (g)	1106
NOx Emissions (g)	105
Vehicles Entered	1098
Vehicles Exited	1100
Hourly Exit Rate	1100
Input Volume	1091
% of Volume	101
Denied Entry Before	0
Denied Entry After	1

Baseline

48: Leinster & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.1	0.2	0.0	0.0	0.4	0.1	0.0	0.0	0.3	0.0	0.1	1.2
Delay / Veh (s)	5.2	1.6	1.1	5.7	3.1	2.4	14.1	5.5	15.9	13.1	4.3	3.3
Total Stops	37	0	0	6	0	2	5	14	58	4	52	178
Travel Dist (km)	18.5	132.7	2.2	6.8	225.6	39.5	0.3	0.8	8.8	0.7	7.7	443.6
Travel Time (hr)	0.5	3.0	0.1	0.2	5.2	0.9	0.0	0.0	0.5	0.0	0.3	10.8
Avg Speed (kph)	34	44	39	39	44	42	12	17	18	21	26	41
Fuel Used (l)	1.2	9.1	0.1	0.4	15.5	2.5	0.0	0.0	1.2	0.1	1.0	31.3
HC Emissions (g)	1	26	0	1	46	9	0	0	3	0	3	90
CO Emissions (g)	28	472	3	11	846	158	0	1	143	9	149	1820
NOx Emissions (g)	4	72	0	2	127	24	0	0	11	1	12	253
Vehicles Entered	78	551	9	15	487	85	5	14	58	4	52	1358
Vehicles Exited	78	553	10	15	487	85	5	14	58	4	52	1361
Hourly Exit Rate	78	553	10	15	487	85	5	14	58	4	52	1361
Input Volume	74	544	8	17	495	76	7	12	55	4	55	1347
% of Volume	105	102	125	88	98	112	71	117	105	100	95	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

Intersection: 1: Vansittart &

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	TR	L	T
Maximum Queue (m)	37.8	46.7	103.7	60.4	52.9
Average Queue (m)	15.1	18.2	44.1	30.4	21.3
95th Queue (m)	30.5	35.2	81.6	53.0	38.9
Link Distance (m)		108.0	136.3		73.1
Upstream Blk Time (%)			0	0	0
Queuing Penalty (veh)			0	0	0
Storage Bay Dist (m)	100.0			68.0	
Storage Blk Time (%)				0	0
Queuing Penalty (veh)				1	0

Intersection: 8: Wellington &

Movement	EB	EB	B7	WB	WB	NB	NB	SB
Directions Served	L	TR	T	L	TR	LT	R	LTR
Maximum Queue (m)	19.8	92.1	2.8	30.8	72.3	30.7	22.0	17.2
Average Queue (m)	6.7	44.7	0.1	9.1	28.2	11.8	10.2	7.0
95th Queue (m)	16.7	82.6	1.8	21.2	56.6	23.9	18.6	15.6
Link Distance (m)		93.9	255.6		97.4	71.2	71.2	160.9
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		2						
Storage Bay Dist (m)	100.0			100.0				
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 14: Huron &

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (m)	24.6	95.8	49.1	81.2	40.4	44.4	19.4	20.2
Average Queue (m)	7.7	49.5	20.2	42.3	15.9	22.2	5.9	8.8
95th Queue (m)	17.7	87.2	37.3	71.4	30.9	39.1	15.8	18.8
Link Distance (m)		96.2		88.8	128.8	128.8		48.5
Upstream Blk Time (%)		0		0				
Queuing Penalty (veh)		2		0				
Storage Bay Dist (m)	100.0		100.0				50.0	
Storage Blk Time (%)		0		0				
Queuing Penalty (veh)		0		0				

Intersection: 22: Clarke &

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (m)	3.5	20.4	20.8	24.3
Average Queue (m)	0.2	9.6	6.3	11.6
95th Queue (m)	2.3	17.9	15.4	18.7
Link Distance (m)	230.5		128.7	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)		90.0		55.0
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Springbank &

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (m)	62.9	100.3	23.9	66.7	62.1	73.8	25.8	50.6	29.0
Average Queue (m)	30.4	48.3	10.7	33.4	29.7	31.7	8.0	24.2	15.6
95th Queue (m)	52.6	80.7	21.8	53.7	52.8	56.3	19.5	43.6	25.6
Link Distance (m)		199.6	88.9	88.9		65.5		52.9	52.9
Upstream Blk Time (%)					0	0	0	0	
Queuing Penalty (veh)					0	0	0	0	
Storage Bay Dist (m)	95.0				55.0		45.0		
Storage Blk Time (%)		1			1	1	0	1	
Queuing Penalty (veh)		1			4	1	0	1	

