

APPENDIX A

Intersection Analysis Reports

70: March Road /March Road & Second Line Road
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	69	82	18	20	16	15	8	286	51	15	113	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	0.0		0.0	35.0		0.0	35.0		30.0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (m)	7.5			7.5			80.0			80.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.960			0.977				0.850
Flt Protected		0.980			0.981		0.950			0.950		
Satd. Flow (prot)	0	1725	0	0	1687	0	1616	1658	0	1662	1733	1517
Flt Permitted		0.842			0.823		0.681			0.549		
Satd. Flow (perm)	0	1482	0	0	1415	0	1158	1658	0	961	1733	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			16			10				40
Link Speed (k/h)		50			70			80				80
Link Distance (m)		169.4			2437.7			322.8				966.0
Travel Time (s)		12.2			125.4			14.5				43.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	1%	6%	1%	2%	2%	7%	8%	3%	4%	5%	2%
Adj. Flow (vph)	73	86	19	21	17	16	8	301	54	16	119	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	54	0	8	355	0	16	119	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		9.0			9.0			9.0				9.0
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	22.4	22.4		26.4	26.4		25.9	25.9		25.9	25.9	25.9
Total Split (s)	56.4	56.4		56.4	56.4		35.9	35.9		35.9	35.9	35.9
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	38.9%
Maximum Green (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	30.0
Yellow Time (s)	4.6	4.6		4.6	4.6		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	1.8	1.8		1.8	1.8		2.2	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
Total Lost Time (s)		6.4			6.4		5.9	5.9		5.9	5.9	5.9
Lead/Lag												

70: March Road /March Road & Second Line Road
2013 Existing AM Peak

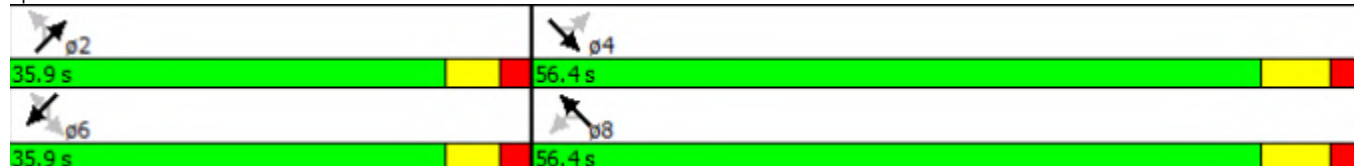
Kanata North CDP TMP
15/03/2013

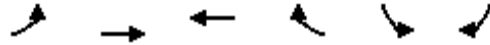
												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		9.0	9.0		9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		11.5			11.5		21.5	21.5		21.5	21.5	21.5
Actuated g/C Ratio		0.25			0.25		0.47	0.47		0.47	0.47	0.47
v/c Ratio		0.46			0.15		0.01	0.45		0.04	0.15	0.03
Control Delay		17.1			10.4		7.6	10.7		7.9	8.2	2.1
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		17.1			10.4		7.6	10.7		7.9	8.2	2.1
LOS		B			B		A	B		A	A	A
Approach Delay		17.1			10.4			10.7			7.4	
Approach LOS		B			B			B			A	

Intersection Summary

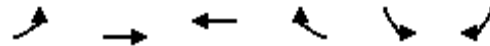
Area Type:	Other
Cycle Length: 92.3	
Actuated Cycle Length: 45.4	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 70: March Road /March Road & Second Line Road





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	47	304	58	143	437	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0			90.0	50.0	0.0
Storage Lanes	1			1	1	0
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt				0.850	0.988	
Flt Protected	0.950				0.956	
Satd. Flow (prot)	1729	1820	1750	1473	2727	0
Flt Permitted	0.717				0.956	
Satd. Flow (perm)	1305	1820	1750	1473	2727	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				151	14	
Link Speed (k/h)		80	80		48	
Link Distance (m)		374.8	177.0		195.2	
Travel Time (s)		16.9	8.0		14.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	4%	5%	24%	2%
Adj. Flow (vph)	49	320	61	151	460	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	320	61	151	499	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	0.0		8.4	
Link Offset(m)		0.0	1.5		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0	20.0	10.0	
Minimum Split (s)	26.3	26.3	26.3	26.3	22.3	
Total Split (s)	41.3	41.3	41.3	41.3	56.3	
Total Split (%)	42.3%	42.3%	42.3%	42.3%	57.7%	
Maximum Green (s)	35.0	35.0	35.0	35.0	50.0	
Yellow Time (s)	4.6	4.6	4.6	4.6	3.7	
All-Red Time (s)	1.7	1.7	1.7	1.7	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	
Lead/Lag						

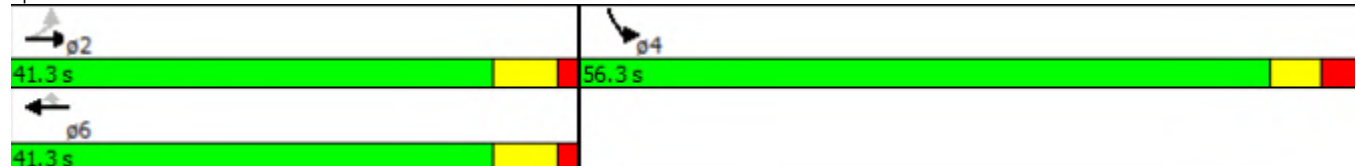


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Min	Min	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	9.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effect Green (s)	20.1	20.1	20.1	20.1	13.7	
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.30	
v/c Ratio	0.09	0.41	0.08	0.21	0.61	
Control Delay	9.6	11.9	9.3	3.2	17.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	9.6	11.9	9.3	3.2	17.1	
LOS	A	B	A	A	B	
Approach Delay		11.6	5.0		17.1	
Approach LOS		B	A		B	

Intersection Summary

Area Type:	Other
Cycle Length:	97.6
Actuated Cycle Length:	46.4
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	12.8
Intersection Capacity Utilization:	43.8%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	A

Splits and Phases: 68: March Road & Dunrobin Road



46: Halton Terrace/Maxwell Bridge Road & March Road
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	32	788	9	36	176	20	9	13	279	55	14	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	3.7	3.7	3.7	3.7
Storage Length (m)	40.0		10.0	80.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	60.0			50.0			30.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.857			0.916	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1616	3424	1381	1712	3424	1502	1586	1730	0	1729	1667	0
Flt Permitted	0.635			0.303			0.735			0.323		
Satd. Flow (perm)	1080	3424	1381	546	3424	1502	1227	1730	0	588	1667	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		294			19	
Link Speed (k/h)		80			80			40			50	
Link Distance (m)		118.9			239.9			116.9			761.3	
Travel Time (s)		5.4			10.8			10.5			54.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	1%	12%	1%	1%	3%	9%	2%	1%	0%	0%	0%
Adj. Flow (vph)	34	829	9	38	185	21	9	14	294	58	15	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	829	9	38	185	21	9	308	0	58	34	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			5.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.91	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	1	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.4	34.6	34.6	11.4	34.6	34.6	38.6	38.6		38.6	38.6	
Total Split (s)	20.0	52.0	52.0	20.0	52.0	52.0	48.0	48.0		48.0	48.0	
Total Split (%)	16.7%	43.3%	43.3%	16.7%	43.3%	43.3%	40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	13.6	45.4	45.4	13.6	45.4	45.4	41.4	41.4		41.4	41.4	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.8	2.0	2.0	1.8	2.0	2.0	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.6	6.6	6.4	6.6	6.6	6.6	6.6		6.6	6.6	

46: Halton Terrace/Maxwell Bridge Road & March Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	49.7	45.9	45.9	49.8	46.0	46.0	12.4	12.4		12.4	12.4	
Actuated g/C Ratio	0.63	0.58	0.58	0.63	0.58	0.58	0.16	0.16		0.16	0.16	
v/c Ratio	0.05	0.42	0.01	0.09	0.09	0.02	0.05	0.59		0.63	0.12	
Control Delay	5.0	11.3	0.0	5.3	9.1	0.1	30.6	10.1		63.4	19.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.0	11.3	0.0	5.3	9.1	0.1	30.6	10.1		63.4	19.7	
LOS	A	B	A	A	A	A	C	B		E	B	
Approach Delay		11.0			7.8			10.7			47.3	
Approach LOS		B			A			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 78.8

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 12.6

Intersection LOS: B

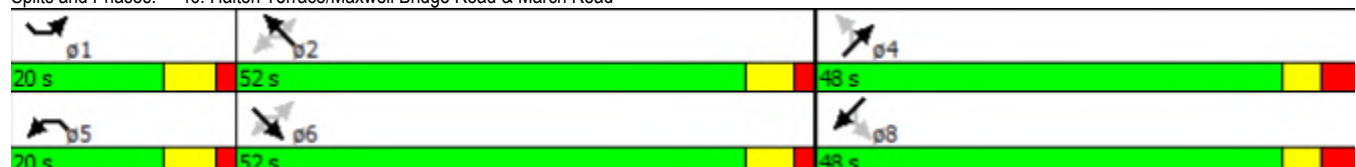
Intersection Capacity Utilization 75.3%

ICU Level of Service D

Analysis Period (min) 15

Description: Used Late AM Timings since peak hour of adjacent street traffic is 8-9

Splits and Phases: 46: Halton Terrace/Maxwell Bridge Road & March Road



33: Klondike Road & March Road
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	20	894		79	283	53	26	32	225	90	30	13
Ideal Flow (vphpl)	1800	1800		1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	100.0		0.0	0.0		0.0	15.0		0.0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (m)	70.0			100.0			7.5			30.0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.976			0.869			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1572	4852	0	3288	4747	0	1695	1451	0	1682	1586	0
Flt Permitted	0.950			0.950			0.475			0.593		
Satd. Flow (perm)	1572	4852	0	3288	4747	0	848	1451	0	1050	1586	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			32			237			14	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		242.2			599.2			131.9			200.6	
Travel Time (s)		10.9			27.0			9.5			14.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	2%	2%	2%	2%	3%	2%	16%	8%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	2	17	1
Adj. Flow (vph)	21	941	23	83	298	56	27	34	237	95	32	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	964	0	83	354	0	27	271	0	95	46	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		8.9			8.9			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.07	1.16	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases	1	6		5	2		7	4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0		5.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.2	32.5		11.2	32.5		12.1	44.1		44.1	44.1	
Total Split (s)	20.0	36.0		20.0	36.0		13.0	58.0		45.0	45.0	
Total Split (%)	17.5%	31.6%		17.5%	31.6%		11.4%	50.9%		39.5%	39.5%	
Maximum Green (s)	13.8	29.5		13.8	29.5		5.9	50.9		37.9	37.9	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.6	1.9		1.6	1.9		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.5		6.2	6.5		7.1	7.1		7.1	7.1	

33: Klondike Road & March Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag	Lead	Lead		Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		19.0			19.0			30.0		30.0	30.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	6.8	30.6		7.5	36.7		17.7	17.7		13.4	13.4	
Actuated g/C Ratio	0.09	0.42		0.10	0.50		0.24	0.24		0.18	0.18	
v/c Ratio	0.14	0.47		0.25	0.15		0.10	0.51		0.49	0.15	
Control Delay	38.3	19.1		36.1	12.8		21.3	8.4		39.6	22.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.3	19.1		36.1	12.8		21.3	8.4		39.6	22.9	
LOS	D	B		D	B		C	A		D	C	
Approach Delay		19.5			17.2			9.5			34.1	
Approach LOS		B			B			A			C	

Intersection Summary

Area Type: Other

Cycle Length: 114

Actuated Cycle Length: 73.1

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 18.5

Intersection LOS: B

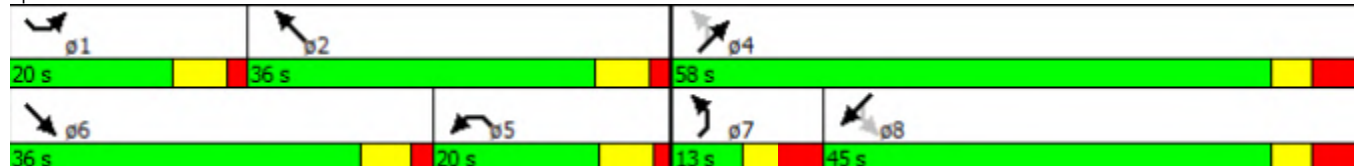
Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

Description: Used Late AM timings since peak hour of adjacent street traffic is 8-9

Splits and Phases: 33: Klondike Road & March Road



37: Morgan's Grant Way & March Road
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	55	986	7	45	378	18	10	25	139	127	9	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		35.0	90.0		35.0	0.0		25.0	30.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	35.0			70.0			7.5			40.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.985		0.950		
Satd. Flow (prot)	1695	4824	1502	1712	4824	1547	0	1709	1517	1712	1733	1532
Flt Permitted	0.507			0.245				0.917		0.733		
Satd. Flow (perm)	905	4824	1502	441	4824	1547	0	1590	1517	1321	1733	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98			98			146			91
Link Speed (k/h)		80			80			40			48	
Link Distance (m)		599.2			307.3			460.2			508.2	
Travel Time (s)		27.0			13.8			41.4			38.1	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	3%	1%	3%	0%	0%	7%	2%	1%	5%	1%
Adj. Flow (vph)	58	1038	7	47	398	19	11	26	146	134	9	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1038	7	47	398	19	0	37	146	134	9	27
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	26.5	26.5	11.5	26.5	26.5	33.3	33.3	33.3	33.3	33.3	33.3
Total Split (s)	18.0	66.0	66.0	18.0	66.0	66.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	15.0%	55.0%	55.0%	15.0%	55.0%	55.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Maximum Green (s)	11.5	59.5	59.5	11.5	59.5	59.5	28.7	28.7	28.7	28.7	28.7	28.7
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.9	1.9	1.9	1.9	1.9	1.9	4.3	4.3	4.3	4.3	4.3	4.3
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

37: Morgan's Grant Way & March Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5		7.3	7.3	7.3	7.3	7.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	19.0	19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	66.8	61.5	61.5	66.4	61.3	61.3		15.7	15.7	15.7	15.7	15.7
Actuated g/C Ratio	0.66	0.61	0.61	0.66	0.61	0.61		0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.09	0.35	0.01	0.13	0.14	0.02		0.15	0.41	0.65	0.03	0.09
Control Delay	5.9	11.6	0.0	6.4	10.1	0.1		38.3	9.9	56.0	36.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	11.6	0.0	6.4	10.1	0.1		38.3	9.9	56.0	36.1	0.5
LOS	A	B	A	A	B	A		D	A	E	D	A
Approach Delay		11.3			9.3			15.6			46.2	
Approach LOS		B			A			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 101.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 14.3

Intersection LOS: B

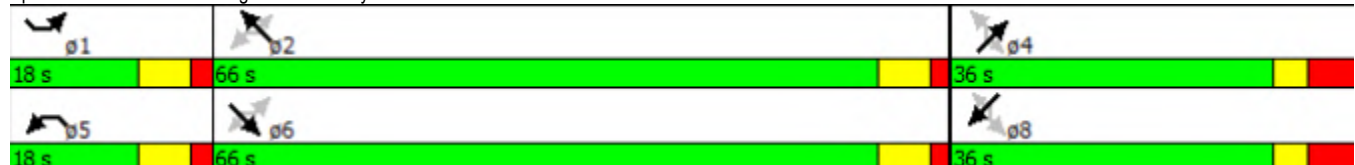
Intersection Capacity Utilization 55.5%

ICU Level of Service B

Analysis Period (min) 15

Description: Used Late AM timings since peak hour of adjacent street traffic is 8-9

Splits and Phases: 37: Morgan's Grant Way & March Road



31: Terry Fox Drive & March Road
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	193	914	48	157	408	91	141	643	212	68	33	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		80.0	175.0		50.0	80.0		60.0	70.0		50.0
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (m)	85.0			55.0			70.0			30.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98						0.98			0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	4871	1517	3288	4824	1502	3257	3390	1502	3257	3390	1517
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1712	4871	1492	3288	4824	1502	3257	3390	1470	3257	3390	1497
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			160			223			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		307.3			294.7			204.8			240.1	
Travel Time (s)		13.8			13.3			12.3			14.4	
Confl. Bikes (#/hr)			5						14			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	2%	2%	3%	3%	3%	2%	3%	3%	2%	2%
Adj. Flow (vph)	203	962	51	165	429	96	148	677	223	72	35	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	962	51	165	429	96	148	677	223	72	35	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			8.9			8.9			8.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	28.6	28.6	11.8	28.6	28.6	11.7	36.1	36.1	11.7	36.1	36.1
Total Split (s)	15.0	36.0	36.0	15.0	36.0	36.0	23.0	46.0	46.0	23.0	46.0	46.0
Total Split (%)	12.5%	30.0%	30.0%	12.5%	30.0%	30.0%	19.2%	38.3%	38.3%	19.2%	38.3%	38.3%
Maximum Green (s)	8.2	29.4	29.4	8.2	29.4	29.4	16.3	38.9	38.9	16.3	38.9	38.9
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.2	2.0	2.0	3.4	3.8	3.8	3.4	3.8	3.8
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

31: Terry Fox Drive & March Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Lost Time (s)	6.8	6.6	6.6	6.8	6.6	6.6	6.7	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		22.0	22.0		22.0	22.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	8.4	30.1	30.1	8.1	29.9	29.9	17.9	25.1	25.1	7.6	19.5	19.5
Actuated g/C Ratio	0.09	0.32	0.32	0.08	0.31	0.31	0.19	0.26	0.26	0.08	0.20	0.20
v/c Ratio	1.36	0.63	0.09	0.59	0.28	0.17	0.24	0.76	0.41	0.28	0.05	0.05
Control Delay	236.0	32.0	0.3	54.1	27.5	1.1	39.7	38.8	6.2	47.3	29.5	0.2
Queue Delay	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 Delay	236.0	32.0	0.3	54.1	27.5	1.1	39.7	38.8	6.2	47.3	29.5	0.2
LOS	F	C	A	D	C	A	D	D	A	D	C	A
Approach Delay		64.8			30.2			32.0			34.7	
Approach LOS		E			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 95.5

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.36

Intersection Signal Delay: 44.6

Intersection LOS: D

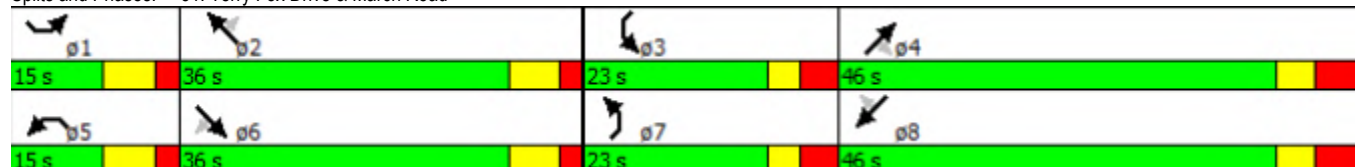
Intersection Capacity Utilization 73.5%

ICU Level of Service D

Analysis Period (min) 15

Description: Used Other AM timings since peak hour of adjacent street traffic is 8-9

Splits and Phases: 31: Terry Fox Drive & March Road



49: Terry Fox Drive & Second Line Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	156	228	89	576	237	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0	0.0	60.0			115.0
Storage Lanes	1	1	1			1
Taper Length (m)	50.0		80.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98				
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1517	1679	1701	1701	1532
Flt Permitted	0.950		0.565			
Satd. Flow (perm)	1694	1482	998	1701	1701	1532
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		240				27
Link Speed (k/h)	50			60	60	
Link Distance (m)	421.7			207.4	794.3	
Travel Time (s)	30.4			12.4	47.7	
Confl. Peds. (#/hr)	4	1				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	3%	7%	7%	1%
Adj. Flow (vph)	164	240	94	606	249	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	164	240	94	606	249	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	8.0			8.0	8.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				CI+Ex	CI+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	20.0	20.0	20.0
Minimum Split (s)	26.9	26.9	14.0	26.9	28.0	28.0
Total Split (s)	30.0	30.0	15.0	80.0	65.0	65.0
Total Split (%)	27.3%	27.3%	13.6%	72.7%	59.1%	59.1%
Maximum Green (s)	24.1	24.1	11.0	74.1	59.0	59.0
Yellow Time (s)	4.6	4.6	3.5	4.6	3.3	3.3
All-Red Time (s)	1.3	1.3	0.5	1.3	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0

49: Terry Fox Drive & Second Line Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Total Lost Time (s)	5.9	5.9	4.0	5.9	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	14.6	14.6	72.4	70.4	59.6	59.6
Actuated g/C Ratio	0.15	0.15	0.75	0.73	0.61	0.61
v/c Ratio	0.64	0.56	0.12	0.49	0.24	0.03
Control Delay	51.1	10.5	4.2	7.7	10.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	10.5	4.2	7.7	10.8	4.0
LOS	D	B	A	A	B	A
Approach Delay	27.0			7.2	10.2	
Approach LOS	C			A	B	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 97