Intersection: 35: Devonshire & Lansdowne

Movement	EB	EB	B26	WB	WB	NB	NB	B38	SB	SB
Directions Served	L	TR	T	L	TR	LT	R	T	LT	R
Maximum Queue (m)	43.4	45.9	1.7	11.8	29.2	60.5	10.4	2.8	39.5	20.0
Average Queue (m)	20.9	16.9	0.1	3.0	11.6	30.8	2.0	0.1	19.8	9.7
95th Queue (m)	36.9	35.8	1.1	9.6	24.5	50.6	8.2	1.8	36.0	15.7
Link Distance (m)	39.3	39.3	87.2		77.0	58.5		65.0	153.0	
Upstream Blk Time (%)	1	1				0				
Queuing Penalty (veh)	1	1				0				
Storage Bay Dist (m)				55.0			25.0			45.0
Storage Blk Time (%)						12			0	
Queuing Penalty (veh)						2			0	

Intersection: 48: Leinster &

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	L	TR
Maximum Queue (m)	13.4	1.3	8.3	7.3	10.6	23.4	16.0
Average Queue (m)	6.7	0.0	1.7	0.6	4.1	9.8	8.0
95th Queue (m)	14.2	0.8	7.0	4.3	11.5	18.8	14.6
Link Distance (m)		228.7		451.9	57.1	149.9	149.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)	35.0		35.0				
Storage Blk Time (%)							
Queuing Penalty (veh)							

1: Dundas St & Oxford St Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBT	SBR	All
Total Delay (hr)	1.2	0.2	1.1	0.8	1.4	0.2	0.1	0.7	0.1	5.8
Delay / Veh (s)	12.0	5.7	21.4	7.9	28.2	3.4	20.0	17.8	3.0	12.5
Total Stops	169	69	146	96	154	141	15	91	37	918
Travel Dist (km)	54.3	19.6	59.9	105.8	11.3	14.6	3.4	23.3	9.5	301.6
Travel Time (hr)	2.5	0.8	2.5	3.2	1.7	0.7	0.2	1.3	0.3	13.3
Avg Speed (kph)	22	25	24	34	7	20	16	18	29	23
Fuel Used (l)	7.8	2.4	5.7	10.0	1.9	0.7	0.5	3.5	1.2	33.6
HC Emissions (g)	24	9	15	30	3	1	1	10	5	96
CO Emissions (g)	1024	338	467	939	69	25	52	426	187	3527
NOx Emissions (g)	88	31	48	97	8	2	4	37	16	330
Vehicles Entered	350	127	184	359	183	236	21	149	61	1670
Vehicles Exited	351	126	184	359	181	236	22	148	60	1667
Hourly Exit Rate	351	126	184	359	181	236	22	148	60	1667
Input Volume	353	121	185	379	189	238	20	143	62	1690
% of Volume	99	104	99	95	96	99	110	103	97	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

9: Vansittart Ave & Performance by movement

Movement	EBL	EBT	WBL	WBT	WBR	SBL2	SBR	All
Total Delay (hr)	0.8	0.2	0.0	0.3	0.0	0.3	0.2	1.8
Delay / Veh (s)	8.8	1.9	4.1	3.1	2.2	28.6	3.7	5.1
Total Stops	134	3	4	11	8	42	223	425
Travel Dist (km)	103.3	97.7	2.5	56.2	13.2	3.0	15.7	291.6
Travel Time (hr)	3.2	2.3	0.1	1.5	0.4	0.4	0.7	8.6
Avg Speed (kph)	32	42	33	38	35	7	21	34
Fuel Used (l)	9.3	9.0	0.2	3.8	0.7	0.4	0.8	24.2
HC Emissions (g)	28	28	0	8	2	0	1	68
CO Emissions (g)	872	853	5	192	30	14	29	1995
NOx Emissions (g)	94	94	1	25	4	1	3	221
Vehicles Entered	316	299	14	321	76	42	224	1292
Vehicles Exited	315	298	14	320	76	42	223	1288
Hourly Exit Rate	315	298	14	320	76	42	223	1288
Input Volume	328	289	15	345	77	41	219	1314
% of Volume	96	103	93	93	99	102	102	98
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

46: Springbank & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.0	2.9	0.7	1.2	2.9	0.1	0.7	2.7	0.2	0.4	1.8	0.4
Delay / Veh (s)	22.5	24.3	20.7	22.2	24.8	3.8	18.8	27.6	9.8	20.1	21.9	15.5
Total Stops	139	283	85	178	287	13	105	254	90	56	197	78
Travel Dist (km)	30.2	77.7	21.3	33.6	69.4	7.6	22.1	57.3	11.3	5.1	23.0	7.7
Travel Time (hr)	1.7	4.5	1.2	2.0	4.3	0.2	1.3	4.1	0.5	0.5	2.3	0.7
Avg Speed (kph)	18	17	18	17	16	34	17	14	27	10	10	11
Fuel Used (l)	2.7	7.3	1.8	3.1	6.8	0.4	3.2	9.1	1.5	0.6	3.0	0.8
HC Emissions (g)	4	14	3	4	11	1	9	23	8	0	5	2
CO Emissions (g)	99	371	67	115	313	16	381	829	249	22	154	36
NOx Emissions (g)	13	43	8	15	35	2	33	90	24	2	16	4
Vehicles Entered	162	426	114	200	413	56	133	345	83	67	301	102
Vehicles Exited	160	425	114	201	415	55	134	347	84	67	303	102
Hourly Exit Rate	160	425	114	201	415	55	134	347	84	67	303	102
Input Volume	154	423	113	206	413	53	136	354	80	60	298	105
% of Volume	104	100	101	98	100	104	99	98	105	112	102	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

46: Springbank & Performance by movement

Movement	All
Total Delay (hr)	14.9
Delay / Veh (s)	22.4
Total Stops	1765
Travel Dist (km)	366.4
Travel Time (hr)	23.4
Avg Speed (kph)	16
Fuel Used (l)	40.1
HC Emissions (g)	83
CO Emissions (g)	2650
NOx Emissions (g)	286
Vehicles Entered	2402
Vehicles Exited	2407
Hourly Exit Rate	2407
Input Volume	2395
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

Queuing and Blocking Report - DUNDAS CORRIDOR
Baseline

4/30/2010

Intersection: 1: Dundas St & Oxford St

Movement	EB	EB	WB	WB	NB	NB	B5	SB	SB	SB
Directions Served	T	TR	LT	T	L	R	T	L	T	R
Maximum Queue (m)	38.2	43.1	51.0	33.8	56.3	30.3	3.2	18.9	39.7	16.6
Average Queue (m)	21.8	20.9	23.3	15.6	27.9	13.5	0.1	4.3	19.7	7.2
95th Queue (m)	34.4	36.1	41.9	29.8	47.2	23.5	2.2	13.1	35.2	14.6
Link Distance (m)	154.0	154.0	308.8	308.8	44.5	44.5	108.6	156.8	156.8	156.8
Upstream Blk Time (%)					2	0				
Queuing Penalty (veh)					0	0				
Storage Bay Dist (m)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 9: Vansittart Ave &

Movement	EB	EB	WB	SB	SB
Directions Served	L	TR	LTR	<	R
Maximum Queue (m)	50.3	12.8	32.4	25.6	22.7
Average Queue (m)	18.8	0.8	5.2	7.5	12.5
95th Queue (m)	36.8	5.8	18.6	17.4	19.6
Link Distance (m)	308.8	308.8	158.0		56.0
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				49.0	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report - DUNDAS CORRIDOR
Baseline

4/30/2010

Intersection: 46: Springbank &

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	T	R	L	T
Maximum Queue (m)	48.2	56.7	68.8	49.3	56.7	61.3	48.8	44.3	110.5	40.9	30.3	54.2
Average Queue (m)	23.2	30.7	39.1	26.0	26.6	31.1	4.2	18.4	50.7	6.2	11.7	22.2
95th Queue (m)	43.3	50.9	59.4	43.3	45.0	51.0	26.5	32.8	92.5	30.3	24.0	43.5
Link Distance (m)		176.7	176.7		156.7	156.7		165.2	165.2			65.6
Upstream Blk Time (%)												0
Queuing Penalty (veh)												0
Storage Bay Dist (m)	48.0			52.0			40.0			35.0	60.0	
Storage Blk Time (%)	0	1		0	0	3			20	0		0
Queuing Penalty (veh)	1	1		0	1	2			16	0		0

Intersection: 46: Springbank &

Movement	SB
Directions Served	TR
Maximum Queue (m)	58.9
Average Queue (m)	31.4
95th Queue (m)	51.7
Link Distance (m)	65.6
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