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 13.6

Intersection LOS: B

Intersection Capacity Utilization 51.2%

ICU Level of Service A

Analysis Period (min) 15

Description: Used Late AM timings since peak hour of adjacent street traffic is 8-9

Splits and Phases: 49: Terry Fox Drive & Second Line Road



38: Terry Fox Drive & Innovation Drive/Flamborough Way
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	188	58	41	24	12	15	26	506	241	60	84	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	4.8	4.8	3.7	4.8	4.8	3.7	3.7	3.7	3.7	3.7	3.7
Storage Length (m)	40.0		0.0	40.0		0.0	115.0		115.0	125.0		125.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	50.0			50.0			85.0			65.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99	0.99		1.00					0.97
Frt		0.938			0.917				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1862	0	1631	1691	0	1695	1784	1459	1631	1784	1517
Flt Permitted	0.385			0.976			0.700			0.404		
Satd. Flow (perm)	684	1862	0	1664	1691	0	1243	1784	1459	694	1784	1479
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			16				254			95
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		412.5			314.2			794.3			450.2	
Travel Time (s)		37.1			28.3			47.7			27.0	
Confl. Peds. (#/hr)	2		4	4		2	3					3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	1%	6%	13%	6%	2%	2%	6%	6%	2%	2%
Adj. Flow (vph)	198	61	43	25	13	16	27	533	254	63	88	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	198	104	0	25	29	0	27	533	254	63	88	40
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	0.91	0.91	1.06	0.91	0.91	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	11.3	34.3		11.3	34.3		38.1	38.1	38.1	38.1	38.1	38.1
Total Split (s)	15.0	34.3		15.0	34.3		61.0	61.0	61.0	61.0	61.0	61.0
Total Split (%)	13.6%	31.1%		13.6%	31.1%		55.3%	55.3%	55.3%	55.3%	55.3%	55.3%
Maximum Green (s)	8.7	28.0		8.7	28.0		54.9	54.9	54.9	54.9	54.9	54.9
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	1.7		1.7	1.7		2.8	2.8	2.8	2.8	2.8	2.8

38: Terry Fox Drive & Innovation Drive/Flamborough Way
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		21.0			21.0		25.0	25.0	25.0	25.0	25.0	25.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	14.1	10.9		10.7	10.5		56.6	56.6	56.6	56.6	56.6	56.6
Actuated g/C Ratio	0.17	0.13		0.13	0.12		0.67	0.67	0.67	0.67	0.67	0.67
v/c Ratio	0.87	0.39		0.12	0.13		0.03	0.45	0.24	0.14	0.07	0.04
Control Delay	67.5	30.2		28.2	24.1		7.3	9.8	1.8	8.3	7.0	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	30.2		28.2	24.1		7.3	9.8	1.8	8.3	7.0	0.1
LOS	E	C		C	C		A	A	A	A	A	A
Approach Delay		54.7			26.0			7.2			6.0	
Approach LOS		D			C			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 110.3

Actuated Cycle Length: 85

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 78.6%

ICU Level of Service D

Analysis Period (min) 15

Description: Used Late AM timings since peak hour of adjacent street traffic is 8-9

Splits and Phases: 38: Terry Fox Drive & Innovation Drive/Flamborough Way

		
61 s	11 s	34.3 s
		
61 s	11 s	34.3 s

64: Terry Fox Drive & March Valley Road
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	394	6	11	129	26	5	1	3	198	0	27
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	14	415	6	12	136	27	5	1	3	208	0	28
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	163			421			646	632	418	622	621	149
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	163			421			646	632	418	622	621	149
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	100	100	47	100	97
cM capacity (veh/h)	1428			1138			367	393	633	393	398	902
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	435	175	9	237								
Volume Left	14	12	5	208								
Volume Right	6	27	3	28								
cSH	1428	1138	430	422								
Volume to Capacity	0.01	0.01	0.02	0.56								
Queue Length 95th (m)	0.2	0.2	0.5	25.5								
Control Delay (s)	0.3	0.6	13.6	23.9								
Lane LOS	A	A	B	C								
Approach Delay (s)	0.3	0.6	13.6	23.9								
Approach LOS			B	C								
Intersection Summary												
Average Delay			7.1									
Intersection Capacity Utilization			52.7%		ICU Level of Service				A			
Analysis Period (min)			15									

34: Second Line Road & Klondike Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	23	236	45	40	83	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	24	248	47	42	87	6
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total (vph)	273	89	94			
Volume Left (vph)	24	0	87			
Volume Right (vph)	0	42	6			
Hadj (s)	0.05	-0.22	0.22			
Departure Headway (s)	4.3	4.2	4.9			
Degree Utilization, x	0.32	0.10	0.13			
Capacity (veh/h)	812	818	677			
Control Delay (s)	9.3	7.7	8.6			
Approach Delay (s)	9.3	7.7	8.6			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.9			
Level of Service			A			
Intersection Capacity Utilization			33.0%	ICU Level of Service	A	
Analysis Period (min)			15			

77: Klondike Road & Weatherston Street
2013 Existing AM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	0	0	18	1	18	1	146	44	55	40	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	4.8	3.7	3.7	3.7
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	45.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			40.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor								0.99		1.00		
Frt					0.857			0.965			0.997	
Flt Protected		0.950		0.950			0.950			0.950		
Satd. Flow (prot)	0	1729	0	1662	1493	0	1517	1894	0	1679	3283	0
Flt Permitted							0.728			0.542		
Satd. Flow (perm)	0	1820	0	1750	1493	0	1162	1894	0	954	3283	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					19			23			1	
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		101.0			84.9			80.9			131.9	
Travel Time (s)		7.6			6.4			5.8			9.5	
Confl. Peds. (#/hr)									3	3		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	14%	4%	13%	4%	14%	4%	1%	3%	5%	6%
Adj. Flow (vph)	17	0	0	19	1	19	1	154	46	58	42	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	19	20	0	1	200	0	58	43	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.91	0.91	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		25.8	25.8		10.8	25.8	
Total Split (s)	30.0	30.0		30.0	30.0		25.8	25.8		11.0	35.0	
Total Split (%)	44.9%	44.9%		44.9%	44.9%		38.6%	38.6%		16.5%	52.4%	
Maximum Green (s)	24.0	24.0		24.0	24.0		20.0	20.0		5.2	29.2	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.1	2.1		2.1	2.1	

77: Klondike Road & Weatherston Street
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		10.0		10.0	10.0		38.3	38.3		39.0	42.6	
Actuated g/C Ratio		0.20		0.20	0.20		0.75	0.75		0.76	0.84	
v/c Ratio		0.05		0.06	0.06		0.00	0.14		0.07	0.02	
Control Delay		17.8		17.9	10.2		10.0	7.1		3.8	3.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		17.8		17.9	10.2		10.0	7.1		3.8	3.5	
LOS		B		B	B		A	A		A	A	
Approach Delay		17.8			13.9			7.1			3.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 66.8

Actuated Cycle Length: 51

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.14

Intersection Signal Delay: 7.4

Intersection LOS: A

Intersection Capacity Utilization 56.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 77: Klondike Road & Weatherston Street



						
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	208	18	1	11	2	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	219	19	1	12	2	26
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			238		242	228
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			238		242	228
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1329		733	816
Direction, Lane #	SE 1	NW 1	NE 1			
Volume Total	238	13	28			
Volume Left	0	1	2			
Volume Right	19	0	26			
cSH	1700	1329	809			
Volume to Capacity	0.14	0.00	0.04			
Queue Length 95th (m)	0.0	0.0	0.8			
Control Delay (s)	0.0	0.6	9.6			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.6	9.6			
Approach LOS			A			
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			22.7%	ICU Level of Service		A
Analysis Period (min)			15			

47: Old Carp Road & Second Line Road
2013 Existing AM Peak

Kanata North CDP TMP
15/03/2013

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	233	2	4	31	10	1	19	25	12	5	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	22	245	2	4	33	11	1	20	26	13	5	2
Direction, Lane #	SE 1	NW 1	NE 1	SW 1								
Volume Total (vph)	269	47	47	20								
Volume Left (vph)	22	4	1	13								
Volume Right (vph)	2	11	26	2								
Hadj (s)	0.05	-0.06	-0.26	0.16								
Departure Headway (s)	4.2	4.3	4.4	4.8								
Degree Utilization, x	0.31	0.06	0.06	0.03								
Capacity (veh/h)	851	809	759	689								
Control Delay (s)	9.0	7.5	7.6	7.9								
Approach Delay (s)	9.0	7.5	7.6	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.6									
Level of Service			A									
Intersection Capacity Utilization			32.9%	ICU Level of Service		A						
Analysis Period (min)			15									

70: March Road /March Road & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	24	32	9	44	66	11	25	120	28	25	441	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	0.0		0.0	35.0		0.0	35.0		30.0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (m)	7.5			7.5			80.0			80.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.987			0.972				0.850
Flt Protected		0.982			0.982		0.950			0.950		
Satd. Flow (prot)	0	1720	0	0	1736	0	1616	1652	0	1662	1733	1517
Flt Permitted		0.826			0.852		0.470			0.659		
Satd. Flow (perm)	0	1447	0	0	1506	0	799	1652	0	1153	1733	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			6			22				61
Link Speed (k/h)		50			70			80				80
Link Distance (m)		169.4			2437.7			322.8				966.0
Travel Time (s)		12.2			125.4			14.5				43.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	1%	6%	1%	2%	2%	7%	8%	3%	4%	5%	2%
Adj. Flow (vph)	25	34	9	46	69	12	26	126	29	26	464	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	127	0	26	155	0	26	464	61
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		9.0			9.0			9.0				9.0
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	22.4	22.4		22.4	22.4		25.9	25.9		25.9	25.9	25.9
Total Split (s)	31.9	31.9		31.9	31.9		61.4	61.4		61.4	61.4	61.4
Total Split (%)	34.2%	34.2%		34.2%	34.2%		65.8%	65.8%		65.8%	65.8%	65.8%
Maximum Green (s)	25.5	25.5		25.5	25.5		55.5	55.5		55.5	55.5	55.5
Yellow Time (s)	4.6	4.6		4.6	4.6		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	1.8	1.8		1.8	1.8		2.2	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
Total Lost Time (s)		6.4			6.4		5.9	5.9		5.9	5.9	5.9
Lead/Lag												

70: March Road /March Road & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		9.0	9.0		9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		10.5			10.5		25.4	25.4		25.4	25.4	25.4
Actuated g/C Ratio		0.24			0.24		0.58	0.58		0.58	0.58	0.58
v/c Ratio		0.19			0.35		0.06	0.16		0.04	0.46	0.07
Control Delay		14.1			16.7		6.8	6.4		6.5	9.6	2.6
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		14.1			16.7		6.8	6.4		6.5	9.6	2.6
LOS		B			B		A	A		A	A	A
Approach Delay		14.1			16.7			6.4			8.7	
Approach LOS		B			B			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 93.3

Actuated Cycle Length: 43.5

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 9.7

Intersection LOS: A

Intersection Capacity Utilization 56.8%

ICU Level of Service B

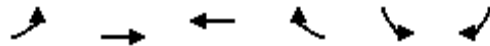
Analysis Period (min) 15

Splits and Phases: 70: March Road /March Road & Second Line Road



68: March Road & Dunrobin Road
2013 Existing PM Peak

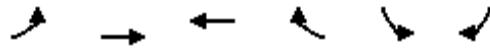
Kanata North CDP TMP
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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	85	36	418	536	181	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0			90.0	50.0	0.0
Storage Lanes	1			1	1	0
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt				0.850	0.969	
Flt Protected	0.950				0.962	
Satd. Flow (prot)	1729	1820	1750	1473	2754	0
Flt Permitted	0.303				0.962	
Satd. Flow (perm)	551	1820	1750	1473	2754	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				564	32	
Link Speed (k/h)		80	80		48	
Link Distance (m)		374.8	177.0		195.2	
Travel Time (s)		16.9	8.0		14.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	4%	5%	24%	2%
Adj. Flow (vph)	89	38	440	564	191	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	38	440	564	240	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	0.0		8.4	
Link Offset(m)		0.0	1.5		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		CI+Ex	CI+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	NA	
Protected Phases	5	2	6		4	
Permitted Phases	2			6		
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	10.0	
Minimum Split (s)	11.3	26.3	26.3	26.3	22.3	
Total Split (s)	21.3	67.6	46.3	46.3	36.3	
Total Split (%)	20.5%	65.1%	44.6%	44.6%	34.9%	
Maximum Green (s)	15.0	61.3	40.0	40.0	30.0	
Yellow Time (s)	4.6	4.6	4.6	4.6	3.7	
All-Red Time (s)	1.7	1.7	1.7	1.7	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	
Lead/Lag	Lead		Lag	Lag		

68: March Road & Dunrobin Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Min	Min	None	
Walk Time (s)		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	9.0	
Pedestrian Calls (#/hr)		0	0	0	0	
Act Effect Green (s)	35.9	35.9	24.0	24.0	11.6	
Actuated g/C Ratio	0.59	0.59	0.40	0.40	0.19	
v/c Ratio	0.18	0.04	0.64	0.61	0.43	
Control Delay	5.8	4.9	21.5	4.8	23.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	5.8	4.9	21.5	4.8	23.8	
LOS	A	A	C	A	C	
Approach Delay		5.5	12.1		23.8	
Approach LOS		A	B		C	

Intersection Summary

Area Type:	Other
Cycle Length: 103.9	
Actuated Cycle Length: 60.7	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 68: March Road & Dunrobin Road



46: Halton Terrace/Maxwell Bridge Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	36	212	9	172	925	70	11	30	36	66	47	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	4.8	3.7	3.7	3.7
Storage Length (m)	40.0		10.0	80.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	60.0			50.0			30.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.96	0.99		0.98	1.00	0.99		1.00	0.99	
Frt			0.850			0.850		0.919			0.896	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1616	3424	1381	1712	3424	1502	1586	1831	0	1729	1612	0
Flt Permitted	0.285			0.552			0.585			0.711		
Satd. Flow (perm)	484	3424	1328	981	3424	1466	973	1831	0	1289	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		38			100	
Link Speed (k/h)		80			80			40			50	
Link Distance (m)		118.9			239.9			116.9			761.3	
Travel Time (s)		5.4			10.8			10.5			54.8	
Confl. Peds. (#/hr)	2		9	9		2	4		4	4		4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	1%	12%	1%	1%	3%	9%	2%	1%	0%	0%	0%
Adj. Flow (vph)	38	223	9	181	974	74	12	32	38	69	49	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	223	9	181	974	74	12	70	0	69	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			5.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.91	0.91	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	1	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.4	34.6	34.6	11.4	34.6	34.6	38.6	38.6		38.6	38.6	
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	45.0	45.0		45.0	45.0	
Total Split (%)	16.7%	45.8%	45.8%	16.7%	45.8%	45.8%	37.5%	37.5%		37.5%	37.5%	
Maximum Green (s)	13.6	48.4	48.4	13.6	48.4	48.4	38.4	38.4		38.4	38.4	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.8	2.0	2.0	1.8	2.0	2.0	3.3	3.3		3.3	3.3	

46: Halton Terrace/Maxwell Bridge Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.6	6.6	6.4	6.6	6.6	6.6	6.6		6.6	6.6	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	54.7	48.5	48.5	63.0	56.8	56.8	11.3	11.3		11.3	11.3	
Actuated g/C Ratio	0.62	0.55	0.55	0.71	0.64	0.64	0.13	0.13		0.13	0.13	
v/c Ratio	0.10	0.12	0.01	0.23	0.45	0.08	0.10	0.26		0.42	0.55	
Control Delay	5.0	10.5	0.0	4.7	10.1	1.7	36.5	22.2		44.6	23.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.0	10.5	0.0	4.7	10.1	1.7	36.5	22.2		44.6	23.0	
LOS	A	B	A	A	B	A	D	C		D	C	
Approach Delay		9.4			8.8			24.3			29.5	
Approach LOS		A			A			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 88.8

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 12.2

Intersection LOS: B

Intersection Capacity Utilization 62.3%

ICU Level of Service B

Analysis Period (min) 15

Description: Used Late PM Timings since peak hour of adjacent street traffic is 430-530

Splits and Phases: 46: Halton Terrace/Maxwell Bridge Road & March Road



33: Klondike Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	3	385	54	227	1237	86	76	22	104	42	28	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	100.0		100.0	0.0		0.0	15.0		0.0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (m)	70.0			100.0			7.5			30.0		
Lane Util. Factor	1.00	0.91	0.91	0.97	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	0.99		1.00	0.99	
Frt		0.981			0.990			0.876			0.935	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1572	4771	0	3288	4809	0	1695	1520	0	1695	1498	0
Flt Permitted	0.950			0.950			0.432			0.673		
Satd. Flow (perm)	1569	4771	0	3284	4809	0	764	1520	0	1200	1498	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			9			109			22	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		242.2			599.2			131.9			200.6	
Travel Time (s)		10.9			27.0			9.5			14.4	
Confl. Peds. (#/hr)	6		1	1		6	10		1	1		10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	2%	2%	2%	2%	3%	2%	17%	1%	2%	16%	8%
Adj. Flow (vph)	3	405	57	239	1302	91	80	23	109	44	29	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	462	0	239	1393	0	80	132	0	44	51	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		8.9			8.9			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases	1	6		5	2		7	4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0		5.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.2	32.5		11.2	32.5		12.1	44.1		44.1	44.1	
Total Split (s)	28.0	36.0		28.0	36.0		12.1	56.0		44.1	44.1	
Total Split (%)	23.3%	30.0%		23.3%	30.0%		10.1%	46.6%		36.7%	36.7%	
Maximum Green (s)	21.8	29.5		21.8	29.5		5.0	48.9		37.0	37.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.6	1.9		1.6	1.9		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

33: Klondike Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Lost Time (s)	6.2	6.5		6.2	6.5		7.1	7.1		7.1	7.1	
Lead/Lag	Lead	Lead		Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		19.0			19.0			30.0		30.0	30.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	5.8	29.7		11.1	44.8		19.8	19.8		10.5	10.5	
Actuated g/C Ratio	0.07	0.37		0.14	0.56		0.25	0.25		0.13	0.13	
v/c Ratio	0.03	0.26		0.53	0.52		0.33	0.29		0.28	0.24	
Control Delay	38.0	18.6		37.5	13.4		27.8	9.3		38.9	25.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.0	18.6		37.5	13.4		27.8	9.3		38.9	25.3	
LOS	D	B		D	B		C	A		D	C	
Approach Delay		18.7			17.0			16.3			31.6	
Approach LOS		B			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 120.2

Actuated Cycle Length: 80.6

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 17.8

Intersection LOS: B

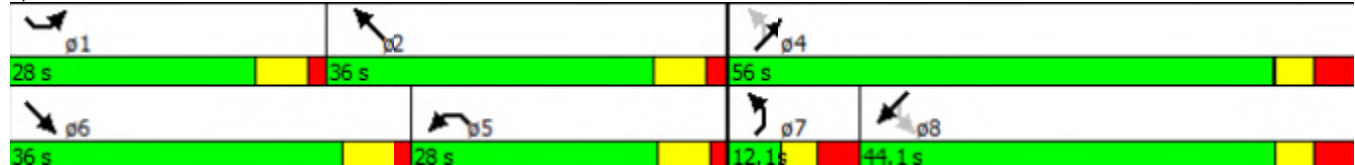
Intersection Capacity Utilization 73.0%

ICU Level of Service D

Analysis Period (min) 15

Description: Used Late PM timings since peak hour of adjacent street traffic is 415-515

Splits and Phases: 33: Klondike Road & March Road



37: Morgan's Grant Way/Shirley's Brook Drive & March Road
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	48	500	24	256	1161	85	17	25	60	120	46	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		35.0	90.0		35.0	0.0		25.0	30.0		30.0
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (m)	35.0			70.0			7.5			40.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.980		0.950		
Satd. Flow (prot)	1695	4824	1502	1712	4824	1547	0	1713	1517	1712	1733	1532
Flt Permitted	0.218			0.401				0.859		0.728		
Satd. Flow (perm)	389	4824	1502	723	4824	1547	0	1501	1517	1312	1733	1532
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98			98			91			91
Link Speed (k/h)		80			80			40			48	
Link Distance (m)		599.2			307.3			460.2			487.6	
Travel Time (s)		27.0			13.8			41.4			36.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	3%	1%	3%	0%	0%	7%	2%	1%	5%	1%
Adj. Flow (vph)	51	526	25	269	1222	89	18	26	63	126	48	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	526	25	269	1222	89	0	44	63	126	48	86
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	26.5	26.5	11.5	26.5	26.5	33.3	33.3	33.3	33.3	33.3	33.3
Total Split (s)	23.0	62.0	62.0	23.0	62.0	62.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	19.2%	51.7%	51.7%	19.2%	51.7%	51.7%	29.2%	29.2%	29.2%	29.2%	29.2%	29.2%
Maximum Green (s)	16.5	55.5	55.5	16.5	55.5	55.5	27.7	27.7	27.7	27.7	27.7	27.7
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.9	1.9	1.9	1.9	1.9	1.9	4.3	4.3	4.3	4.3	4.3	4.3
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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5		7.3	7.3	7.3	7.3	7.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						