4: Main & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.0	0.3	0.1	0.1	0.3	0.0	0.1	0.3	0.0	0.0	0.4	0.0
Delay / Veh (s)	4.8	6.7	2.6	5.0	7.1	3.6	4.5	6.0	3.6	4.4	7.7	4.4
Total Stops	32	156	109	59	161	29	59	208	50	7	204	26
Travel Dist (km)	1.3	6.4	2.8	3.4	9.8	1.7	1.6	5.6	1.4	0.3	9.6	1.2
Travel Time (hr)	0.1	0.4	0.2	0.2	0.5	0.1	0.1	0.5	0.1	0.0	0.6	0.1
Avg Speed (kph)	16	15	17	19	19	19	13	12	12	17	15	16
Fuel Used (l)	0.1	0.5	0.2	0.2	0.5	0.1	0.1	0.5	0.1	0.0	0.7	0.1
HC Emissions (g)	0	1	0	0	1	0	0	0	0	0	1	0
CO Emissions (g)	2	19	8	4	17	3	3	14	5	0	19	2
NOx Emissions (g)	0	2	1	0	2	0	0	2	0	0	2	0
Vehicles Entered	32	156	109	59	161	29	58	207	50	7	204	26
Vehicles Exited	32	156	109	59	162	29	59	208	50	7	204	26
Hourly Exit Rate	32	156	109	59	162	29	59	208	50	7	204	26
Input Volume	33	151	105	63	167	29	60	209	49	7	209	23
% of Volume	97	103	104	94	97	100	98	100	102	100	98	113
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Main & Performance by movement

Movement	All
Total Delay (hr)	1.8
Delay / Veh (s)	5.8
Total Stops	1100
Travel Dist (km)	45.2
Travel Time (hr)	2.9
Avg Speed (kph)	16
Fuel Used (l)	3.1
HC Emissions (g)	3
CO Emissions (g)	97
NOx Emissions (g)	10
Vehicles Entered	1098
Vehicles Exited	1101
Hourly Exit Rate	1101
Input Volume	1105
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

17: Peel & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.3	0.6	0.1	0.1	0.5	0.1	0.2	0.8	0.1	0.2	0.7	0.1
Delay / Veh (s)	20.8	13.9	6.9	17.5	13.6	6.9	18.4	13.4	7.5	23.2	14.8	8.2
Total Stops	39	89	24	13	74	25	25	110	16	23	84	26
Travel Dist (km)	2.4	8.4	2.2	1.2	8.4	2.4	1.2	7.5	1.0	1.4	8.1	2.1
Travel Time (hr)	0.4	0.8	0.2	0.1	0.7	0.2	0.2	0.9	0.1	0.2	0.9	0.2
Avg Speed (kph)	7	10	14	9	12	15	6	8	10	6	9	12
Fuel Used (l)	0.4	1.1	0.2	0.1	1.0	0.2	0.2	1.2	0.1	0.2	1.2	0.2
HC Emissions (g)	0	1	0	0	1	0	0	1	0	0	2	0
CO Emissions (g)	9	50	8	3	43	6	9	40	6	6	73	7
NOx Emissions (g)	1	5	1	0	5	1	1	5	1	1	7	1
Vehicles Entered	49	168	44	20	141	40	35	206	29	30	173	46
Vehicles Exited	50	167	44	20	141	41	35	206	29	30	173	46
Hourly Exit Rate	50	167	44	20	141	41	35	206	29	30	173	46
Input Volume	45	165	44	21	142	38	34	207	30	28	175	47
% of Volume	111	101	100	95	99	108	103	100	97	107	99	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Peel & Performance by movement

Movement	All
Total Delay (hr)	3.7
Delay / Veh (s)	13.7
Total Stops	548
Travel Dist (km)	46.4
Travel Time (hr)	4.9
Avg Speed (kph)	9
Fuel Used (l)	6.2
HC Emissions (g)	8
CO Emissions (g)	261
NOx Emissions (g)	28
Vehicles Entered	981
Vehicles Exited	982
Hourly Exit Rate	982
Input Volume	976
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

Baseline

22: Dundas & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.2	1.2	0.1	0.1	1.3	0.1	0.1	0.7	0.1	0.5	0.6	0.1
Delay / Veh (s)	23.6	13.5	7.1	20.9	12.6	7.8	14.1	11.8	6.7	20.9	11.1	7.6
Total Stops	30	149	17	20	145	20	26	120	27	61	78	17
Travel Dist (km)	1.2	10.8	1.3	0.7	10.8	1.4	1.5	10.0	2.2	4.7	9.6	1.8
Travel Time (hr)	0.3	1.4	0.1	0.2	1.5	0.2	0.2	0.9	0.2	0.7	0.8	0.1
Avg Speed (kph)	4	8	10	4	7	9	9	11	13	7	12	13
Fuel Used (l)	0.3	2.0	0.2	0.2	2.2	0.2	0.2	1.4	0.2	0.8	1.2	0.2
HC Emissions (g)	0	3	0	0	3	1	0	2	0	1	2	0
CO Emissions (g)	7	79	7	5	90	13	8	66	8	28	78	9
NOx Emissions (g)	1	11	1	0	13	2	1	8	1	3	7	1
Vehicles Entered	36	308	38	24	366	48	32	217	48	93	188	35
Vehicles Exited	36	308	38	24	366	48	32	217	49	93	188	35
Hourly Exit Rate	36	308	38	24	366	48	32	217	49	93	188	35
Input Volume	34	313	40	25	360	43	34	207	49	97	185	36
% of Volume	106	98	95	96	102	112	94	105	100	96	102	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

22: Dundas & Performance by movement

Movement	All
Total Delay (hr)	5.1
Delay / Veh (s)	12.8
Total Stops	710
Travel Dist (km)	56.1
Travel Time (hr)	6.5
Avg Speed (kph)	9
Fuel Used (l)	8.9
HC Emissions (g)	13
CO Emissions (g)	396
NOx Emissions (g)	49
Vehicles Entered	1433
Vehicles Exited	1434
Hourly Exit Rate	1434
Input Volume	1423
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

Baseline

32: Princess St & Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.2	0.3	0.2	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.5	0.1
Delay / Veh (s)	20.2	18.8	8.6	25.0	16.5	7.0	8.2	4.0	1.3	14.2	10.6	5.3
Total Stops	20	37	56	4	16	5	26	40	6	11	85	27
Travel Dist (km)	3.3	6.6	8.8	1.0	5.2	1.5	2.2	7.8	0.9	0.7	8.2	2.5
Travel Time (hr)	0.3	0.5	0.5	0.1	0.2	0.1	0.2	0.4	0.0	0.1	0.7	0.2
Avg Speed (kph)	12	14	18	17	21	27	12	21	21	9	12	15
Fuel Used (l)	0.6	1.2	1.3	0.1	0.7	0.2	0.3	0.8	0.1	0.1	1.0	0.2
HC Emissions (g)	2	3	4	0	4	0	0	2	0	0	2	0
CO Emissions (g)	60	127	155	14	109	21	10	65	2	3	49	6
NOx Emissions (g)	6	12	15	1	11	1	1	7	0	0	6	1
Vehicles Entered	29	60	80	5	27	8	55	195	23	15	176	55
Vehicles Exited	30	60	80	5	27	8	55	195	23	15	177	54
Hourly Exit Rate	30	60	80	5	27	8	55	195	23	15	177	54
Input Volume	29	59	80	7	28	8	55	185	20	16	175	51
% of Volume	103	102	100	71	96	100	100	105	115	94	101	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

32: Princess St & Performance by movement

Movement	All
Total Delay (hr)	1.9
Delay / Veh (s)	9.1
Total Stops	333
Travel Dist (km)	48.9
Travel Time (hr)	3.2
Avg Speed (kph)	15
Fuel Used (l)	6.4
HC Emissions (g)	17
CO Emissions (g)	620
NOx Emissions (g)	62
Vehicles Entered	728
Vehicles Exited	729
Hourly Exit Rate	729
Input Volume	713
% of Volume	102
Denied Entry Before	0
Denied Entry After	0

Queuing and Blocking Report - WELLINGTON CORRIDOR
Baseline

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Intersection: 4: Main &

Movement	EB	EB	EB	WB	WB	NB	NB	B5	SB	SB
Directions Served	L	T	R	L	TR	L	TR	T	L	TR
Maximum Queue (m)	13.2	28.7	22.3	15.3	23.5	13.3	27.9	4.2	8.1	29.2
Average Queue (m)	4.8	12.2	2.2	6.4	9.4	8.4	15.9	0.1	1.6	15.5
95th Queue (m)	11.3	21.0	13.1	11.6	17.3	14.6	24.7	2.3	6.9	24.9
Link Distance (m)	30.6	30.6		46.4	46.4	17.6	17.6	19.0	34.6	34.6
Upstream Blk Time (%)		0				0	3	0		0
Queuing Penalty (veh)		0				0	0	0		0
Storage Bay Dist (m)			21.0							
Storage Blk Time (%)		1	0							
Queuing Penalty (veh)		1	0							