37: Morgan's Grant Way/Shirley's Brook Drive & March Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	19.0	19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	62.2	55.7	55.7	74.1	64.3	64.3		15.5	15.5	15.5	15.5	15.5
Actuated g/C Ratio	0.60	0.54	0.54	0.71	0.62	0.62		0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.16	0.20	0.03	0.43	0.41	0.09		0.20	0.21	0.65	0.19	0.28
Control Delay	7.4	13.8	0.1	7.7	11.9	2.2		41.0	5.1	57.6	40.5	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	13.8	0.1	7.7	11.9	2.2		41.0	5.1	57.6	40.5	10.0
LOS	A	B	A	A	B	A		D	A	E	D	A
Approach Delay		12.7			10.6			19.9			38.7	
Approach LOS		B			B			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 104.1

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 14.4

Intersection LOS: B

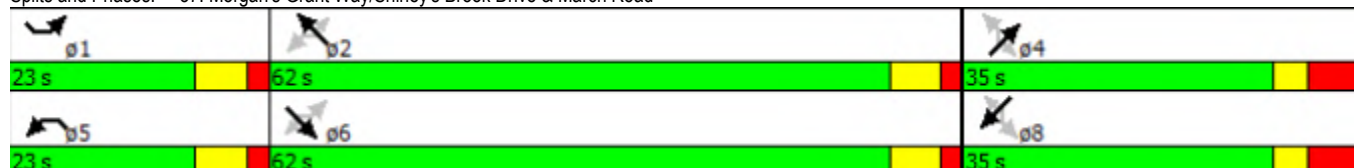
Intersection Capacity Utilization 62.2%

ICU Level of Service B

Analysis Period (min) 15

Description: Used Late PM timings since peak hour of adjacent street traffic is 430-530

Splits and Phases: 37: Morgan's Grant Way/Shirley's Brook Drive & March Road



31: Terry Fox Drive & March Road
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	67	507	34	329	1278	72	228	147	110	68	351	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		80.0	175.0		50.0	80.0		60.0	70.0		50.0
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (m)	85.0			55.0			70.0			30.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	1.00		0.98	0.99		0.99			0.97	0.99		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	4871	1517	3288	4824	1502	3257	3390	1502	3257	3390	1517
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1711	4871	1489	3271	4824	1482	3257	3390	1460	3214	3390	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			160			155			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		307.3			294.7			204.8			240.1	
Travel Time (s)		13.8			13.3			12.3			14.4	
Confl. Peds. (#/hr)	1		4	4		1			13	13		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	2%	2%	3%	3%	3%	2%	3%	3%	2%	2%
Adj. Flow (vph)	71	534	36	346	1345	76	240	155	116	72	369	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	534	36	346	1345	76	240	155	116	72	369	91
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			8.9			8.9			8.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	28.6	28.6	11.8	28.6	28.6	11.7	36.1	36.1	11.7	36.1	36.1
Total Split (s)	17.0	50.0	50.0	17.0	50.0	50.0	16.0	37.0	37.0	16.0	37.0	37.0
Total Split (%)	14.2%	41.7%	41.7%	14.2%	41.7%	41.7%	13.3%	30.8%	30.8%	13.3%	30.8%	30.8%
Maximum Green (s)	10.2	43.4	43.4	10.2	43.4	43.4	9.3	29.9	29.9	9.3	29.9	29.9
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.2	2.0	2.0	3.4	3.8	3.8	3.4	3.8	3.8
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

31: Terry Fox Drive & March Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Lost Time (s)	6.8	6.6	6.6	6.8	6.6	6.6	6.7	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		22.0	22.0		22.0	22.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	8.8	43.5	43.5	10.2	47.5	47.5	9.3	21.1	21.1	7.7	16.8	16.8
Actuated g/C Ratio	0.08	0.41	0.41	0.10	0.44	0.44	0.09	0.20	0.20	0.07	0.16	0.16
v/c Ratio	0.50	0.27	0.05	1.11	0.63	0.10	0.85	0.23	0.28	0.31	0.69	0.25
Control Delay	60.1	22.0	0.1	127.3	26.1	0.3	75.1	38.7	4.2	51.2	49.9	2.0
Queue Delay	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 Delay	60.1	22.0	0.1	127.3	26.1	0.3	75.1	38.7	4.2	51.2	49.9	2.0
LOS	E	C	A	F	C	A	E	D	A	D	D	A
Approach Delay		25.0			44.8			48.0			41.9	
Approach LOS		C			D			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 107

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 41.2

Intersection LOS: D

Intersection Capacity Utilization 71.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 31: Terry Fox Drive & March Road



49: Terry Fox Drive & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	57	150	239	269	591	122
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0	0.0	60.0			115.0
Storage Lanes	1	1	1			1
Taper Length (m)	50.0		80.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99					
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1517	1679	1701	1701	1532
Flt Permitted	0.950		0.309			
Satd. Flow (perm)	1698	1517	546	1701	1701	1532
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		158				128
Link Speed (k/h)	50			60	60	
Link Distance (m)	421.7			207.4	794.3	
Travel Time (s)	30.4			12.4	47.7	
Confl. Peds. (#/hr)	3					
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	3%	7%	7%	1%
Adj. Flow (vph)	60	158	252	283	622	128
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	158	252	283	622	128
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	8.0			8.0	8.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				CI+Ex	CI+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	20.0	20.0	20.0
Minimum Split (s)	26.9	26.9	9.0	26.9	28.0	28.0
Total Split (s)	30.0	30.0	15.0	80.0	65.0	65.0
Total Split (%)	27.3%	27.3%	13.6%	72.7%	59.1%	59.1%
Maximum Green (s)	24.1	24.1	11.0	74.1	59.0	59.0
Yellow Time (s)	4.6	4.6	3.5	4.6	3.3	3.3
All-Red Time (s)	1.3	1.3	0.5	1.3	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0

49: Terry Fox Drive & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Total Lost Time (s)	5.9	5.9	4.0	5.9	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	10.4	10.4	76.0	74.1	59.0	59.0
Actuated g/C Ratio	0.11	0.11	0.79	0.77	0.61	0.61
v/c Ratio	0.33	0.52	0.45	0.22	0.60	0.13
Control Delay	44.9	13.3	5.2	3.6	14.5	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	13.3	5.2	3.6	14.5	1.8
LOS	D	B	A	A	B	A
Approach Delay	22.0			4.3	12.3	
Approach LOS	C			A	B	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 96.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 10.9

Intersection LOS: B

Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

Description: Used Late PM timings since peak hour of adjacent street traffic is 415-515

Splits and Phases: 49: Terry Fox Drive & Second Line Road



38: Terry Fox Drive & Innovation Drive/Flamborough Way
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	121	19	102	224	53	107	91	176	27	32	560	147
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	4.8	4.8	3.7	4.8	4.8	3.7	3.7	3.7	3.7	3.7	3.7
Storage Length (m)	40.0		0.0	40.0		0.0	115.0		115.0	125.0		125.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	50.0			50.0			85.0			65.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		1.00	0.98				0.97	0.99		
Frt		0.874			0.900				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1730	0	1631	1659	0	1695	1784	1459	1631	1784	1517
Flt Permitted	0.600			0.658			0.318			0.641		
Satd. Flow (perm)	1061	1730	0	1128	1659	0	567	1784	1413	1091	1784	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		107			100				95			155
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		412.5			314.2			794.3			450.2	
Travel Time (s)		37.1			28.3			47.7			27.0	
Confl. Peds. (#/hr)	6		1	1		6			7	7		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	1%	6%	13%	6%	2%	2%	6%	6%	2%	2%
Adj. Flow (vph)	127	20	107	236	56	113	96	185	28	34	589	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	127	0	236	169	0	96	185	28	34	589	155
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	0.91	0.91	1.06	0.91	0.91	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	11.3	34.3		11.3	34.3		38.1	38.1	38.1	38.1	38.1	38.1
Total Split (s)	15.0	44.0		15.0	44.0		51.0	51.0	51.0	51.0	51.0	51.0
Total Split (%)	13.6%	40.0%		13.6%	40.0%		46.4%	46.4%	46.4%	46.4%	46.4%	46.4%
Maximum Green (s)	8.7	37.7		8.7	37.7		44.9	44.9	44.9	44.9	44.9	44.9
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	1.7		1.7	1.7		2.8	2.8	2.8	2.8	2.8	2.8

38: Terry Fox Drive & Innovation Drive/Flamborough Way
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		21.0			21.0		25.0	25.0	25.0	25.0	25.0	25.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	19.4	11.0		20.1	11.4		44.9	44.9	44.9	44.9	44.9	44.9
Actuated g/C Ratio	0.23	0.13		0.24	0.14		0.54	0.54	0.54	0.54	0.54	0.54
v/c Ratio	0.41	0.40		0.73	0.54		0.31	0.19	0.03	0.06	0.61	0.17
Control Delay	25.8	13.5		39.2	22.0		14.7	10.8	0.1	10.0	17.0	2.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	13.5		39.2	22.0		14.7	10.8	0.1	10.0	17.0	2.4
LOS	C	B		D	C		B	B	A	A	B	A
Approach Delay		19.7			32.0			11.1			13.8	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 83.3

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 18.4

Intersection LOS: B

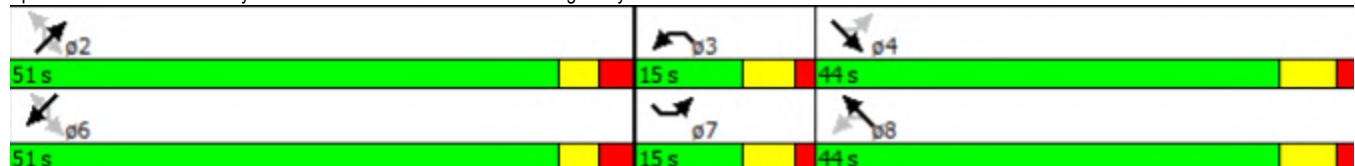
Intersection Capacity Utilization 90.4%

ICU Level of Service E

Analysis Period (min) 15

Description: Used Lat PM timings since peak hour of adjacent street traffic is 445-545

Splits and Phases: 38: Terry Fox Drive & Innovation Drive/Flamborough Way



64: Terry Fox Drive & March Valley Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	212	0	1	447	145	0	0	2	42	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	23	223	0	1	471	153	0	0	2	44	0	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	623			223			833	895	223	821	818	547
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			223			833	895	223	821	818	547
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	100	85	100	97
cM capacity (veh/h)	968			1346			275	275	814	290	305	541
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	246	624	2	59								
Volume Left	23	1	0	44								
Volume Right	0	153	2	15								
cSH	968	1346	814	328								
Volume to Capacity	0.02	0.00	0.00	0.18								
Queue Length 95th (m)	0.6	0.0	0.1	4.9								
Control Delay (s)	1.0	0.0	9.4	18.4								
Lane LOS	A	A	A	C								
Approach Delay (s)	1.0	0.0	9.4	18.4								
Approach LOS			A	C								
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			51.1%		ICU Level of Service				A			
Analysis Period (min)			15									

34: Second Line Road & Klondike Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	8	83	202	86	56	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	87	213	91	59	32
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total (vph)	96	303	91			
Volume Left (vph)	8	0	59			
Volume Right (vph)	0	91	32			
Hadj (s)	0.05	-0.13	0.02			
Departure Headway (s)	4.5	4.1	4.8			
Degree Utilization, x	0.12	0.35	0.12			
Capacity (veh/h)	766	854	691			
Control Delay (s)	8.1	9.3	8.4			
Approach Delay (s)	8.1	9.3	8.4			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.9			
Level of Service			A			
Intersection Capacity Utilization			28.6%	ICU Level of Service	A	
Analysis Period (min)			15			

77: Klondike Road & Weatherston Street
2013 Existing PM Peak

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	4	1	3	48	0	54	8	93	38	83	112	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	4.8	4.8	4.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	45.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			40.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor		1.00			0.98		1.00	0.99		1.00	1.00	
Frt		0.949			0.850			0.957			0.985	
Flt Protected		0.976		0.950			0.950			0.950		
Satd. Flow (prot)	0	1795	0	1662	1463	0	1517	1677	0	1679	3234	0
Flt Permitted		0.833		0.752			0.669			0.596		
Satd. Flow (perm)	0	1529	0	1316	1463	0	1066	1677	0	1049	3234	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			863			29			13	
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		101.0			84.9			77.2			131.9	
Travel Time (s)		7.6			6.4			5.6			9.5	
Confl. Peds. (#/hr)	4					4	1		2	2		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	14%	4%	13%	4%	14%	4%	1%	3%	5%	6%
Adj. Flow (vph)	4	1	3	51	0	57	8	98	40	87	118	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	51	57	0	8	138	0	87	131	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	0.91	0.91	0.91	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		25.8	25.8		10.8	25.8	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		15.0	60.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		50.0%	50.0%		16.7%	66.7%	
Maximum Green (s)	24.0	24.0		24.0	24.0		39.2	39.2		9.2	54.2	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.1	2.1		2.1	2.1	

77: Klondike Road & Weatherston Street
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		10.3		10.3	10.3		48.7	48.7		57.7	58.9	
Actuated g/C Ratio		0.13		0.13	0.13		0.64	0.64		0.75	0.77	
v/c Ratio		0.04		0.29	0.06		0.01	0.13		0.10	0.05	
Control Delay		24.8		34.5	0.1		8.6	7.3		3.7	3.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		24.8		34.5	0.1		8.6	7.3		3.7	3.0	
LOS		C		C	A		A	A		A	A	
Approach Delay		24.8			16.3			7.4			3.3	
Approach LOS		C			B			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 76.6

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 7.9

Intersection LOS: A

Intersection Capacity Utilization 57.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 77: Klondike Road & Weatherston Street



						
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	28	8	30	133	17	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	29	8	32	140	18	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			38		237	34
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			38		237	34
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			98		98	99
cM capacity (veh/h)			1572		724	1045
Direction, Lane #	SE 1	NW 1	NE 1			
Volume Total	38	172	28			
Volume Left	0	32	18			
Volume Right	8	0	11			
cSH	1700	1572	817			
Volume to Capacity	0.02	0.02	0.03			
Queue Length 95th (m)	0.0	0.5	0.8			
Control Delay (s)	0.0	1.5	9.6			
Lane LOS		A	A			
Approach Delay (s)	0.0	1.5	9.6			
Approach LOS			A			
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization			25.8%	ICU Level of Service		A
Analysis Period (min)			15			

47: Old Carp Road & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP
15/03/2013

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	65	2	29	156	17	1	12	7	13	36	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	9	68	2	31	164	18	1	13	7	14	38	32
Direction, Lane #	SE 1	NW 1	NE 1	SW 1								
Volume Total (vph)	80	213	21	83								
Volume Left (vph)	9	31	1	14								
Volume Right (vph)	2	18	7	32								
Hadj (s)	0.05	0.03	-0.12	-0.13								
Departure Headway (s)	4.4	4.3	4.5	4.5								
Degree Utilization, x	0.10	0.25	0.03	0.10								
Capacity (veh/h)	776	819	727	749								
Control Delay (s)	7.9	8.7	7.7	8.0								
Approach Delay (s)	7.9	8.7	7.7	8.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			32.2%	ICU Level of Service		A						
Analysis Period (min)			15									

31: Terry Fox Drive & March Road
2013 Existing AM Peak - Optimized

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	193	914	48	157	408	91	141	643	212	68	33	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		80.0	175.0		50.0	80.0		60.0	70.0		50.0
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (m)	85.0			55.0			70.0			30.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98						0.98			0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	4871	1517	3288	4824	1502	3257	3390	1502	3257	3390	1517
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1712	4871	1493	3288	4824	1502	3257	3390	1468	3257	3390	1497
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			222			223			217
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		307.3			294.7			204.8			240.1	
Travel Time (s)		13.8			13.3			12.3			14.4	
Confl. Bikes (#/hr)			5						14			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	2%	2%	3%	3%	3%	2%	3%	3%	2%	2%
Adj. Flow (vph)	203	962	51	165	429	96	148	677	223	72	35	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	962	51	165	429	96	148	677	223	72	35	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			8.9			8.9			8.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	28.6	28.6	11.8	28.6	28.6	11.7	36.1	36.1	11.7	36.1	36.1
Total Split (s)	32.0	46.0	46.0	19.0	33.0	33.0	18.0	42.0	42.0	13.0	37.0	37.0
Total Split (%)	26.7%	38.3%	38.3%	15.8%	27.5%	27.5%	15.0%	35.0%	35.0%	10.8%	30.8%	30.8%
Maximum Green (s)	25.2	39.4	39.4	12.2	26.4	26.4	11.3	34.9	34.9	6.3	29.9	29.9
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.2	2.0	2.0	3.4	3.8	3.8	3.4	3.8	3.8
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

31: Terry Fox Drive & March Road
2013 Existing AM Peak - Optimized

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Lost Time (s)	6.8	6.6	6.6	6.8	6.6	6.6	6.7	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		22.0	22.0		22.0	22.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	17.9	40.0	40.0	10.4	32.5	32.5	12.3	27.2	27.2	6.3	22.3	22.3
Actuated g/C Ratio	0.17	0.37	0.37	0.10	0.30	0.30	0.11	0.25	0.25	0.06	0.21	0.21
v/c Ratio	0.72	0.53	0.08	0.53	0.30	0.16	0.40	0.80	0.42	0.38	0.05	0.04
Control Delay	58.5	30.1	0.2	55.0	33.1	0.6	52.2	45.9	6.8	59.2	34.8	0.1
Queue Delay	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 Delay	58.5	30.1	0.2	55.0	33.1	0.6	52.2	45.9	6.8	59.2	34.8	0.1
LOS	E	C	A	D	C	A	D	D	A	E	C	A
Approach Delay		33.5			33.8			38.5			42.9	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 108.3

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 35.7

Intersection LOS: D

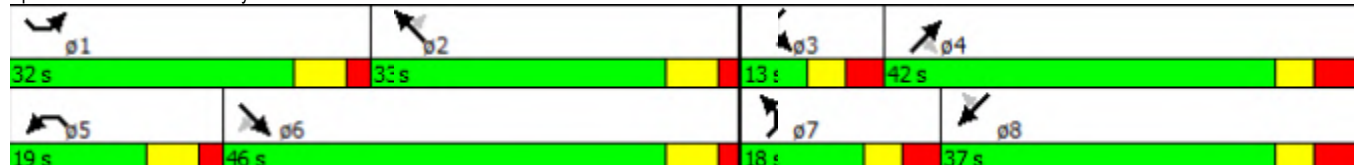
Intersection Capacity Utilization 73.5%

ICU Level of Service D

Analysis Period (min) 15

Description: Used Other AM timings since peak hour of adjacent street traffic is 8-9

Splits and Phases: 31: Terry Fox Drive & March Road



31: Terry Fox Drive & March Road
2013 Existing PM Peak - Optimized

Kanata North CDP TMP

15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	67	507	34	329	1278	72	228	147	110	68	351	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		80.0	175.0		50.0	80.0		60.0	70.0		50.0
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (m)	85.0			55.0			70.0			30.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	1.00		0.98	0.99		0.99			0.97	0.99		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	4871	1517	3288	4824	1502	3257	3390	1502	3257	3390	1517
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1711	4871	1489	3271	4824	1482	3257	3390	1460	3214	3390	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			282			221			217			278
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		307.3			294.7			204.8			240.1	
Travel Time (s)		13.8			13.3			12.3			14.4	
Confl. Peds. (#/hr)	1		4	4		1			13	13		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	2%	2%	3%	3%	3%	2%	3%	3%	2%	2%
Adj. Flow (vph)	71	534	36	346	1345	76	240	155	116	72	369	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	534	36	346	1345	76	240	155	116	72	369	91
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			8.9			8.9			8.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	28.6	28.6	11.8	28.6	28.6	11.7	36.1	36.1	11.7	36.1	36.1
Total Split (s)	16.0	37.0	37.0	27.0	48.0	48.0	20.0	43.0	43.0	13.0	36.1	36.1
Total Split (%)	13.3%	30.8%	30.8%	22.5%	40.0%	40.0%	16.7%	35.8%	35.8%	10.8%	30.1%	30.1%
Maximum Green (s)	9.2	30.4	30.4	20.2	41.4	41.4	13.3	35.9	35.9	6.3	29.0	29.0
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.2	2.0	2.0	3.4	3.8	3.8	3.4	3.8	3.8
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