Intersection: 17: Peel &

Movement	EB	EB	B19	WB	WB	B18	NB	NB	B7	SB	SB	B8
Directions Served	L	TR	T	L	TR	T	L	TR	T	L	TR	T
Maximum Queue (m)	19.6	49.0	7.4	15.5	48.3	6.0	20.4	41.2	18.8	26.1	46.6	1.2
Average Queue (m)	8.8	21.4	0.2	3.5	19.8	0.4	6.7	23.7	1.6	6.4	21.1	0.0
95th Queue (m)	19.3	39.9	3.2	11.9	37.2	5.6	16.1	42.2	9.2	18.0	37.4	0.9
Link Distance (m)	39.6	39.6	57.8	48.6	48.6	141.8	25.2	25.2	185.1		36.4	35.3
Upstream Blk Time (%)		1			0		0	7		0	1	
Queuing Penalty (veh)		0			0		0	9		0	3	
Storage Bay Dist (m)										38.0		
Storage Blk Time (%)										0	1	
Queuing Penalty (veh)										0	0	

Queuing and Blocking Report - WELLINGTON CORRIDOR
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Intersection: 22: Dundas &

Movement	EB	EB	B24	WB	WB	B23	NB	NB	B8	SB	SB
Directions Served	L	TR	T	L	TR	T	L	TR	T	L	TR
Maximum Queue (m)	22.9	42.9	42.6	16.7	41.5	65.1	29.1	49.7	25.9	34.6	43.9
Average Queue (m)	7.4	33.4	9.2	5.3	31.0	19.0	6.7	27.6	1.4	13.3	19.5
95th Queue (m)	17.9	48.2	30.5	13.9	41.3	49.8	18.6	47.6	11.9	26.6	35.4
Link Distance (m)	23.9	23.9	73.6	18.0	18.0	97.6		35.3	36.4		40.3
Upstream Blk Time (%)	0	15		0	25		0	2	0	0	1
Queuing Penalty (veh)	0	0		0	0		0	6	0	0	2
Storage Bay Dist (m)							40.0			39.0	
Storage Blk Time (%)							0	2		0	1
Queuing Penalty (veh)							0	1		0	1

Intersection: 32: Princess St &

Movement	EB	WB	NB	NB	B31	SB	SB	B35
Directions Served	LTR	LTR	L	TR	T	L	TR	T
Maximum Queue (m)	52.4	25.6	20.5	28.9	1.1	16.6	47.4	4.1
Average Queue (m)	20.3	7.4	6.3	11.3	0.0	3.1	22.4	0.1
95th Queue (m)	39.2	18.4	15.7	24.2	0.8	11.2	41.3	2.2
Link Distance (m)	110.2	195.7		29.9	40.5		35.9	34.1
Upstream Blk Time (%)			0	0		0	2	
Queuing Penalty (veh)			0	1		0	0	
Storage Bay Dist (m)			30.0			38.0		
Storage Blk Time (%)			0	0		0	2	
Queuing Penalty (veh)			0	0		0	0	

18: Dundas & Huron Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.5	2.1	0.1	0.4	3.0	0.4	0.6	1.9	0.5	1.1	2.2	0.6
Delay / Veh (s)	20.6	17.5	3.6	18.4	24.9	18.6	25.0	24.2	17.6	26.5	30.6	25.3
Total Stops	87	257	48	65	329	61	88	209	79	140	213	80
Travel Dist (km)	5.0	25.4	4.0	11.1	63.1	11.7	6.7	21.4	7.6	9.7	17.7	6.1
Travel Time (hr)	0.6	2.6	0.2	0.7	4.6	0.8	0.8	2.4	0.8	1.3	2.6	0.8
Avg Speed (kph)	8	10	19	16	14	15	8	9	10	7	7	7
Fuel Used (l)	0.8	4.1	0.3	1.6	9.8	1.7	0.9	3.1	0.9	1.4	3.2	0.9
HC Emissions (g)	1	6	1	5	27	6	1	4	2	1	5	1
CO Emissions (g)	30	184	22	209	886	179	32	156	43	41	130	35
NOx Emissions (g)	4	25	3	18	103	20	3	15	5	4	16	4
Vehicles Entered	84	433	70	76	433	80	91	285	101	143	260	91
Vehicles Exited	84	433	70	76	435	81	91	287	102	143	258	90
Hourly Exit Rate	84	433	70	76	435	81	91	287	102	143	258	90
Input Volume	83	442	71	80	432	76	88	287	99	149	262	88
% of Volume	101	98	99	95	101	107	103	100	103	96	98	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: Dundas & Huron Performance by movement

Movement	All
Total Delay (hr)	13.4
Delay / Veh (s)	22.5
Total Stops	1656
Travel Dist (km)	189.7
Travel Time (hr)	18.2
Avg Speed (kph)	10
Fuel Used (l)	28.7
HC Emissions (g)	60
CO Emissions (g)	1946
NOx Emissions (g)	220
Vehicles Entered	2147
Vehicles Exited	2150
Hourly Exit Rate	2150
Input Volume	2157
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