31: Terry Fox Drive & March Road
2013 Existing PM Peak - Optimized

Kanata North CDP TMP
15/03/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Lost Time (s)	6.8	6.6	6.6	6.8	6.6	6.6	6.7	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		22.0	22.0		22.0	22.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	8.3	32.7	32.7	16.0	43.3	43.3	12.0	25.3	25.3	6.2	16.6	16.6
Actuated g/C Ratio	0.08	0.31	0.31	0.15	0.41	0.41	0.11	0.24	0.24	0.06	0.16	0.16
v/c Ratio	0.52	0.35	0.05	0.69	0.67	0.10	0.64	0.19	0.22	0.37	0.69	0.19
Control Delay	62.6	29.8	0.1	50.3	28.8	0.3	53.9	33.8	1.0	55.6	49.0	0.9
Queue Delay	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 Delay	62.6	29.8	0.1	50.3	28.8	0.3	53.9	33.8	1.0	55.6	49.0	0.9
LOS	E	C	A	D	C	A	D	C	A	E	D	A
Approach Delay		31.8			31.8			35.8			41.7	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120.1

Actuated Cycle Length: 104.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 33.9

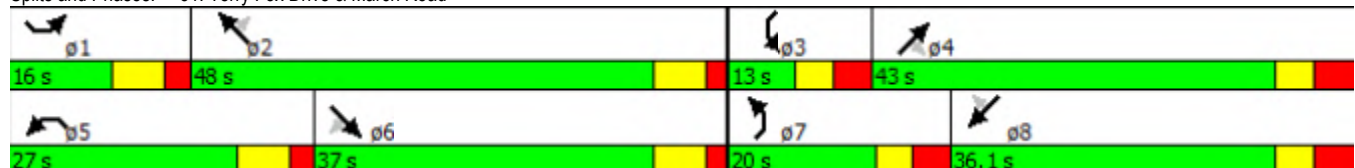
Intersection LOS: C

Intersection Capacity Utilization 71.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 31: Terry Fox Drive & March Road



APPENDIX B

OC Transpo Transit Data

PROCESSED: 2013-02-14 10:47:46

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 0 IBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM565	MAXWELL BRIDGE / WINDANCE	ONS	0	3	1	1.0	1.0	14	9	100	14
		OFFS	0	0	0	0.0	0.0	14	9	100	0
		LOAD	0	3	1	1.0	1.0	14	9	100	
WM555	MARCONI / STREAMSIDE	ONS	0	5	1	1.4	1.4	14	11	100	20
		OFFS	0	0	0	0.0	0.0	14	11	100	0
		LOAD	0	6	3	2.4	1.7	14	11	100	
WM545	MARCONI / BURWASH LANDING	ONS	0	3	0	0.5	0.9	14	11	100	7
		OFFS	0	0	0	0.0	0.0	14	11	100	0
		LOAD	1	6	3	3.2	1.4	14	11	100	
WM535	MARCONI / KLONDIKE	ONS	0	2	1	0.9	0.7	14	12	100	13
		OFFS	0	0	0	0.0	0.0	14	12	100	0
		LOAD	2	7	5	4.2	1.5	14	12	100	
WM526	MARCONI / KINGHORN	ONS	0	2	1	0.7	0.6	14	12	100	10
		OFFS	0	0	0	0.0	0.0	14	12	100	0
		LOAD	2	9	5	4.9	1.7	14	12	100	
WM527	MARCONI / SHIRLEY'S BROOK	ONS	0	1	1	0.4	0.5	14	9	100	6
		OFFS	0	0	0	0.0	0.0	14	9	100	0
		LOAD	2	9	5	5.3	1.9	14	9	100	
WM501	SHIRLEY'S BROOK / CATTERICK	ONS	0	1	1	0.7	0.5	14	13	100	10
		OFFS	0	0	0	0.0	0.0	14	13	100	0
		LOAD	3	9	6	6.0	2.0	14	13	100	
WM510	SHIRLEY'S BROOK / TOBERMOY	ONS	0	2	1	0.8	0.7	14	13	100	11
		OFFS	0	0	0	0.0	0.0	14	13	100	0
		LOAD	3	11	6	6.6	2.3	14	13	100	
WM517	SHIRLEY'S BROOK / HELMSDALE	ONS	0	2	1	0.4	0.6	14	10	100	6
		OFFS	0	0	0	0.0	0.0	14	10	100	0
		LOAD	4	12	7	7.2	2.1	14	10	100	

PROCESSED: 2013-02-14 10:48:36

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 0 IBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM310	HELMSDALE / TOBERMORY	ONS	0	1	1	0.5	0.5	14	13	100	7
		OFFS	0	0	0	0.0	0.0	14	13	100	0
		LOAD	4	13	8	7.8	2.4	14	13	100	
WM302	SHIRLEY'S BROOK / SANDHILL	ONS	0	2	1	0.6	0.6	14	10	100	9
		OFFS	0	0	0	0.0	0.0	14	10	100	0
		LOAD	5	13	9	8.2	2.3	14	10	100	
WM300	SHIRLEY'S BROOK / INVERARY	ONS	0	2	1	0.6	0.7	14	11	100	9
		OFFS	0	0	0	0.0	0.0	14	11	100	0
		LOAD	5	13	9	8.8	2.5	14	11	100	
WM200	MORGAN'S GRANT / MARCH	ONS	0	4	1	0.9	1.1	14	10	100	12
		OFFS	0	0	0	0.0	0.0	14	10	100	0
		LOAD	5	13	10	9.4	2.0	14	10	100	
WM220	MORGANS GRANT / GATESHEAD	ONS	0	3	1	1.1	0.8	14	13	100	16
		OFFS	0	0	0	0.0	0.0	14	13	100	0
		LOAD	6	15	11	10.6	2.4	14	13	100	
WM226	MORGAN'S GRANT / FLAMBOROUGH	ONS	0	2	1	0.6	0.8	14	12	100	8
		OFFS	0	0	0	0.0	0.0	14	12	100	0
		LOAD	6	17	12	11.4	2.8	14	12	100	
WM175	FLAMBOROUGH / SPALDING	ONS	0	3	2	1.4	0.8	14	12	100	19
		OFFS	0	0	0	0.0	0.0	14	12	100	0
		LOAD	6	19	14	12.8	3.2	14	12	100	
WM185	FLAMBOROUGH / KEIGLEY	ONS	0	6	2	1.9	1.4	14	14	100	27
		OFFS	0	0	0	0.0	0.0	14	14	100	0
		LOAD	6	20	15	14.4	4.0	14	14	100	
WM271	FLAMBOROUGH / HALTON	ONS	0	3	1	1.4	1.0	14	13	100	19
		OFFS	0	0	0	0.0	0.0	14	13	100	0
		LOAD	8	23	15	15.7	4.1	14	13	100	

PROCESSED: 2013-02-14 10:48:36

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 0 IBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM266	HALTON / DUNOLLIE	ONS	0	3	1	1.6	0.9	14	14	100	22
		OFFS	0	0	0	0.0	0.0	14	14	100	0
		LOAD	9	24	17	17.4	4.3	14	14	100	
WM261	HALTON / WHERNSIDE	ONS	1	8	3	3.3	2.0	14	14	100	46
		OFFS	0	0	0	0.0	0.0	14	14	100	0
		LOAD	10	29	21	20.6	5.0	14	14	100	
WM256	HALTON / SCAMPTON	ONS	0	7	3	3.2	2.0	14	14	100	45
		OFFS	0	0	0	0.0	0.0	14	14	100	0
		LOAD	10	32	24	23.9	6.1	14	14	100	
WM250	HALTON / PIEKOFF	ONS	0	3	1	1.4	0.9	14	12	100	19
		OFFS	0	0	0	0.0	0.0	14	12	100	0
		LOAD	10	34	25	25.2	6.7	14	12	100	
WM240	HALTON / BRADY	ONS	0	6	3	2.3	1.9	14	12	100	32
		OFFS	0	0	0	0.0	0.0	14	12	100	0
		LOAD	10	38	27	27.4	8.1	14	12	100	
WM230	FLAMBOROUGH / HALTON	ONS	0	2	1	0.9	0.7	14	13	100	12
		OFFS	0	0	0	0.0	0.0	14	13	100	0
		LOAD	10	39	27	28.4	8.4	14	13	100	
WM280	FLAMBOROUGH / TERRY FOX	ONS	0	4	2	2.2	1.1	14	13	100	31
		OFFS	0	0	0	0.0	0.0	14	13	100	0
		LOAD	14	41	30	30.4	8.5	14	13	100	
WM282	TERRY FOX / INNOVATION	ONS	0	1	1	0.1	0.4	14	4	100	2
		OFFS	0	0	0	0.0	0.0	14	4	100	0
		LOAD	14	41	30	30.6	8.6	14	4	100	
WM290	TERRY FOX / MARCH	ONS	0	3	1	1.4	0.9	14	14	100	20
		OFFS	0	0	0	0.0	0.0	14	14	100	0
		LOAD	17	43	31	32.0	8.7	14	14	100	

PROCESSED: 2013-02-14 10:48:36

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 0 IBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM050	MARCH ROAD / TRILLIUM	ONS	0	0	0	0.0	0.0	14	5	100	0
		OFFS	0	0	0	0.0	0.0	14	5	100	0
		LOAD	17	43	31	32.1	8.5	14	5	100	

PROCESSED: 2013-02-14 10:50:13

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 1 OBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL
											ACTIVITY
WM285	TERRY FOX / MARCH	ONS	0	1	0	0.1	0.3	12	12	100	1
		OFFS	2	8	5	4.3	2.1	12	12	100	51
		LOAD	19	45	29	29.0	7.9	12	12	100	
WM273	TERRY FOX / FLAMBOROUGH	ONS	0	0	0	0.0	0.0	12	3	100	0
		OFFS	0	1	0	0.1	0.3	12	3	100	1
		LOAD	19	45	29	28.9	7.9	12	3	100	
WM275	FLAMBOROUGH / TERRY FOX	ONS	0	0	0	0.0	0.0	12	11	100	0
		OFFS	0	5	2	2.1	1.4	12	11	100	25
		LOAD	17	40	28	26.9	7.1	12	11	100	
WM225	FLAMBOROUGH / HALTON	ONS	0	0	0	0.0	0.0	12	12	100	0
		OFFS	2	4	3	2.8	0.8	12	12	100	33
		LOAD	15	37	25	24.5	6.7	12	12	100	
WM210	HALTON / BRADY	ONS	0	0	0	0.0	0.0	12	12	100	0
		OFFS	1	6	3	3.4	1.8	12	12	100	41
		LOAD	14	32	21	21.2	5.1	12	12	100	
WM245	HALTON / WIMBLEDON	ONS	0	0	0	0.0	0.0	12	11	100	0
		OFFS	0	3	2	2.0	1.0	12	11	100	24
		LOAD	12	29	19	19.1	4.9	12	11	100	
WM276	HALTON / SCAMPTON	ONS	0	1	0	0.1	0.3	12	12	100	1
		OFFS	2	7	4	3.9	1.4	12	12	100	47
		LOAD	9	23	16	15.4	4.1	12	12	100	

PROCESSED: 2013-02-14 10:50:51

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 1 OBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL
											ACTIVITY
WM281	HALTON / WHERNSIDE	ONS	0	1	0	0.1	0.3	12	12	100	1
		OFFS	1	6	2	2.8	1.7	12	12	100	34
		LOAD	8	20	13	12.6	3.1	12	12	100	
WM286	HALTON / AD. 1159	ONS	0	0	0	0.0	0.0	12	12	100	0
		OFFS	1	3	1	1.4	0.7	12	12	100	17
		LOAD	7	17	12	11.2	2.7	12	12	100	
WM291	FLAMBOROUGH / WOLISTON	ONS	0	1	0	0.1	0.3	12	12	100	1
		OFFS	1	4	2	2.3	0.8	12	12	100	28
		LOAD	6	15	10	9.3	2.4	12	12	100	
WM190	FLAMBOROUGH / KEIGLEY	ONS	0	1	0	0.1	0.3	12	12	100	1
		OFFS	1	4	2	1.9	1.0	12	12	100	23
		LOAD	5	13	7	7.3	2.1	12	12	100	
WM180	FLAMBOROUGH / LAXFORD	ONS	0	0	0	0.0	0.0	12	9	100	0
		OFFS	0	1	1	0.4	0.5	12	9	100	5
		LOAD	4	13	7	7.0	2.3	12	9	100	
WM170	MORGAN'S GRANT / FLAMBOROUGH WAY	ONS	0	0	0	0.0	0.0	12	2	100	0
		OFFS	0	1	1	0.1	0.3	12	2	100	1
		LOAD	4	12	7	6.9	2.0	12	2	100	
WM215	MORGAN'S GRANT / ALLENBY	ONS	0	0	0	0.0	0.0	12	3	100	0
		OFFS	0	1	1	0.2	0.4	12	3	100	2
		LOAD	4	12	7	6.8	2.0	12	3	100	
WM205	MORGAN'S GRANT / MARCH	ONS	0	0	0	0.0	0.0	12	2	100	0
		OFFS	0	0	0	0.0	0.0	12	2	100	0
		LOAD	4	12	7	6.8	2.0	12	2	100	
WM305	SHIRLEY'S BROOK / MCKINLEY	ONS	0	0	0	0.0	0.0	12	7	100	0
		OFFS	0	2	1	0.4	0.7	12	7	100	5
		LOAD	4	11	6	6.5	1.9	12	7	100	

PROCESSED: 2013-02-14 10:50:51

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 1 OBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM308	SHIRLEY'S BROOK / SANDHILL	ONS	0	0	0	0.0	0.0	12	8	100	0
		OFFS	0	1	0	0.1	0.3	12	8	100	1
		LOAD	4	11	5	6.1	2.0	12	8	100	
WM503	SHIRLEY'S BROOK / HELMSDALE	ONS	0	0	0	0.0	0.0	12	10	100	0
		OFFS	0	1	0	0.3	0.5	12	10	100	3
		LOAD	3	11	5	5.8	2.2	12	10	100	
WM315	HELMSDALE / TOBERMORY	ONS	0	0	0	0.0	0.0	12	10	100	0
		OFFS	0	1	0	0.3	0.5	12	10	100	3
		LOAD	3	11	5	5.5	2.1	12	10	100	
WM518	SHIRLEY'S BROOK / HELMSDALE	ONS	0	0	0	0.0	0.0	12	10	100	0
		OFFS	0	1	1	0.5	0.5	12	10	100	6
		LOAD	3	10	5	5.1	1.9	12	10	100	
WM515	SHIRLEY'S BROOK / ABERFOYLE	ONS	0	0	0	0.0	0.0	12	8	100	0
		OFFS	0	1	1	0.3	0.5	12	8	100	4
		LOAD	2	10	5	4.8	2.1	12	8	100	
WM502	SHIRLEY'S BROOK / CATTERICK	ONS	0	0	0	0.0	0.0	12	12	100	0
		OFFS	0	3	1	1.2	0.7	12	12	100	14
		LOAD	1	7	4	3.7	1.6	12	12	100	
WM521	MARCONI / KINGHORN	ONS	0	0	0	0.0	0.0	12	12	100	0
		OFFS	0	2	1	0.7	0.8	12	12	100	8
		LOAD	1	5	3	3.0	1.1	12	12	100	
WM530	MARCONI / KLONDIKE	ONS	0	0	0	0.0	0.0	12	9	100	0
		OFFS	0	2	1	0.8	0.8	12	9	100	9
		LOAD	1	4	2	2.2	0.8	12	9	100	
WM540	MARCONI / BURWASH LANDING	ONS	0	0	0	0.0	0.0	12	11	100	0
		OFFS	0	3	1	1.3	0.9	12	11	100	16
		LOAD	0	2	1	1.0	0.6	12	11	100	

PROCESSED: 2013-02-14 10:50:52

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 60 Express Morgans Grant
DIRECTION: 1 OBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM550	MARCONI / MAXWELL BRIDGE	ONS	0	0	0	0.0	0.0	12	9	100	0
		OFFS	0	2	1	0.8	0.6	12	9	100	9
		LOAD	0	1	0	0.3	0.5	12	9	100	
WM560	MAXWELL BRIDGE / WINDANCE	ONS	0	0	0	0.0	0.0	12	7	100	0
		OFFS	0	1	1	0.3	0.5	12	7	100	4
		LOAD	0	0	0	0.0	0.0	12	7	100	

PROCESSED: 2013-02-14 10:52:22

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 93 Lincoln Fields / Kanata North
DIRECTION: 0 EBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL
											ACTIVITY
WM475	INNOVATION / AD. 4000	ONS	0	6	1	1.3	1.6	46	34	100	59
		OFFS	0	0	0	0.0	0.0	46	34	100	0
		LOAD	0	6	1	1.3	1.6	46	34	100	
WM491	INNOVATION / TERRY FOX	ONS	0	1	0	0.0	0.1	46	6	100	1
		OFFS	0	0	0	0.0	0.0	46	6	100	0
		LOAD	0	6	1	1.3	1.6	46	6	100	
WM275	FLAMBOROUGH / TERRY FOX	ONS	0	4	1	0.5	0.8	46	31	100	23
		OFFS	0	0	0	0.0	0.0	46	31	100	0
		LOAD	0	6	1	1.8	1.6	46	31	100	
WM225	FLAMBOROUGH / HALTON	ONS	0	3	0	0.3	0.6	46	28	100	13
		OFFS	0	0	0	0.0	0.0	46	28	100	0
		LOAD	0	7	2	2.1	1.8	46	28	100	
WM210	HALTON / BRADY	ONS	0	4	1	1.0	0.9	46	39	100	45
		OFFS	0	0	0	0.0	0.0	46	39	100	0
		LOAD	0	9	3	3.1	2.2	46	39	100	
WM245	HALTON / WIMBLEDON	ONS	0	2	0	0.3	0.5	46	21	100	12
		OFFS	0	0	0	0.0	0.0	46	21	100	0
		LOAD	0	10	4	3.4	2.3	46	21	100	
WM661	KLONDIKE / HALTON	ONS	0	4	1	1.0	1.3	46	32	100	48
		OFFS	0	1	0	0.0	0.1	46	32	100	1
		LOAD	0	14	5	4.3	3.1	46	32	100	
WM656	KLONDIKE / LAXFORD	ONS	0	4	1	0.7	1.1	46	30	100	33
		OFFS	0	0	0	0.0	0.0	46	30	100	0
		LOAD	0	16	5	5.1	3.7	46	30	100	
WM636	KLONDIKE / WEATHERSTON	ONS	0	6	1	1.4	1.5	46	37	100	64
		OFFS	0	0	0	0.0	0.0	46	37	100	0
		LOAD	0	17	6	6.4	4.7	46	37	100	

PROCESSED: 2013-02-14 10:53:09

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 93 Lincoln Fields / Kanata North
DIRECTION: 0 EBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM631	KLONDIKE / MARCH	ONS	0	2	1	0.6	0.6	46	37	100	29
		OFFS	0	1	0	0.0	0.2	46	37	100	2
		LOAD	0	18	7	7.0	5.0	46	37	100	
WM626	KLONDIKE / SANDHILL	ONS	0	1	0	0.0	0.1	46	8	100	1
		OFFS	0	0	0	0.0	0.0	46	8	100	0
		LOAD	0	18	7	7.0	5.0	46	8	100	
WM535	MARCONI / KLONDIKE	ONS	0	7	1	1.1	1.5	46	35	100	52
		OFFS	0	0	0	0.0	0.0	46	35	100	0
		LOAD	0	21	7	8.0	6.1	46	35	100	
WM526	MARCONI / KINGHORN	ONS	0	4	1	0.5	0.8	46	28	100	23
		OFFS	0	0	0	0.0	0.0	46	28	100	0
		LOAD	0	22	7	8.5	6.3	46	28	100	
WM527	MARCONI / SHIRLEY'S BROOK	ONS	0	2	1	0.5	0.7	46	27	100	21
		OFFS	0	0	0	0.0	0.0	46	27	100	0
		LOAD	0	23	7	8.9	6.8	46	27	100	
WM304	SHIRLEY'S BROOK / KINROSS	ONS	0	2	0	0.2	0.5	46	25	100	11
		OFFS	0	0	0	0.0	0.0	46	25	100	0
		LOAD	0	24	8	9.2	7.1	46	25	100	
WM311	HELMSDALE / SHIRLEY'S BROOK	ONS	0	1	1	0.0	0.1	46	1	100	1
		OFFS	0	0	0	0.0	0.0	46	1	100	0
		LOAD	0	24	8	9.2	7.1	46	1	100	
WM315	HELMSDALE / TOBERMORY	ONS	0	5	1	1.0	1.2	46	36	100	46
		OFFS	0	0	0	0.0	0.0	46	36	100	0
		LOAD	0	26	9	10.3	8.0	46	36	100	
WM401	TERRY FOX / HELMSDALE	ONS	0	4	1	0.6	0.9	46	26	100	29
		OFFS	0	0	0	0.0	0.0	46	26	100	0
		LOAD	0	26	10	10.9	7.9	46	26	100	