24: Peel & Wilson Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.3	0.4	0.1	0.1	0.2	0.0	0.2	1.3	0.2	0.1	0.8	0.1
Delay / Veh (s)	16.9	14.0	3.6	18.8	13.1	4.3	16.6	11.8	7.0	17.1	8.4	5.6
Total Stops	40	52	44	21	34	12	27	195	50	9	134	34
Travel Dist (km)	3.7	5.8	3.7	1.7	3.8	1.2	3.1	31.9	7.3	0.4	13.4	2.9
Travel Time (hr)	0.4	0.5	0.2	0.2	0.3	0.1	0.3	2.0	0.4	0.1	1.0	0.2
Avg Speed (kph)	10	12	20	9	12	19	12	16	18	7	13	13
Fuel Used (l)	0.5	0.7	0.2	0.2	0.4	0.1	0.3	3.1	0.5	0.1	1.6	0.2
HC Emissions (g)	0	2	0	0	1	0	0	6	1	0	3	0
CO Emissions (g)	15	45	12	9	22	2	9	171	28	2	88	8
NOx Emissions (g)	2	5	1	1	3	0	1	21	4	0	10	1
Vehicles Entered	61	94	61	28	62	20	39	401	91	11	323	69
Vehicles Exited	61	95	61	28	62	20	38	397	91	11	322	69
Hourly Exit Rate	61	95	61	28	62	20	38	397	91	11	322	69
Input Volume	57	96	64	29	58	20	41	397	83	11	339	63
% of Volume	107	99	95	97	107	100	93	100	110	100	95	110
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

24: Peel & Wilson Performance by movement

Movement	All
Total Delay (hr)	3.7
Delay / Veh (s)	10.5
Total Stops	652
Travel Dist (km)	79.0
Travel Time (hr)	5.6
Avg Speed (kph)	14
Fuel Used (l)	7.9
HC Emissions (g)	15
CO Emissions (g)	409
NOx Emissions (g)	49
Vehicles Entered	1260
Vehicles Exited	1255
Hourly Exit Rate	1255
Input Volume	1258
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

28: Hounsfield & Wilson Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.5	0.1	0.7	0.8	0.1	0.2	2.0	0.4	0.1	1.2	0.0
Delay / Veh (s)	19.7	16.4	7.7	20.3	15.7	8.8	20.0	14.4	10.1	21.6	11.4	7.4
Total Stops	12	68	16	90	97	13	26	263	76	8	174	13
Travel Dist (km)	1.1	6.9	1.5	8.1	11.4	1.4	3.8	59.3	16.3	0.9	34.0	2.0
Travel Time (hr)	0.1	0.7	0.1	0.9	1.0	0.1	0.3	3.2	0.8	0.1	1.9	0.1
Avg Speed (kph)	8	10	14	9	11	14	14	18	20	10	18	19
Fuel Used (l)	0.1	0.9	0.1	1.1	1.4	0.1	0.3	5.2	1.2	0.1	3.0	0.1
HC Emissions (g)	0	1	0	1	3	0	0	10	2	0	6	1
CO Emissions (g)	4	35	5	40	72	3	10	266	47	2	162	11
NOx Emissions (g)	0	3	1	5	8	0	1	33	6	0	20	1
Vehicles Entered	18	117	25	123	173	21	32	491	136	10	378	23
Vehicles Exited	18	119	26	124	174	21	32	490	135	10	378	23
Hourly Exit Rate	18	119	26	124	174	21	32	490	135	10	378	23
Input Volume	17	119	25	127	171	19	36	484	135	11	393	28
% of Volume	106	100	104	98	102	111	89	101	100	91	96	82
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

28: Hounsfield & Wilson Performance by movement

Movement	All
Total Delay (hr)	6.0
Delay / Veh (s)	14.0
Total Stops	856
Travel Dist (km)	146.8
Travel Time (hr)	9.4
Avg Speed (kph)	16
Fuel Used (l)	13.7
HC Emissions (g)	24
CO Emissions (g)	658
NOx Emissions (g)	79
Vehicles Entered	1547
Vehicles Exited	1550
Hourly Exit Rate	1550
Input Volume	1565
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