PROCESSED: 2013-02-14 10:53:09

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 93 Lincoln Fields / Kanata North
DIRECTION: 0 EBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM386	350 TERRY FOX	ONS	0	5	1	0.5	1.0	46	19	100	23
		OFFS	0	0	0	0.0	0.0	46	19	100	0
		LOAD	0	26	11	11.4	7.9	46	19	100	
WM381	TERRY FOX / LEGGET	ONS	0	5	1	1.1	1.1	46	38	100	49
		OFFS	0	1	0	0.0	0.1	46	38	100	1
		LOAD	0	28	12	12.4	8.2	46	38	100	

PROCESSED: 2013-02-14 10:59:58

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 93 Lincoln Fields / Kanata North
DIRECTION: 1 WBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

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PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM380	TERRY FOX / LEGGET	ONS	0	0	0	0.0	0.0	54	42	98	0
		OFFS	0	4	1	0.6	0.8	54	42	98	33
		LOAD	0	25	11	10.6	6.4	54	42	98	
WM385	350 TERRY FOX	ONS	0	0	0	0.0	0.0	54	23	98	0
		OFFS	0	2	1	0.3	0.6	54	23	98	16
		LOAD	0	25	10	10.4	6.6	54	23	98	
WM400	TERRY FOX / HELMSDALE	ONS	0	1	0	0.0	0.1	54	26	98	1
		OFFS	0	4	1	0.5	0.9	54	26	98	26
		LOAD	0	25	9	9.9	6.7	54	26	98	
WM320	HELMSDALE / SHIRLEY'S BROOK	ONS	0	0	0	0.0	0.0	54	31	98	0
		OFFS	0	3	1	0.6	0.8	54	31	98	31
		LOAD	0	23	9	9.4	6.2	54	31	98	
WM310	HELMSDALE / TOBERMORY	ONS	0	0	0	0.0	0.0	54	31	98	0
		OFFS	0	2	1	0.4	0.7	54	31	98	22
		LOAD	0	22	9	9.1	5.8	54	31	98	
WM303	SHIRLEY'S BROOK / KINROSS	ONS	0	0	0	0.0	0.0	54	28	98	0
		OFFS	0	2	0	0.3	0.5	54	28	98	14
		LOAD	0	21	8	8.8	5.7	54	28	98	
WM525	MARCONI / SHIRLEY'S BROOK	ONS	0	0	0	0.0	0.0	54	30	98	0
		OFFS	0	3	1	0.5	0.7	54	30	98	29
		LOAD	0	21	8	8.3	5.3	54	30	98	
WM521	MARCONI / KINGHORN	ONS	0	0	0	0.0	0.0	54	27	98	0
		OFFS	0	3	1	0.5	0.7	54	27	98	29
		LOAD	0	20	8	7.8	4.9	54	27	98	
WM530	MARCONI / KLONDIKE	ONS	0	1	0	0.0	0.2	54	39	98	2
		OFFS	0	4	1	1.1	1.3	54	39	98	62
		LOAD	0	16	7	6.8	4.1	54	39	98	

PROCESSED: 2013-02-14 10:59:58

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 93 Lincoln Fields / Kanata North
DIRECTION: 1 WBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM625	KLONDIKE / SANDHILL	ONS	0	0	0	0.0	0.0	54	14	98	0
		OFFS	0	1	0	0.0	0.1	54	14	98	1
		LOAD	0	16	7	6.7	4.1	54	14	98	
WM630	KLONDIKE / MARCH	ONS	0	1	0	0.0	0.2	54	43	98	2
		OFFS	0	3	1	0.9	0.8	54	43	98	51
		LOAD	0	14	6	5.9	3.7	54	43	98	
WM635	KLONDIKE / WEATHERSTON	ONS	0	1	0	0.0	0.1	54	45	98	1
		OFFS	0	5	1	1.1	1.1	54	45	98	58
		LOAD	0	13	5	4.9	3.2	54	45	98	
WM655	KLONDIKE / PENRITH	ONS	0	0	0	0.0	0.0	54	34	98	0
		OFFS	0	3	1	0.6	0.8	54	34	98	36
		LOAD	0	13	4	4.4	2.9	54	34	98	
WM660	KLONDIKE / HALTON	ONS	0	1	0	0.1	0.2	54	42	98	3
		OFFS	0	4	1	1.0	1.1	54	42	98	57
		LOAD	0	12	3	3.4	2.5	54	42	98	
WM250	HALTON / PIEKOFF	ONS	0	0	0	0.0	0.0	54	29	98	0
		OFFS	0	1	0	0.2	0.4	54	29	98	11
		LOAD	0	12	3	3.1	2.5	54	29	98	
WM240	HALTON / BRADY	ONS	0	2	0	0.0	0.3	54	39	98	2
		OFFS	0	3	1	0.9	0.9	54	39	98	50
		LOAD	0	12	2	2.4	2.5	54	39	98	
WM230	FLAMBOROUGH / HALTON	ONS	0	0	0	0.0	0.0	54	25	98	0
		OFFS	0	2	1	0.3	0.5	54	25	98	16
		LOAD	0	12	1	2.1	2.5	54	25	98	
WM280	FLAMBOROUGH / TERRY FOX	ONS	0	0	0	0.0	0.0	54	34	98	0
		OFFS	0	2	1	0.4	0.6	54	34	98	21
		LOAD	0	12	1	1.6	2.6	54	34	98	

PROCESSED: 2013-02-14 10:59:59

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 93 Lincoln Fields / Kanata North
DIRECTION: 1 WBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM490	INNOVATION / TERRY FOX	ONS	0	0	0	0.0	0.0	54	5	98	0
		OFFS	0	1	0	0.0	0.2	54	5	98	2
		LOAD	0	12	1	1.5	2.6	54	5	98	
WM480	INNOVATION / AD. 4000	ONS	0	0	0	0.0	0.0	54	30	98	0
		OFFS	0	5	1	0.6	1.1	54	30	98	33
		LOAD	0	10	0	1.0	1.8	54	30	98	
WM470	INNOVATION / AD. 3000	ONS	0	0	0	0.0	0.0	54	17	98	0
		OFFS	0	1	0	0.1	0.3	54	17	98	7
		LOAD	0	9	0	0.9	1.6	54	17	98	
WM460	INNOVATION / AD. 2000	ONS	0	0	0	0.0	0.0	54	22	98	0
		OFFS	0	6	1	0.5	1.1	54	22	98	28
		LOAD	0	4	0	0.4	0.8	54	22	98	
WM450	INNOVATION / HINES	ONS	0	0	0	0.0	0.0	54	21	98	0
		OFFS	0	2	1	0.3	0.6	54	21	98	14
		LOAD	0	3	0	0.1	0.5	54	21	98	

PROCESSED: 2013-02-14 11:16:56

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 674 All Saints H.S. \ Kanata
DIRECTION: 0 WBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM475	INNOVATION / AD. 4000	ONS	0	0	0	0.0	0.0	3	0	75	0
		OFFS	0	0	0	0.0	0.0	3	0	75	0
		LOAD	0	0	0	0.0	0.0	3	0	75	0
WM491	INNOVATION / TERRY FOX	ONS	0	0	0	0.0	0.0	3	0	75	0
		OFFS	0	0	0	0.0	0.0	3	0	75	0
		LOAD	0	0	0	0.0	0.0	3	0	75	0
WM275	FLAMBOROUGH / TERRY FOX	ONS	0	6	6	2.0	3.5	3	1	75	8
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	6	0	2.0	3.5	3	1	75	0
WM225	FLAMBOROUGH / HALTON	ONS	0	3	3	1.0	1.7	3	1	75	4
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	10	0	3.3	5.8	3	1	75	0
WM210	HALTON / BRADY	ONS	0	3	3	1.0	1.7	3	1	75	4
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	12	0	4.0	6.9	3	1	75	0
WM245	HALTON / WIMBLEDON	ONS	0	5	5	1.7	2.9	3	1	75	7
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	17	0	5.7	9.8	3	1	75	0
WM661	KLONDIKE / HALTON	ONS	0	2	2	1.0	1.0	3	2	75	4
		OFFS	0	0	0	0.0	0.0	3	2	75	0
		LOAD	0	19	1	6.7	10.7	3	2	75	0
WM656	KLONDIKE / LAXFORD	ONS	0	4	4	1.3	2.3	3	2	75	5
		OFFS	0	1	1	0.3	0.6	3	2	75	1
		LOAD	0	23	0	7.7	13.3	3	2	75	0
WM636	KLONDIKE / WEATHERSTON	ONS	0	1	1	0.3	0.6	3	1	75	1
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	24	0	8.0	13.9	3	1	75	0

PROCESSED: 2013-02-14 11:17:34

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 674 All Saints H.S. \ Kanata
DIRECTION: 0 WBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM631	KLONDIKE / MARCH	ONS	0	0	0	0.0	0.0	3	0	75	0
		OFFS	0	0	0	0.0	0.0	3	0	75	0
		LOAD	0	24	0	8.0	13.9	3	0	75	
WM626	KLONDIKE / SANDHILL	ONS	0	0	0	0.0	0.0	3	1	75	0
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	24	0	8.0	13.9	3	1	75	
WM535	MARCONI / KLONDIKE	ONS	0	1	1	0.3	0.6	3	1	75	1
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	25	0	8.3	14.4	3	1	75	
WM526	MARCONI / KINGHORN	ONS	0	1	1	0.3	0.6	3	1	75	1
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	25	0	8.3	14.4	3	1	75	
WM527	MARCONI / SHIRLEY'S BROOK	ONS	0	0	0	0.0	0.0	3	0	75	0
		OFFS	0	0	0	0.0	0.0	3	0	75	0
		LOAD	0	25	0	8.3	14.4	3	0	75	
WM304	SHIRLEY'S BROOK / KINROSS	ONS	0	2	2	0.7	1.2	3	1	75	3
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	27	0	9.0	15.6	3	1	75	
WM311	HELMSDALE / SHIRLEY'S BROOK	ONS	0	0	0	0.0	0.0	3	0	75	0
		OFFS	0	0	0	0.0	0.0	3	0	75	0
		LOAD	0	27	0	9.0	15.6	3	0	75	
WM315	HELMSDALE / TOBERMORY	ONS	0	2	2	0.7	1.2	3	1	75	3
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	30	0	10.0	17.3	3	1	75	
WM401	TERRY FOX / HELMSDALE	ONS	0	0	0	0.0	0.0	3	0	75	0
		OFFS	0	0	0	0.0	0.0	3	0	75	0
		LOAD	0	30	0	10.0	17.3	3	0	75	

PROCESSED: 2013-02-14 11:17:34

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 674 All Saints H.S. \ Kanata
DIRECTION: 0 WBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM386	350 TERRY FOX	ONS	0	0	0	0.0	0.0	3	0	75	0
		OFFS	0	0	0	0.0	0.0	3	0	75	0
		LOAD	0	30	0	10.0	17.3	3	0	75	
WM381	TERRY FOX / LEGGET	ONS	0	1	1	0.3	0.6	3	1	75	1
		OFFS	0	0	0	0.0	0.0	3	1	75	0
		LOAD	0	30	0	10.0	17.3	3	1	75	

PROCESSED: 2013-02-14 11:17:55

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 674 All Saints H.S. \ Kanata
DIRECTION: 1 EBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM380	TERRY FOX / LEGGET	ONS	0	0	0	0.0	0.0	4	3	100	0
		OFFS	0	3	1	1.0	1.4	4	3	100	4
		LOAD	6	56	37	33.0	20.6	4	3	100	
WM385	350 TERRY FOX	ONS	0	0	0	0.0	0.0	4	0	100	0
		OFFS	0	0	0	0.0	0.0	4	0	100	0
		LOAD	6	56	37	33.0	20.6	4	0	100	

PROCESSED: 2013-02-14 11:18:31

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 674 All Saints H.S. \ Kanata
DIRECTION: 1 EBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM400	TERRY FOX / HELMSDALE	ONS	0	0	0	0.0	0.0	4	0	100	0
		OFFS	0	0	0	0.0	0.0	4	0	100	0
		LOAD	6	56	37	33.0	20.6	4	0	100	
WM320	HELMSDALE / SHIRLEY'S BROOK	ONS	0	2	0	0.5	1.0	4	4	100	2
		OFFS	2	4	2	2.5	1.0	4	4	100	10
		LOAD	6	51	35	30.8	18.6	4	4	100	
WM310	HELMSDALE / TOBERMORY	ONS	0	1	0	0.3	0.5	4	4	100	1
		OFFS	0	2	1	1.0	0.8	4	4	100	4
		LOAD	5	51	34	29.8	19.0	4	4	100	
WM303	SHIRLEY'S BROOK / KINROSS	ONS	0	0	0	0.0	0.0	4	3	100	0
		OFFS	0	2	1	1.0	0.8	4	3	100	4
		LOAD	5	49	33	29.0	18.2	4	3	100	
WM525	MARCONI / SHIRLEY'S BROOK	ONS	0	1	0	0.3	0.5	4	4	100	1
		OFFS	1	6	1	2.3	2.5	4	4	100	9
		LOAD	5	43	32	27.0	16.0	4	4	100	
WM521	MARCONI / KINGHORN	ONS	0	0	0	0.0	0.0	4	3	100	0
		OFFS	0	4	1	1.3	1.9	4	3	100	5
		LOAD	5	39	32	25.8	14.7	4	3	100	
WM530	MARCONI / KLONDIKE	ONS	0	1	0	0.3	0.5	4	4	100	1
		OFFS	1	2	1	1.3	0.5	4	4	100	5
		LOAD	4	38	30	24.5	14.5	4	4	100	
WM625	KLONDIKE / SANDHILL	ONS	0	0	0	0.0	0.0	4	3	100	0
		OFFS	0	1	0	0.3	0.5	4	3	100	1
		LOAD	4	38	30	24.5	14.5	4	3	100	
WM635	KLONDIKE / WEATHERSTON	ONS	0	1	0	0.3	0.5	4	4	100	1
		OFFS	1	5	5	3.5	1.9	4	4	100	14
		LOAD	4	33	25	21.5	12.3	4	4	100	

PROCESSED: 2013-02-14 11:18:31

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 674 All Saints H.S. \ Kanata
DIRECTION: 1 EBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM655	KLONDIKE / PENRITH	ONS	0	1	0	0.3	0.5	4	4	100	1
		OFFS	1	6	5	4.0	2.2	4	4	100	16
		LOAD	4	30	19	18.0	10.7	4	4	100	
WM660	KLONDIKE / HALTON	ONS	0	3	1	1.0	1.4	4	4	100	4
		OFFS	4	10	7	6.5	2.6	4	4	100	26
		LOAD	3	21	14	12.5	7.4	4	4	100	
WM250	HALTON / PIEKOFF	ONS	0	2	0	0.5	1.0	4	4	100	2
		OFFS	2	3	2	2.3	0.5	4	4	100	9
		LOAD	3	18	12	10.8	6.2	4	4	100	
WM240	HALTON / BRADY	ONS	0	1	0	0.3	0.5	4	4	100	1
		OFFS	2	7	6	5.0	2.2	4	4	100	20
		LOAD	2	12	6	6.3	4.2	4	4	100	
WM230	FLAMBOROUGH / HALTON	ONS	0	0	0	0.0	0.0	4	4	100	0
		OFFS	1	3	3	2.3	1.0	4	4	100	9
		LOAD	1	9	4	4.0	3.6	4	4	100	
WM280	FLAMBOROUGH / TERRY FOX	ONS	0	1	0	0.3	0.5	4	4	100	1
		OFFS	2	7	4	3.8	2.4	4	4	100	15
		LOAD	0	3	1	1.0	1.4	4	4	100	
WM490	INNOVATION / TERRY FOX	ONS	0	0	0	0.0	0.0	4	0	100	0
		OFFS	0	0	0	0.0	0.0	4	0	100	0
		LOAD	0	3	1	1.0	1.4	4	0	100	
WM480	INNOVATION / AD. 4000	ONS	0	0	0	0.0	0.0	4	0	100	0
		OFFS	0	0	0	0.0	0.0	4	0	100	0
		LOAD	0	3	1	1.0	1.4	4	0	100	
WM470	INNOVATION / AD. 3000	ONS	0	0	0	0.0	0.0	4	0	100	0
		OFFS	0	0	0	0.0	0.0	4	0	100	0
		LOAD	0	3	1	1.0	1.4	4	0	100	

PROCESSED: 2013-02-14 11:18:31

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY AND LOAD BY STOP
WEEKDAY SERVICE

ROUTE: 674 All Saints H.S. \ Kanata
DIRECTION: 1 EBND
BSI STOP : FOR ALL BSI STOPS

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
TIME: ALL DAY

RUN: ALL
PATTERN: ALL

DAY OF THE WEEK: MON TUE WED THU FRI

BSI STOP	LOCATION	ACTIVITY	MINIMUM	MAXIMUM	MEDIAN	AVERAGE	STD DEV	OBSERVED	STOPS	% SAMPLED	TOTAL ACTIVITY
WM460	INNOVATION / AD. 2000	ONS	0	0	0	0.0	0.0	4	0	100	0
		OFFS	0	0	0	0.0	0.0	4	0	100	0
		LOAD	0	3	1	1.0	1.4	4	0	100	
WM450	INNOVATION / HINES	ONS	0	0	0	0.0	0.0	4	0	100	0
		OFFS	0	0	0	0.0	0.0	4	0	100	0
		LOAD	0	3	1	1.0	1.4	4	0	100	

PROCESSED: 2013-02-14 10:33:35

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY BY AREA
GEOGRAPHICAL AREAS IN USE

AREA	AREA DESCRIPTION	BSI	BSI DESCRIPTION
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MA01	KanataN	WM050	MARCH ROAD / TRILLIUM
		WM170	MORGAN'S GRANT / FLAMBOROUGH WAY
		WM175	FLAMBOROUGH / SPALDING
		WM180	FLAMBOROUGH / LAXFORD
		WM185	FLAMBOROUGH / KEIGLEY
		WM190	FLAMBOROUGH / KEIGLEY
		WM200	MORGAN'S GRANT / MARCH
		WM205	MORGAN'S GRANT / MARCH
		WM210	HALTON / BRADY
		WM215	MORGAN'S GRANT / ALLENBY
		WM220	MORGAN'S GRANT / GATESHEAD
		WM225	FLAMBOROUGH / HALTON
		WM226	MORGAN'S GRANT / FLAMBOROUGH
		WM230	FLAMBOROUGH / HALTON
		WM240	HALTON / BRADY
		WM245	HALTON / WIMBLEDON
		WM250	HALTON / PIEKOFF
		WM256	HALTON / SCAMPTON
		WM261	HALTON / WHERNSIDE
		WM266	HALTON / DUNOLLIE
		WM271	FLAMBOROUGH / HALTON
		WM273	TERRY FOX / FLAMBOROUGH
		WM275	FLAMBOROUGH / TERRY FOX
		WM276	HALTON / SCAMPTON
		WM280	FLAMBOROUGH / TERRY FOX
		WM281	HALTON / WHERNSIDE
		WM282	TERRY FOX / INNOVATION
		WM285	TERRY FOX / MARCH
		WM286	HALTON / AD. 1159
		WM290	TERRY FOX / MARCH
		WM291	FLAMBOROUGH / WOLISTON
		WM300	SHIRLEY'S BROOK / INVERARY
		WM302	SHIRLEY'S BROOK / SANDHILL
		WM303	SHIRLEY'S BROOK / KINROSS
		WM304	SHIRLEY'S BROOK / KINROSS
		WM305	SHIRLEY'S BROOK / MCKINLEY
		WM308	SHIRLEY'S BROOK / SANDHILL
		WM310	HELMSDALE / TOBERMORY
		WM311	HELMSDALE / SHIRLEY'S BROOK
		WM315	HELMSDALE / TOBERMORY
		WM320	HELMSDALE / SHIRLEY'S BROOK
		WM380	TERRY FOX / LEGGET
		WM381	TERRY FOX / LEGGET
		WM385	350 TERRY FOX
		WM386	350 TERRY FOX
		WM400	TERRY FOX / HELMSDALE
		WM401	TERRY FOX / HELMSDALE
		WM450	INNOVATION / HINES
		WM460	INNOVATION / AD. 2000
		WM470	INNOVATION / AD. 3000
		WM475	INNOVATION / AD. 4000
		WM480	INNOVATION / AD. 4000

WM490	INNOVATION / TERRY FOX
WM491	INNOVATION / TERRY FOX
WM501	SHIRLEY'S BROOK / CATTERICK
WM502	SHIRLEY'S BROOK / CATTERICK
WM503	SHIRLEY'S BROOK / HELMSDALE
WM510	SHIRLEY'S BROOK / TOBERMOY
WM515	SHIRLEY'S BROOK / ABERFOYLE
WM517	SHIRLEY'S BROOK / HELMSDALE
WM518	SHIRLEY'S BROOK / HELMSDALE
WM521	MARCONI / KINGHORN
WM525	MARCONI / SHIRLEY'S BROOK
WM526	MARCONI / KINGHORN
WM527	MARCONI / SHIRLEY'S BROOK
WM530	MARCONI / KLONDIKE
WM535	MARCONI / KLONDIKE
WM540	MARCONI / BURWASH LANDING
WM545	MARCONI / BURWASH LANDING
WM550	MARCONI / MAXWELL BRIDGE
WM555	MARCONI / STREAMSIDE
WM560	MAXWELL BRIDGE / WINDANCE
WM565	MAXWELL BRIDGE / WINDANCE
WM625	KLONDIKE / SANDHILL
WM626	KLONDIKE / SANDHILL
WM630	KLONDIKE / MARCH
WM631	KLONDIKE / MARCH
WM635	KLONDIKE / WEATHERSTON
WM636	KLONDIKE / WEATHERSTON
WM655	KLONDIKE / PENRITH
WM656	KLONDIKE / LAXFORD
WM660	KLONDIKE / HALTON

PROCESSED: 2013-02-14 10:36:23

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY BY AREA BY TIME PERIOD
WEEKDAY SERVICE

AREA: MA01 KanataN

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
DAY TYPE: WEEKDAY

ROUTE	STATISTICS	03:01-06:30		06:31-09:30		09:31-15:30		15:31-18:30		18:31-03:00		TOTAL	
		ONS	OFFS	ONS	OFFS	ONS	OFFS	ONS	OFFS	ONS	OFFS	ONS	OFFS
60	MINIMUM	15	0	16	0	0	0	0	23	0	7	0	0
	MAXIMUM	30	0	44	1	0	0	3	55	0	21	44	55
	MEDIAN	18	0	34	0	0	0	1	37	0	21	16	1
	AVERAGE	21.13	0.10	34.45	0.29	0.0	0.0	0.94	34.51	0.17	14.17	16.46	14.69
	STD DEV	6.42	0.14	9.03	0.28	0.0	0.0	0.95	10.06	0.24	10.14	16.59	17.82
	OBSERVED	5	5	10	10	0	0	11	11	2	2	28	28
	% SAMPLED	100	100	100	100	0	0	100	100	100	100	100	100
	TOTAL ACT.	106	1	344	3	0	0	10	380	0	28	461	411
	SCHEDULED	5	5	10	10	0	0	11	11	2	2	28	28
93	MINIMUM	0	0	0	0	0	0	1	0	0	0	0	0
	MAXIMUM	5	5	26	18	22	28	26	24	8	19	26	28
	MEDIAN	0	1	1	4	3	1	8	0	1	1	1	1
	AVERAGE	1.11	1.50	5.58	5.03	7.44	6.37	7.79	7.32	1.73	6.85	5.35	6.07
	STD DEV	1.98	2.07	8.93	5.39	7.77	7.34	6.90	10.15	2.45	7.78	7.23	7.47
	OBSERVED	5	5	28	28	27	27	20	20	25	25	105	105
	% SAMPLED	100	100	97	97	100	100	100	100	100	100	99	99
	TOTAL ACT.	6	8	162	146	201	172	156	146	43	171	567	644
	SCHEDULED	5	5	29	29	27	27	20	20	25	25	106	106
674	MINIMUM	0	0	0	0	0	18	0	0	0	0	0	0
	MAXIMUM	0	0	28	1	12	58	0	0	0	0	28	58
	MEDIAN	0	0	0	0	3	38	0	0	0	0	1	18
	AVERAGE	0.0	0.0	9.40	0.40	3.88	36.88	0.0	0.0	0.0	0.0	6.24	21.24
	STD DEV	0.0	0.0	16.28	0.53	5.18	16.67	0.0	0.0	0.0	0.0	10.51	22.79
	OBSERVED	0	0	3	3	4	4	0	0	0	0	7	7
	% SAMPLED	0	0	75	75	100	100	0	0	0	0	88	88
	TOTAL ACT.	0	0	38	2	16	148	0	0	0	0	50	170
	SCHEDULED	0	0	4	4	4	4	0	0	0	0	8	8

PROCESSED: 2013-02-14 10:36:23

AUTOMATIC PASSENGER COUNTING SYSTEM
PASSENGER ACTIVITY BY AREA BY TIME PERIOD
WEEKDAY SERVICE

AREA: MA01 KanataN

BOOKING: SEP12
PERIOD: 2012-09-02 TO 2012-12-16
DAY TYPE: WEEKDAY

ROUTE	STATISTICS	03:01-06:30		06:31-09:30		09:31-15:30		15:31-18:30		18:31-03:00		TOTAL	
		ONS	OFFS	ONS	OFFS	ONS	OFFS	ONS	OFFS	ONS	OFFS	ONS	OFFS
TOTAL	MINIMUM	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM	30	5	44	18	27	58	27	55	27	21	44	58
	MEDIAN	15	0	2	1	3	10	2	20	0	7	2	1
	AVERAGE	11.12	0.80	12.90	3.53	6.98	10.30	5.36	16.96	1.62	7.39	7.62	8.55
	STD DEV	11.46	1.57	15.49	4.96	7.51	13.51	6.45	16.55	2.39	7.97	10.82	12.09
	OBSERVED	10	10	41	41	31	31	31	31	27	27	140	140
	% SAMPLED	100	100	95	95	100	100	100	100	100	100	99	99
	TOTAL ACT.	111	8	555	152	216	319	166	526	44	200	1082	1215
	SCHEDULED	10	10	43	43	31	31	31	31	27	27	142	142

APPENDIX C

The City of Ottawa *Ottawa Cycling Plan* Cycling Network Maps

Figure 3-2b
Existing Facilities

Legend / Légende

- Existing Capital Pathway
Sentier de la capitale existant
- Existing Bicycle Lane
Voie cyclable existante
- Existing Paved Shoulder
Accotement asphalté existant
- Existing Wide Curb Lane
Voie en bordure élargie existante
- Existing Signed Route
Route signalisée existante
- Existing Off-Road Pathway
Allée hors-route existante
- Existing Additional Pathways (not in network)
- Major Public Parks & Open Space
- Lakes & Rivers
Lacs et cours d'eau
- Provincial Highway
Autoroute provinciale
- City of Ottawa

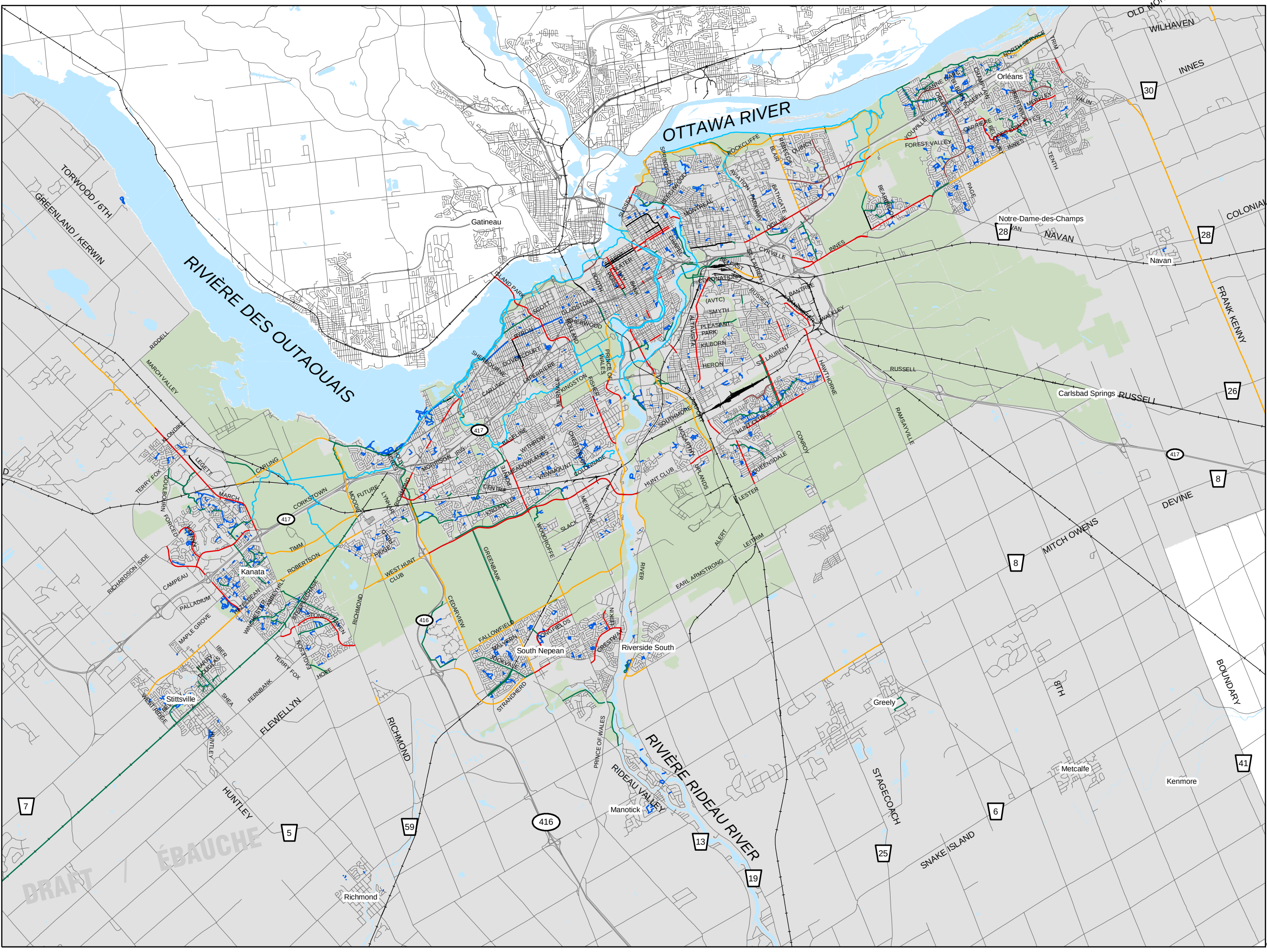
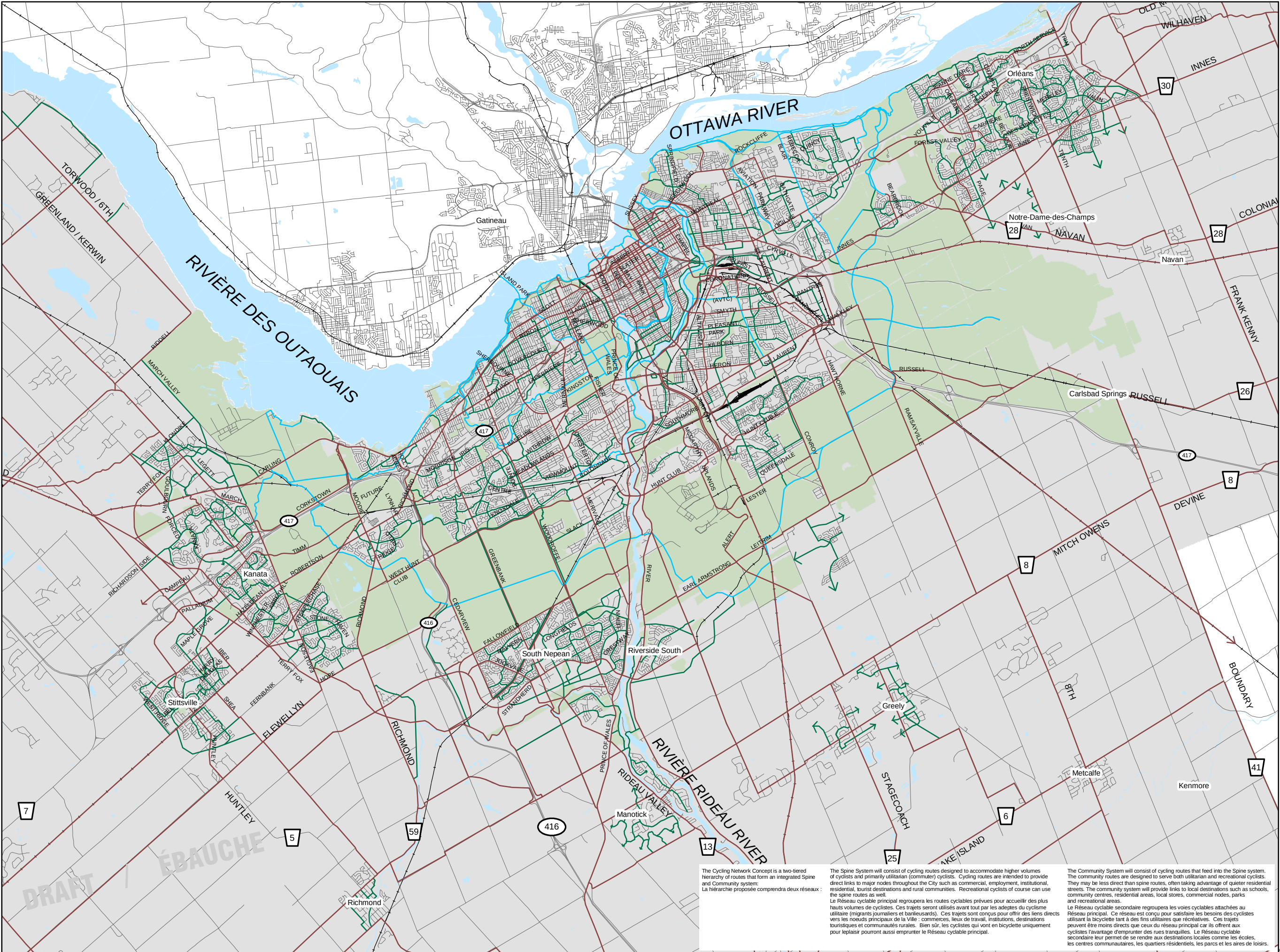


Figure 3-4b
Draft Network Concept
Plan provisoire du réseau

Legend / Légende

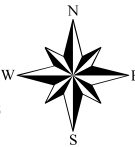
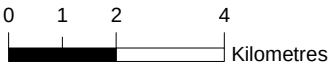
- Spine or City-wide Cycling Route
Réseau cyclable principal de la ville
- Community Cycling Route
Réseau cyclable des secondaire
- Cycling Route on Capital Pathway
Réseau cyclable sur les terrains de la capital existant
- Major Public Parks & Open Space
- Lakes & Rivers
Lacs et cours d'eau
- 417 Provincial Highway
Autoroute provinciale
- City of Ottawa



The Cycling Network Concept is a two-tiered hierarchy of routes that form an integrated Spine and Community system:
La hiérarchie proposée comprendra deux réseaux :

The Spine System will consist of cycling routes designed to accommodate higher volumes of cyclists and primarily utilitarian (commuter) cyclists. Cycling routes are intended to provide direct links to major nodes throughout the City such as commercial, employment, institutional, residential, tourist destinations and rural communities. Recreational cyclists of course can use the spine routes as well.
Le Réseau cyclable principal regroupera les routes cyclables prévues pour accueillir des plus hauts volumes de cyclistes. Ces trajets seront utilisés avant tout par les adeptes du cyclisme utilitaire (migrants journaliers et banlieusards). Ces trajets sont conçus pour offrir des liens directs vers les nœuds principaux de la Ville : commerces, lieux de travail, institutions, destinations touristiques et communautés rurales. Bien sûr, les cyclistes qui vont en bicyclette uniquement pour le plaisir pourront aussi emprunter le Réseau cyclable principal.

The Community System will consist of cycling routes that feed into the Spine system. The community routes are designed to serve both utilitarian and recreational cyclists. They may be less direct than spine routes, often taking advantage of quieter residential streets. The community system will provide links to local destinations such as schools, community centres, residential areas, local stores, commercial nodes, parks and recreational areas.
Le Réseau cyclable secondaire regroupera les voies cyclables attachées au Réseau principal. Ce réseau est conçu pour satisfaire les besoins des cyclistes utilisant la bicyclette tant à des fins utilitaires que récréatives. Ces trajets peuvent être moins directs que ceux du réseau principal car ils offrent aux cyclistes l'avantage d'emprunter des rues tranquilles. Le Réseau cyclable secondaire leur permet de se rendre aux destinations locales comme les écoles, les centres communautaires, les quartiers résidentiels, les parcs et les aires de loisirs.



2005/02/25

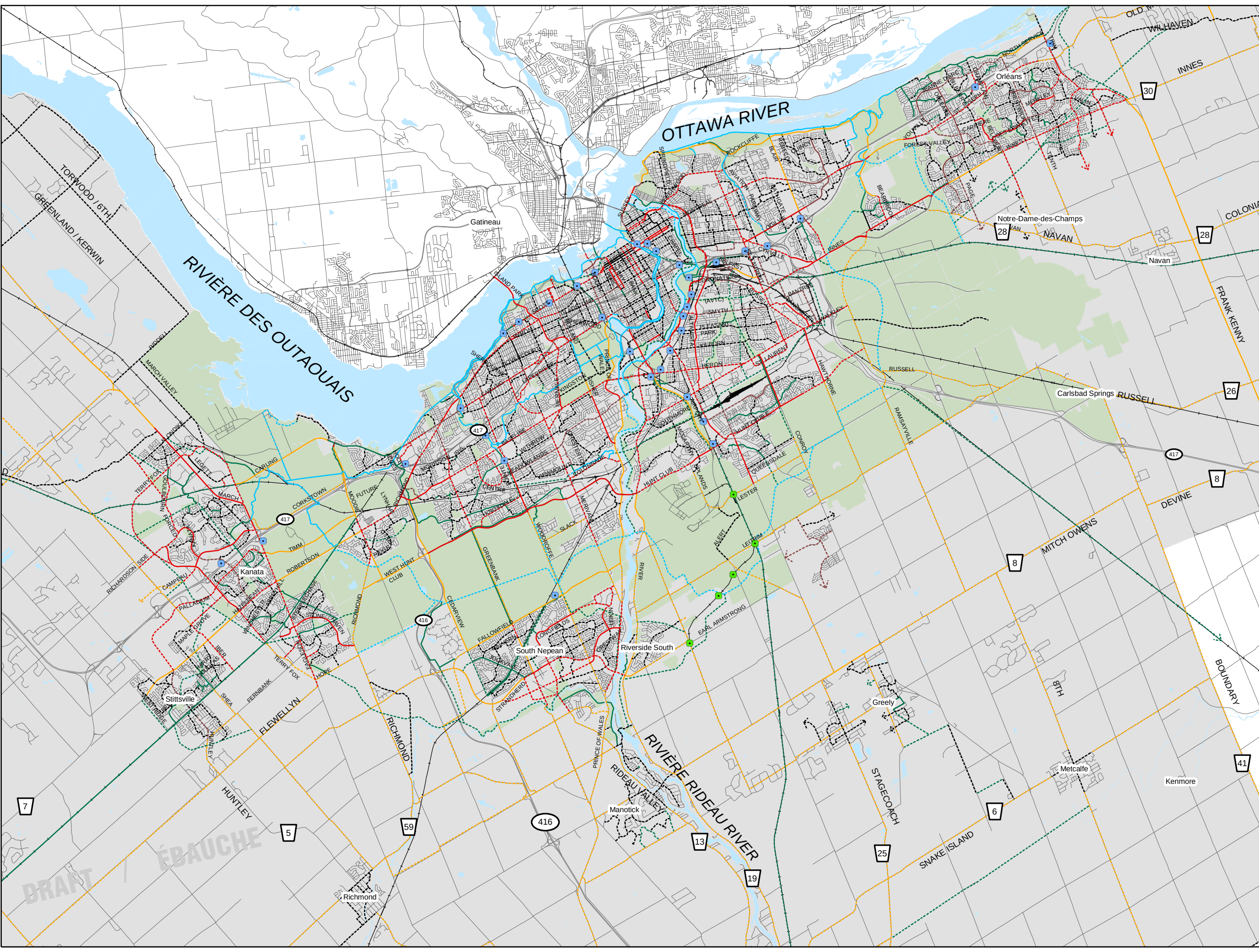
Prepared by:



In Association with: / avec:
Nancy Smith
David Hunt

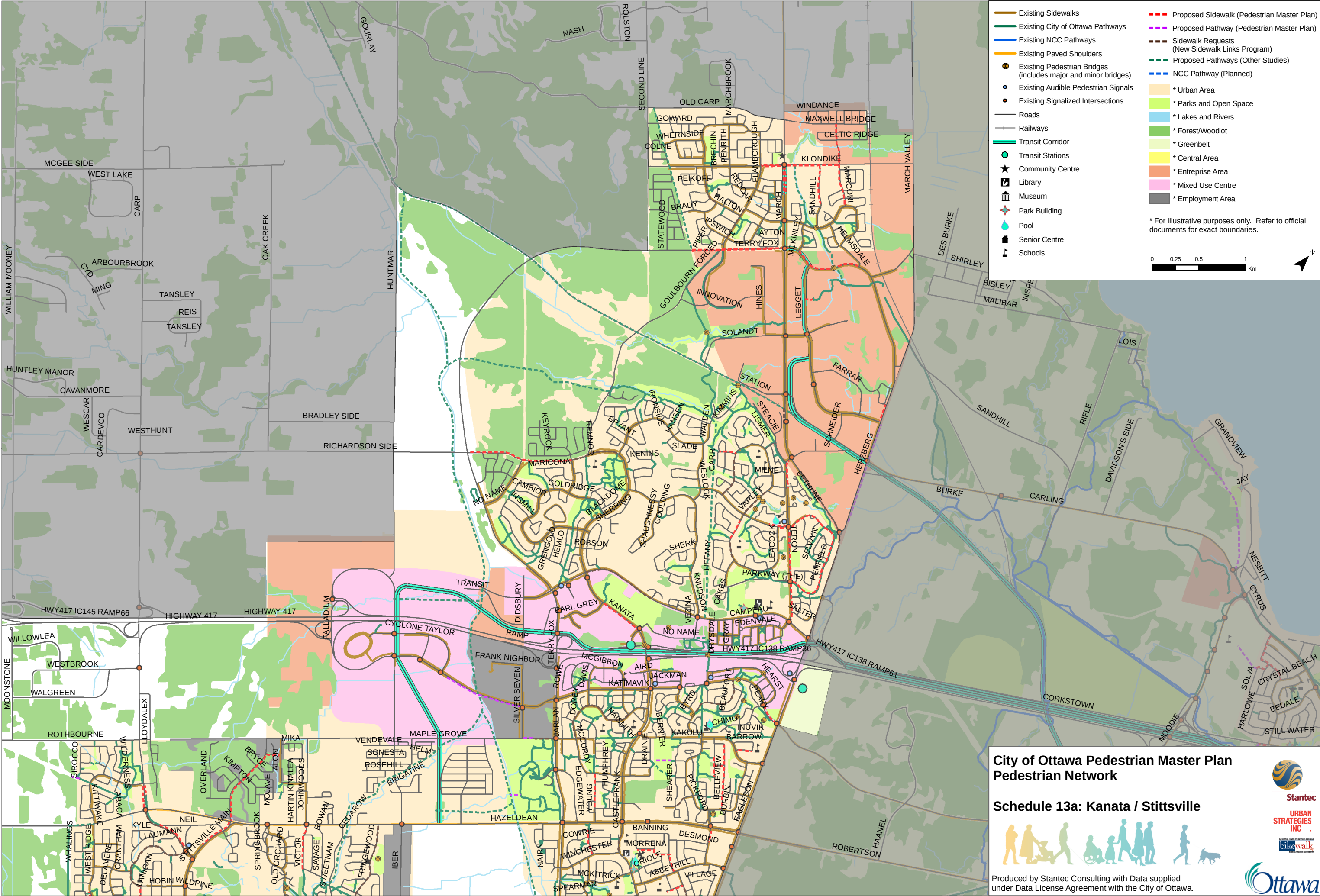
OTTAWA CYCLING PLAN /
PLAN DU RÉSEAU CYCLABLE D'OTTAWA
Figure 3-5b
Draft Network Facility Types
Installation-types du réseau:
propositions

- Legend / Légende
- Existing Capital Pathway
Sentier de la capitale existant
 - Planned Capital Pathway
Sentier de la capital projetée
 - Existing Bicycle Lane
Voie cyclable existante
 - Proposed Bicycle Lane
Voie cyclable proposée
 - Existing Paved Shoulder
Accotement asphalté existant
 - Proposed Paved Shoulder
Accotement asphalté proposé
 - Existing Wide Curb Lane
Voie en bordure élargie existante
 - Proposed Wide Curb Lane
Voie en bordure élargie proposée
 - Existing Signed Route
Route signalisée existante
 - Proposed Signed Route
Route signalisée proposée
 - Existing Off-Road Pathway
Allée hors-route existante
 - Proposed Off-Road Pathway
Allée hors-route proposée
 - Major Public Parks & Open Space
 - Lakes & Rivers
Lacs et cours d'eau
 - Provincial Highway
Autoroute provinciale
 - City of Ottawa
 - Existing Rapid Transit Station
 - Proposed Light Rail Transit Station



APPENDIX D

The City of Ottawa *Ottawa Pedestrian Master Plan* Network Maps



City of Ottawa Pedestrian Master Plan Pedestrian Network

Schedule 13a: Kanata / Stittsville



Produced by Stantec Consulting with Data supplied under Data License Agreement with the City of Ottawa.



APPENDIX E

Excerpts from the *2011 Trans O-D Survey Report*

Kanata - Stittsville

Demographic Characteristics

Population	105,210	Actively Travelled	83,460
Employed Population	49,640	Number of Vehicles	64,540
Households	38,010	Area (km ²)	82.6

Occupation Status (age 5+)	Male	Female	Total
Full Time Employed	24,670	19,590	44,260
Part Time Employed	1,540	3,840	5,380
Student	13,630	13,410	27,040
Retiree	6,480	8,350	14,820
Unemployed	850	940	1,790
Homemaker	160	3,310	3,470
Other	350	1,010	1,360
Total:	47,690	50,440	98,120

Traveller Characteristics	Male	Female	Total
Transit Pass Holders	5,940	6,920	12,860

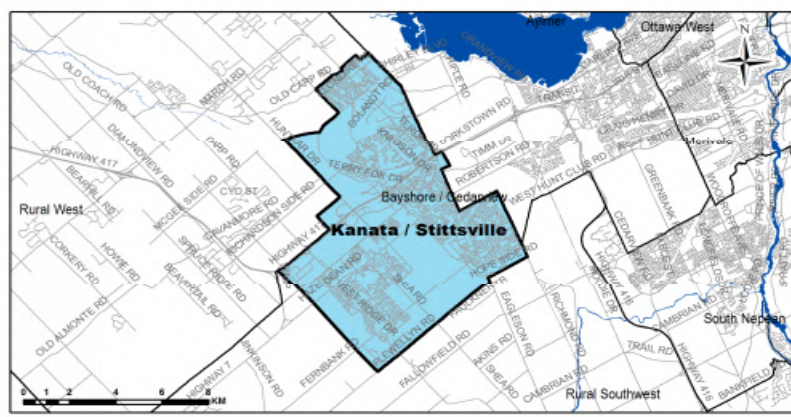
Licensed Drivers	36,280	36,790	73,070
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Telecommuters	200	380	580
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Trips made by residents	135,300	143,330	278,630
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Selected Indicators

Daily Trips per Person (age 5+)	2.84
Vehicles per Person	0.61
Number of Persons per Household	2.77
Daily Trips per Household	7.33
Vehicles per Household	1.70
Workers per Household	1.31
Population Density (Pop/km2)	1270

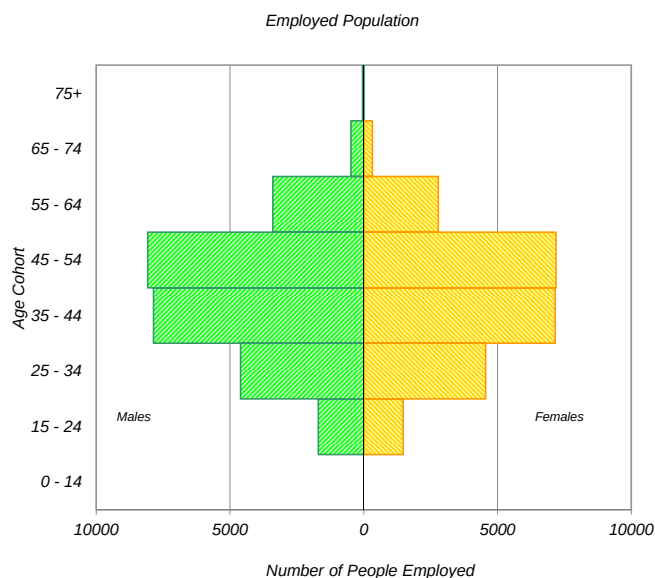
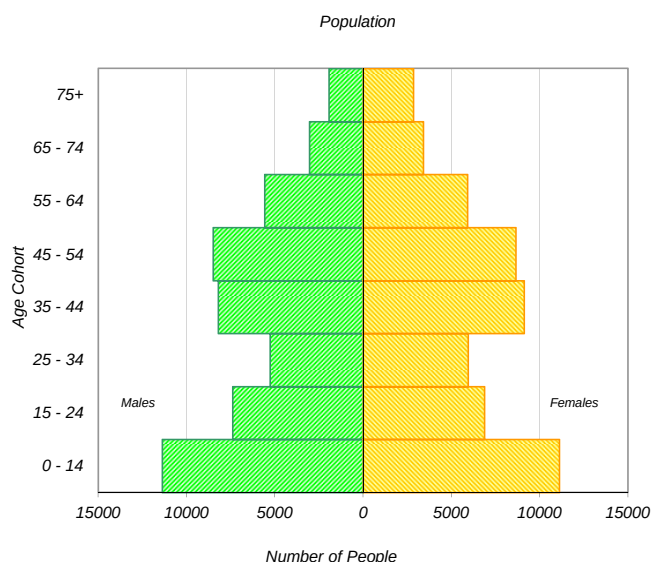


Household Size		
1 person	5,810	15%
2 persons	11,660	31%
3 persons	7,490	20%
4 persons	8,890	23%
5+ persons	4,160	11%
Total:	38,010	100%

Households by Vehicle Availability		
0 vehicles	1,050	3%
1 vehicle	14,090	37%
2 vehicles	19,110	50%
3 vehicles	3,000	8%
4+ vehicles	770	2%
Total:	38,010	100%

Households by Dwelling Type

Single-detached	21,610	57%
Semi-detached	3,890	10%
Townhouse	10,550	28%
Apartment/Condo	1,960	5%
Total:	38,010	100%

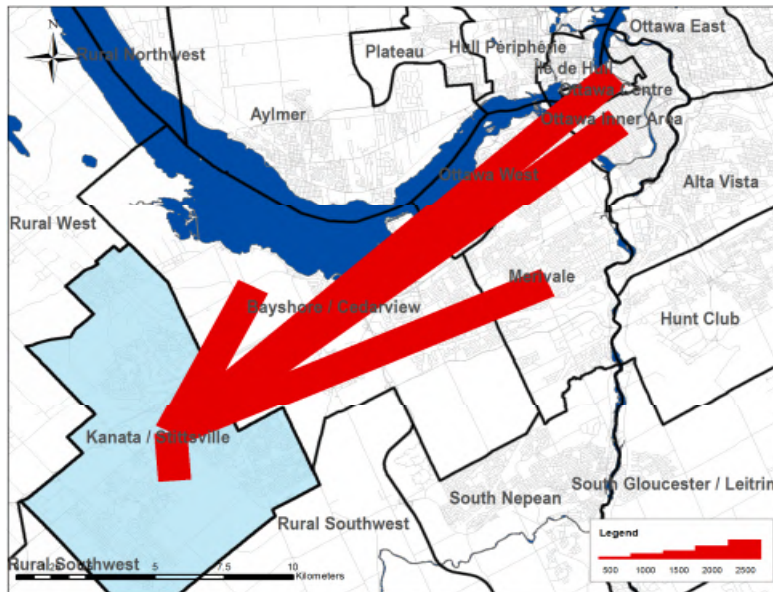


* In 2005 data was only collected for household members aged 11+ therefore these results cannot be compared to the 2011 data.

Travel Patterns

Top Five Destinations of Trips from Kanata - Stittsville

AM Peak Period



Summary of Trips to and from Kanata - Stittsville

AM Peak Period (6:30 - 8:59)

Districts	Destinations of Trips From		Origins of Trips To	
	District	% Total	District	% Total
Ottawa Centre	4,560	8%	140	0%
Ottawa Inner Area	3,350	6%	970	2%
Ottawa East	660	1%	260	1%
Beacon Hill	280	0%	170	0%
Alta Vista	1,810	3%	660	1%
Hunt Club	490	1%	420	1%
Merivale	3,410	6%	1,200	3%
Ottawa West	2,020	4%	840	2%
Bayshore / Cedarview	5,010	9%	2,420	5%
Orléans	290	1%	500	1%
Rural East	100	0%	30	0%
Rural Southeast	50	0%	260	1%
South Gloucester / Leirtrim	60	0%	140	0%
South Nepean	690	1%	1,800	4%
Rural Southwest	1,130	2%	1,850	4%
Kanata / Stittsville	30,360	54%	30,360	66%
Rural West	1,050	2%	3,250	7%
Île de Hull	670	1%	30	0%
Hull Périphérie	160	0%	30	0%
Plateau	100	0%	230	0%
Aylmer	0	0%	190	0%
Rural Northwest	20	0%	60	0%
Pointe Gatineau	20	0%	80	0%
Gatineau Est	0	0%	60	0%
Rural Northeast	30	0%	50	0%
Buckingham / Masson-Angers	30	0%	10	0%
Ontario Sub-Total:	55,320	98%	45,270	98%
Québec Sub-Total:	1,030	2%	740	2%
Total:	56,350	100%	46,010	100%

Trips by Trip Purpose

24 Hours	From District		To District		Within District	
Work or related	27,180	29%	17,020	18%	14,550	9%
School	7,070	7%	2,500	3%	15,110	9%
Shopping	6,070	6%	9,150	10%	22,480	14%
Leisure	8,450	9%	10,590	11%	17,090	11%
Medical	2,520	3%	1,170	1%	2,660	2%
Pick-up / drive passenger	6,570	7%	5,470	6%	15,190	9%
Return Home	33,610	35%	45,620	48%	65,770	41%
Other	3,560	4%	3,590	4%	8,440	5%
Total:	95,030	100%	95,110	100%	161,290	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Work or related	18,030	69%	11,020	70%	7,430	24%
School	4,890	19%	2,280	15%	11,740	39%
Shopping	170	1%	320	2%	760	3%
Leisure	340	1%	400	3%	780	3%
Medical	330	1%	230	1%	350	1%
Pick-up / drive passenger	1,260	5%	580	4%	4,760	16%
Return Home	290	1%	380	2%	1,980	7%
Other	670	3%	430	3%	2,560	8%
Total:	25,980	100%	15,640	100%	30,360	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Work or related	390	2%	350	1%	930	2%
School	370	2%	0	0%	90	0%
Shopping	1,030	5%	1,910	7%	5,100	14%
Leisure	2,140	11%	3,080	11%	4,130	11%
Medical	230	1%	180	1%	400	1%
Pick-up / drive passenger	1,980	10%	1,980	7%	3,410	9%
Return Home	12,130	64%	20,550	71%	21,560	58%
Other	680	4%	860	3%	1,850	5%
Total:	18,950	100%	28,910	100%	37,470	100%

Peak Period (%)	Total:	% of 24 Hours	Within District (%)
24 Hours	351,430		46%
AM Peak Period	71,980	20%	42%
PM Peak Period	85,330	24%	44%

Trips by Primary Travel Mode

24 Hours	From District		To District		Within District	
Auto Driver	63,470	67%	63,830	67%	92,190	57%
Auto Passenger	15,220	16%	14,920	16%	31,880	20%
Transit	12,200	13%	12,270	13%	4,050	3%
Bicycle	360	0%	410	0%	960	1%
Walk	40	0%	50	0%	21,080	13%
Other	3,730	4%	3,660	4%	11,130	7%
Total:	95,020	100%	95,140	100%	161,290	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Auto Driver	15,360	59%	11,530	74%	13,630	45%
Auto Passenger	2,450	9%	1,160	7%	5,050	17%
Transit	6,230	24%	1,290	8%	1,210	4%
Bicycle	30	0%	80	1%	220	1%
Walk	0	0%	40	0%	5,730	19%
Other	1,900	7%	1,560	10%	4,510	15%
Total:	25,970	100%	15,660	100%	30,350	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Auto Driver	13,850	73%	17,660	61%	21,240	57%
Auto Passenger	3,240	17%	4,270	15%	8,570	23%
Transit	1,270	7%	5,980	21%	670	2%
Bicycle	40	0%	100	0%	260	1%
Walk	40	0%	0	0%	4,570	12%
Other	520	3%	910	3%	2,160	6%
Total:	18,960	100%	28,920	100%	37,470	100%

Avg Vehicle Occupancy	From District		To District		Within District	
24 Hours	1.24		1.23		1.35	
AM Peak Period	1.16		1.10		1.37	
PM Peak Period	1.23		1.24		1.40	

Transit Modal Split	From District		To District		Within District	
24 Hours	13%		13%		3%	
AM Peak Period	26%		9%		6%	
PM Peak Period	7%		21%		2%	

Rural West

Demographic Characteristics

Population	24,960	Actively Travelled	19,280
Employed Population	12,280	Number of Vehicles	18,930
Households	8,750	Area (km ²)	744.4

Occupation Status (age 5+)	Male	Female	Total
Full Time Employed	6,190	4,610	10,800
Part Time Employed	480	990	1,470
Student	2,720	2,970	5,680
Retiree	1,920	1,900	3,820
Unemployed	300	150	450
Homemaker	60	970	1,030
Other	260	140	390
Total:	11,920	11,730	23,660

Traveller Characteristics	Male	Female	Total
Transit Pass Holders	620	550	1,170

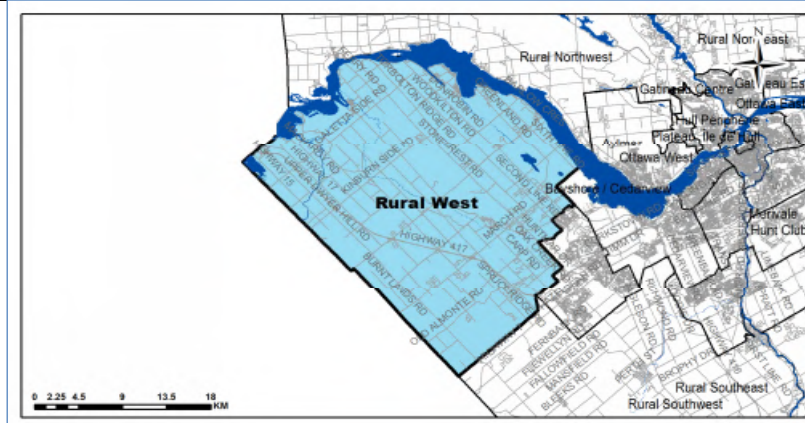
Licensed Drivers	9,590	9,180	18,770
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Telecommuters	90	100	190
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Trips made by residents	28,240	31,610	59,850
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Selected Indicators

Daily Trips per Person (age 5+)	2.53
Vehicles per Person	0.76
Number of Persons per Household	2.85
Daily Trips per Household	6.84
Vehicles per Household	2.16
Workers per Household	1.40
Population Density (Pop/km ²)	30