34: Cedar & Norwich Performance by movement

Movement	SEL	SET	NWT	NWR	SWL	SWR	All
Total Delay (hr)	0.0	0.2	0.2	0.0	0.2	0.0	0.5
Delay / Veh (s)	3.2	1.1	0.9	0.5	34.0	3.5	1.6
Total Stops	3	36	45	3	19	11	117
Travel Dist (km)	0.6	27.4	19.4	0.8	0.4	0.2	48.8
Travel Time (hr)	0.0	0.7	0.6	0.0	0.2	0.0	1.6
Avg Speed (kph)	22	37	34	22	2	10	31
Fuel Used (l)	0.0	2.0	1.5	0.0	0.2	0.0	3.8
HC Emissions (g)	0	5	3	0	0	0	8
CO Emissions (g)	2	97	72	1	3	0	175
NOx Emissions (g)	0	14	11	0	0	0	26
Vehicles Entered	11	529	634	27	20	11	1232
Vehicles Exited	11	528	633	27	20	11	1230
Hourly Exit Rate	11	528	633	27	20	11	1230
Input Volume	11	546	630	24	20	8	1239
% of Volume	100	97	100	112	100	138	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Queuing and Blocking Report - WILSON CORRIDOR
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Intersection: 18: Dundas & Huron

Movement	EB	EB	EB	B20	WB	WB	NB	NB	NB	SB	SB	B13
Directions Served	L	T	R	T	L	TR	L	T	TR	L	TR	T
Maximum Queue (m)	44.3	63.8	44.5	59.1	52.3	129.1	43.0	48.9	51.2	70.0	75.1	10.5
Average Queue (m)	15.3	48.3	11.3	8.5	12.8	68.7	15.3	20.4	27.8	24.3	48.1	0.3
95th Queue (m)	38.2	71.5	34.3	33.4	33.6	116.4	31.0	37.9	45.8	48.6	75.1	4.6
Link Distance (m)		46.8		95.8	145.1	145.1		61.8	61.8	57.9	57.9	272.9
Upstream Blk Time (%)	0	8	0		0	0		0	0	1	7	
Queuing Penalty (veh)	0	0	0		0	0		0	0	0	0	
Storage Bay Dist (m)	45.0		45.0				60.0					
Storage Blk Time (%)	0	9	0					0				
Queuing Penalty (veh)	0	14	1					0				

Intersection: 18: Dundas & Huron

Movement	B13
Directions Served	T
Maximum Queue (m)	45.7
Average Queue (m)	3.7
95th Queue (m)	22.3
Link Distance (m)	272.9
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Peel & Wilson

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB	B15
Directions Served	L	T	R	L	TR	LT	TR	LT	TR	T
Maximum Queue (m)	25.4	31.4	17.4	17.8	23.2	50.1	54.0	33.0	39.8	1.4
Average Queue (m)	9.2	12.8	10.2	5.7	9.5	21.5	22.7	13.5	18.8	0.0
95th Queue (m)	20.2	25.9	20.0	15.0	20.2	43.7	47.3	28.3	34.1	1.0
Link Distance (m)		50.7			51.6	67.0	67.0	30.9	30.9	61.8
Upstream Blk Time (%)						0		0	1	
Queuing Penalty (veh)						0		1	3	
Storage Bay Dist (m)	50.0		13.0	43.0						
Storage Blk Time (%)		8	1							
Queuing Penalty (veh)		10	2							

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Intersection: 28: Hounsfield & Wilson

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (m)	12.7	42.2	45.3	52.5	56.1	62.9	36.6	41.8
Average Queue (m)	3.6	17.7	18.2	22.3	29.9	32.3	16.0	20.2
95th Queue (m)	11.2	33.1	34.6	41.7	47.6	52.6	32.1	37.3
Link Distance (m)		49.2		55.9	111.9	111.9	79.3	79.3
Upstream Blk Time (%)		0	0	0				
Queuing Penalty (veh)		0	0	0				
Storage Bay Dist (m)	39.0		50.0					
Storage Blk Time (%)		0	0	0				
Queuing Penalty (veh)		0	0	0				

Intersection: 34: Cedar & Norwich

Movement	SE	SE	NW	NW	B38	B38	SW	SW
Directions Served	LT	T	T	TR	T	T	L	R
Maximum Queue (m)	17.5	27.8	23.0	30.6	135.8	44.7	16.0	9.9
Average Queue (m)	3.5	6.2	4.3	7.1	4.5	1.5	4.2	2.7
95th Queue (m)	13.1	20.4	15.8	22.5	56.2	31.5	12.1	9.3
Link Distance (m)	42.5	42.5	21.0	21.0	219.4	219.4	12.9	12.9
Upstream Blk Time (%)			0	1	0	0	3	0
Queuing Penalty (veh)			0	0	0	0	0	0
Storage Bay Dist (m)								
Storage Blk Time (%)								
Queuing Penalty (veh)								