Household Size

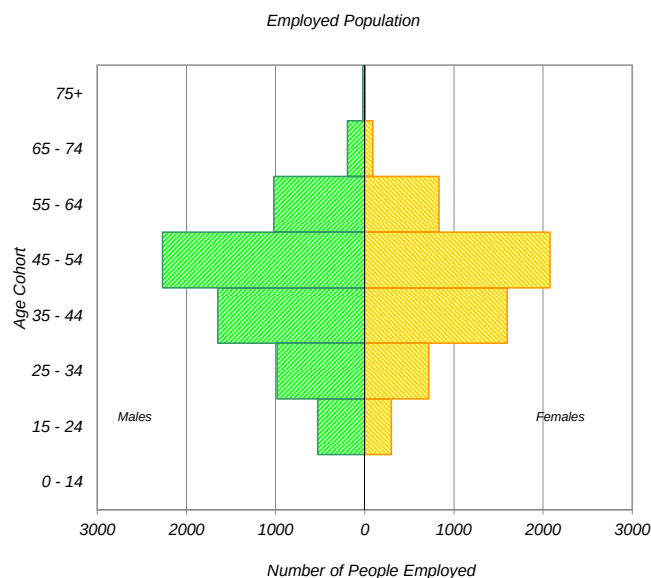
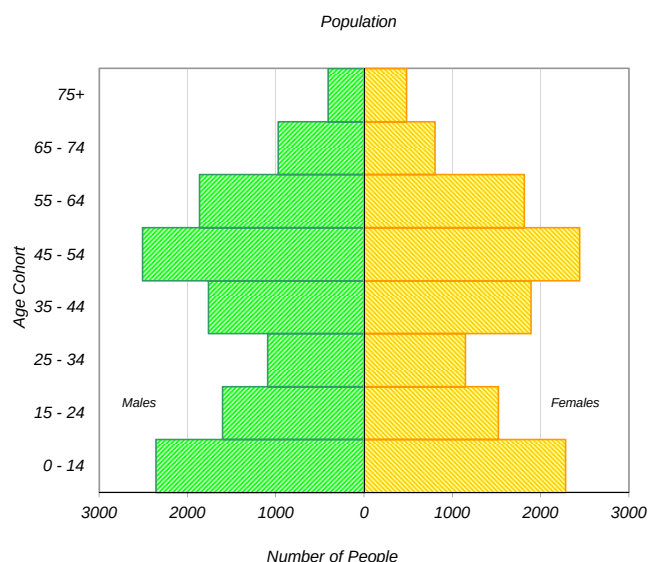
1 person	1,280	15%
2 persons	3,330	38%
3 persons	1,520	17%
4 persons	1,800	21%
5+ persons	820	9%
Total:	8,750	100%

Households by Vehicle Availability

0 vehicles	90	1%
1 vehicle	1,820	21%
2 vehicles	4,540	52%
3 vehicles	1,530	17%
4+ vehicles	770	9%
Total:	8,750	100%

Households by Dwelling Type

Single-detached	8,330	95%
Semi-detached	160	2%
Townhouse	170	2%
Apartment/Condo	90	1%
Total:	8,750	100%

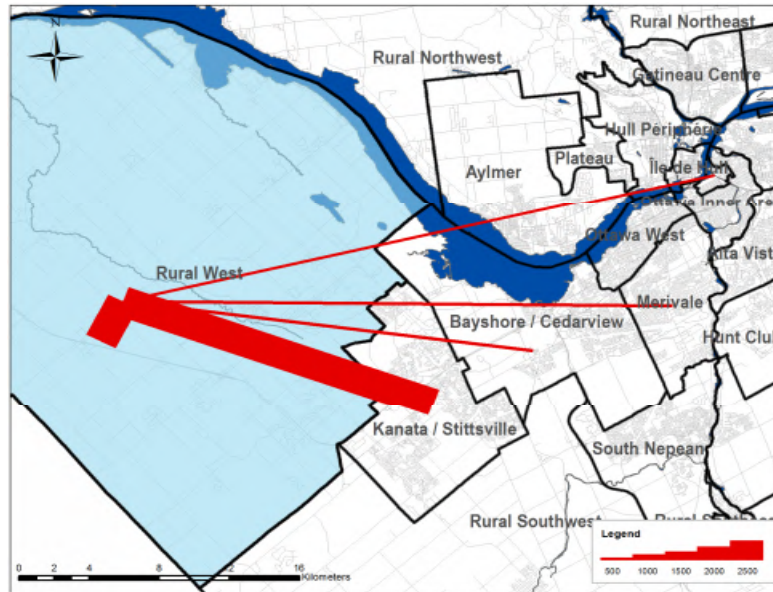


* In 2005 data was only collected for household members aged 11+ therefore these results cannot be compared to the 2011 data.

Travel Patterns

Top Five Destinations of Trips from Rural West

AM Peak Period



Summary of Trips to and from Rural West

AM Peak Period (6:30 - 8:59)

Districts	Destinations of Trips From		Origins of Trips To	
	District	% Total	District	% Total
Ottawa Centre	430	4%	0	0%
Ottawa Inner Area	380	4%	20	0%
Ottawa East	80	1%	90	1%
Beacon Hill	70	1%	40	1%
Alta Vista	180	2%	20	0%
Hunt Club	80	1%	60	1%
Merivale	720	7%	70	1%
Ottawa West	170	2%	70	1%
Bayshore / Cedarview	760	7%	380	6%
Orléans	0	0%	70	1%
Rural East	0	0%	0	0%
Rural Southeast	20	0%	0	0%
South Gloucester / Leitrim	60	1%	40	1%
South Nepean	30	0%	80	1%
Rural Southwest	160	2%	80	1%
Kanata / Stittsville	3,250	31%	1,050	17%
Rural West	4,020	38%	4,020	65%
Île de Hull	140	1%	0	0%
Hull Périphérie	50	0%	0	0%
Plateau	0	0%	0	0%
Aylmer	0	0%	50	1%
Rural Northwest	10	0%	0	0%
Pointe Gatineau	20	0%	10	0%
Gatineau Est	0	0%	20	0%
Rural Northeast	0	0%	0	0%
Buckingham / Masson-Angers	0	0%	0	0%
Ontario Sub-Total:	10,410	98%	6,090	99%
Québec Sub-Total:	220	2%	80	1%
Total:	10,630	100%	6,170	100%

Trips by Trip Purpose

24 Hours	From District		To District		Within District	
Work or related	6,640	32%	2,300	11%	1,860	12%
School	1,930	9%	460	2%	2,220	14%
Shopping	2,930	14%	220	1%	750	5%
Leisure	2,240	11%	1,440	7%	1,310	8%
Medical	680	3%	150	1%	420	3%
Pick-up / drive passenger	1,610	8%	800	4%	1,400	9%
Return Home	3,570	17%	14,860	72%	6,720	43%
Other	1,080	5%	370	2%	880	6%
Total:	20,680	100%	20,600	100%	15,560	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Work or related	4,090	62%	1,410	65%	1,140	28%
School	1,480	22%	420	19%	2,010	50%
Shopping	130	2%	0	0%	90	2%
Leisure	110	2%	40	2%	40	1%
Medical	120	2%	30	1%	0	0%
Pick-up / drive passenger	460	7%	50	2%	430	11%
Return Home	0	0%	150	7%	170	4%
Other	230	3%	60	3%	140	3%
Total:	6,620	100%	2,160	100%	4,020	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Work or related	40	1%	30	0%	50	1%
School	40	1%	0	0%	0	0%
Shopping	550	17%	30	0%	140	4%
Leisure	510	16%	290	4%	510	14%
Medical	170	5%	40	1%	0	0%
Pick-up / drive passenger	360	11%	360	5%	430	12%
Return Home	1,380	42%	5,950	88%	2,310	63%
Other	200	6%	40	1%	230	6%
Total:	3,250	100%	6,740	100%	3,670	100%

Peak Period (%)	Total:	% of 24 Hours	Within District (%)
24 Hours	56,840		27%
AM Peak Period	12,800	23%	31%
PM Peak Period	13,660	24%	27%

Trips by Primary Travel Mode

24 Hours	From District		To District		Within District	
Auto Driver	15,110	73%	15,000	73%	8,640	55%
Auto Passenger	3,170	15%	3,310	16%	2,320	15%
Transit	790	4%	680	3%	0	0%
Bicycle	190	1%	180	1%	50	0%
Walk	0	0%	0	0%	720	5%
Other	1,430	7%	1,430	7%	3,840	25%
Total:	20,690	100%	20,600	100%	15,570	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Auto Driver	4,400	67%	1,570	73%	1,670	42%
Auto Passenger	610	9%	180	8%	490	12%
Transit	650	10%	0	0%	0	0%
Bicycle	0	0%	0	0%	0	0%
Walk	0	0%	0	0%	140	3%
Other	950	14%	400	19%	1,720	43%
Total:	6,610	100%	2,150	100%	4,020	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Auto Driver	2,590	80%	5,070	75%	1,960	54%
Auto Passenger	540	17%	850	13%	870	24%
Transit	0	0%	450	7%	0	0%
Bicycle	10	0%	0	0%	20	1%
Walk	0	0%	0	0%	180	5%
Other	100	3%	370	5%	630	17%
Total:	3,240	100%	6,740	100%	3,660	100%

Avg Vehicle Occupancy	From District		To District		Within District	
24 Hours	1.21		1.22		1.27	
AM Peak Period	1.14		1.11		1.29	
PM Peak Period	1.21		1.17		1.44	

Transit Modal Split	From District		To District		Within District	
24 Hours	4%		4%		0%	
AM Peak Period	11%		0%		0%	
PM Peak Period	0%		7%		0%	

APPENDIX F

Collision Data

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

SECOND LINE RD & TERRY FOX DR

Former Municipality: Kanata

Traffic Control: Traffic signal

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
1	2011/12/27	Tue	04:16	Clear	Dark	Single vehicle	P.D. only	V1 S	Wet	Unknown	Passenger van	Ran off road		0

DUNROBIN RD & MARCH RD

Former Municipality: Kanata

Traffic Control: Traffic signal

Number of Collisions: 5

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
2	2009/05/18	Mo	15:15	Clear	Daylight	Turning	P.D. only	V1 E V2 W	Dry Dry	Turning left Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
3	2009/09/22	Tue	17:45	Clear	Daylight	Sideswipe	P.D. only	V1 W V2 W	Dry Dry	Changing lanes Turning right	Unknown Automobile, station	Other motor vehicle Other motor vehicle		0
4	2009/09/23	We	07:40	Clear	Daylight	Rear end	P.D. only	V1 E V2 E V3 E	Dry Dry Dry	Going ahead Stopped Stopped	Automobile, station Automobile, station Passenger van	Other motor vehicle Other motor vehicle Other motor vehicle		0
5	2010/02/10	We	06:30	Clear	Dark	Single vehicle	P.D. only	V1 S	Wet	Turning left	Automobile, station	Snowbank / drift		0
6	2011/01/20	Thu	13:00	Clear	Daylight	Rear end	P.D. only	V1 S V2 S	Dry Dry	Going ahead Stopped	Passenger van Pick-up truck	Other motor vehicle Other motor vehicle		0

HALTON TER & MARCH RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 5

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
7	2009/05/27	We	09:20	Rain	Daylight	Angle	P.D. only	V1 N V2 W	Wet Wet	Going ahead Turning left	Delivery van Truck - closed	Other motor vehicle Other motor vehicle		0
8	2009/10/08	Thu	12:30	Clear	Daylight	Turning	Non-fatal	V1 S V2 N	Dry Dry	Going ahead Turning left	Motorcycle Automobile, station	Other motor vehicle Other motor vehicle		0

(Note: Time of Day = "00:00" represents unknown collision time)

January 15, 2013

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

9	2010/04/23	Frid	21:50	Clear	Dark	Sideswipe	Non-fatal	V1 N V2 N	Dry Dry	Going ahead Turning right	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
10	2010/08/12	Thu	21:58	Clear	Dark	Angle	P.D. only	V1 S V2 W	Dry Dry	Going ahead Turning left	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
11	2011/07/10	Sun	13:10	Clear	Daylight	Angle	Non-fatal	V1 N V2 E	Dry Dry	Going ahead Going ahead	Automobile, station Bicycle	Cyclist Other motor vehicle	0

KLONDIKE RD & MARCH RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 14

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
12	2009/02/09	Mo	09:00	Clear	Daylight	Angle	Non-fatal	V1 S V2 E	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
13	2009/07/12	Sun	06:28	Clear	Daylight	Angle	P.D. only	V1 N V2 W	Dry Dry	Going ahead Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
14	2009/08/25	Tue	16:00	Clear	Daylight	Sideswipe	P.D. only	V1 N V2 N	Dry Dry	Changing lanes Turning right	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle		0
15	2009/09/02	We	11:18	Clear	Daylight	Rear end	P.D. only	V1 N V2 N	Dry Dry	Going ahead Stopped	Truck - open Automobile, station	Other motor vehicle Skidding/Sliding		0
16	2009/12/23	We	18:29	Clear	Dark	Turning	Non-fatal	V1 N V2 S	Wet Wet	Turning left Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
17	2010/01/28	Thu	20:30	Snow	Dark	Angle	Non-fatal	V1 S V2 E	Wet Wet	Going ahead Turning right	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
18	2010/01/28	Thu	13:05	Drifting	Daylight	Angle	Non-fatal	V1 W V2 S	Wet Wet	Going ahead Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
19	2010/06/29	Tue	13:47	Clear	Daylight	Angle	P.D. only	V1 N V2 W	Dry Dry	Going ahead Turning right	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
20	2010/08/20	Frid	11:28	Clear	Daylight	Turning	P.D. only	V1 N V2 N	Dry Dry	Turning right Turning right	Pick-up truck Truck and trailer	Other motor vehicle Other motor vehicle		0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

21	2010/09/03	Frid	14:45	Clear	Daylight	Angle	Non-fatal	V1 E V2 N	Dry Dry	Going ahead Going ahead	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
22	2010/09/24	Frid	16:50	Clear	Daylight	Angle	P.D. only	V1 W V2 N	Dry Dry	Turning right Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
23	2010/12/31	Frid	13:35	Clear	Daylight	Angle	P.D. only	V1 N V2 W	Dry Dry	Going ahead Going ahead	Automobile, station Passenger van	Other motor vehicle Other motor vehicle	0
24	2011/02/09	We	16:20	Snow	Daylight	Rear end	P.D. only	V1 N V2 N	Loose snow Loose snow	Going ahead Slowing or	Pick-up truck Automobile, station	Skidding/Sliding Other motor vehicle	0
25	2011/08/04	Thu	08:55	Clear	Daylight	Rear end	P.D. only	V1 W V2 W	Dry Dry	Turning right Turning right	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0

MARCH RD & MORGAN'S GRANT WAY

Former Municipality: Kanata

Traffic Control: Traffic signal

Number of Collisions: 21

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
26	2009/03/14	Sat	09:55	Clear	Daylight	Angle	Non-fatal	V1 N V2 W	Dry Dry	Slowing or Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
27	2009/05/23	Sat	18:31	Clear	Daylight	Angle	Non-fatal	V1 E V2 S	Dry Dry	Turning right Going ahead	Passenger van Bicycle	Cyclist Other motor vehicle		0
28	2009/06/19	Frid	01:44	Rain	Dark	Single vehicle	P.D. only	V1 N	Wet	Turning left	Automobile, station	Other Fixed Objects		0
29	2009/07/12	Sun	17:59	Clear	Daylight	Turning	P.D. only	V1 N V2 S	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
30	2009/07/30	Thu	08:44	Clear	Daylight	Angle	Non-fatal	V1 S V2 E	Dry Dry	Going ahead Going ahead	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle		0
31	2009/08/11	Tue	11:05	Clear	Daylight	Rear end	P.D. only	V1 E V2 E	Dry Dry	Turning right Turning right	Delivery van Automobile, station	Other motor vehicle Other motor vehicle		0
32	2010/01/27	We	21:45	Clear	Dark	Turning	P.D. only	V1 N V2 S	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
33	2010/02/03	We	08:20	Snow	Daylight	Single vehicle	Non-fatal	V1 E	Wet	Turning left	Pick-up truck	Pedestrian		1

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

34	2010/02/03	We	07:30	Clear	Daylight	Turning	P.D. only	V1 S V2 N	Wet Wet	Going ahead Making U-Turn	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
35	2010/04/21	We	08:01	Clear	Daylight	Rear end	Non-fatal	V1 E V2 E	Dry Dry	Turning right Turning right	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
36	2010/04/27	Tue	17:10	Rain	Daylight	Turning	P.D. only	V1 N V2 S	Wet Wet	Going ahead Turning left	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0
37	2010/07/22	Thu	07:00	Clear	Daylight	Rear end	P.D. only	V1 E V2 E	Dry Dry	Turning right Turning right	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
38	2010/10/23	Sat	15:10	Clear	Daylight	Sideswipe	P.D. only	V1 W V2 W	Dry Dry	Overtaking Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
39	2010/11/22	Mo	17:30	Fog,	Dark	Rear end	P.D. only	V1 E V2 E	Wet Wet	Turning right Turning right	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
40	2010/11/24	We	16:30	Clear	Dusk	Turning	P.D. only	V1 N V2 S	Dry Dry	Slowing or Turning left	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0
41	2010/12/22	We	16:44	Clear	Dusk	Turning	Fatal	V1 N V2 S	Wet Wet	Going ahead Turning left	Truck - dump Automobile, station	Other motor vehicle Other motor vehicle	0
42	2011/02/01	Tue	16:50	Clear	Daylight	Turning	P.D. only	V1 E V2 W	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
43	2011/04/28	Thu	16:20	Clear	Daylight	Sideswipe	P.D. only	V1 W V2 W	Dry Dry	Changing lanes Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
44	2011/08/20	Sat	15:26	Clear	Daylight	Rear end	P.D. only	V1 N V2 N	Wet Wet	Slowing or Stopped	Automobile, station Pick-up truck	Skidding/Sliding Other motor vehicle	0
45	2011/10/21	Frid	19:44	Clear	Dark	Turning	P.D. only	V1 S V2 N	Wet Wet	Turning left Going ahead	Pick-up truck Pick-up truck	Other motor vehicle Other motor vehicle	0
46	2011/11/19	Sat	15:05	Clear	Daylight	Angle	P.D. only	V1 N V2 W	Dry Dry	Going ahead Going ahead	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	

MARCH RD & TERRY FOX DR

Former Municipality: Kanata

Traffic Control: Traffic signal

Number of Collisions: 37

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

47	2009/01/23	Frid	20:00	Clear	Dark	Turning	P.D. only	V1 N V2 S	Wet Wet	Going ahead Turning left	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0
48	2009/02/15	Sun	21:00	Clear	Dark	Turning	Non-fatal	V1 S V2 N	Wet Wet	Turning left Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
49	2009/03/20	Frid	03:59	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Curb	0
50	2009/04/21	Tue	08:19	Clear	Daylight	Turning	Non-fatal	V1 N V2 S V3 W	Wet Wet Wet	Going ahead Turning left Turning left	Automobile, station Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle Other motor vehicle	0
51	2009/04/27	Mo	17:55	Clear	Daylight	Angle	P.D. only	V1 W V2 N V3 N	Dry Dry Dry	Going ahead Going ahead Going ahead	Automobile, station Automobile, station Automobile, station	Other motor vehicle Other motor vehicle Other motor vehicle	0
52	2009/05/09	Sat	13:21	Rain	Daylight	Turning	Non-fatal	V1 S V2 N V3 E	Wet Wet Wet	Going ahead Turning left Turning right	Passenger van Automobile, station Automobile, station	Other motor vehicle Other motor vehicle Other motor vehicle	0
53	2009/08/06	Thu	18:30	Clear	Daylight	Sideswipe	P.D. only	V1 W V2 W	Dry Dry	Changing lanes Turning left	Passenger van Automobile, station	Other motor vehicle Other motor vehicle	0
54	2009/08/11	Tue	20:41	Clear	Dark	Turning	Non-fatal	V1 N V2 S	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
55	2009/08/26	We	08:30	Clear	Daylight	Rear end	P.D. only	V1 N V2 N	Dry Dry	Turning right Turning right	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
56	2009/09/12	Sat	08:49	Clear	Daylight	Angle	Non-fatal	V1 N V2 W	Dry Dry	Going ahead Going ahead	Passenger van Automobile, station	Other motor vehicle Other motor vehicle	0
57	2009/10/08	Thu	08:00	Clear	Daylight	Turning	P.D. only	V1 N V2 S	Dry Dry	Going ahead Turning left	Truck and trailer Automobile, station	Other motor vehicle Other motor vehicle	0
58	2009/10/22	Thu	17:29	Rain	Daylight	Rear end	P.D. only	V1 N V2 N	Wet Wet	Slowing or Stopped	Automobile, station Automobile, station	Skidding/Sliding Other motor vehicle	0
59	2009/12/07	Mo	20:11	Snow	Dark	Other	P.D. only	V1 N V2 W	Slush Slush	Turning right Stopped	Truck and trailer Passenger van	Skidding/Sliding Other motor vehicle	0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

60	2009/12/11	Frid	12:23	Clear	Daylight	Rear end	Non	V1 W V2 W	Dry Dry	Turning right Turning right	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
61	2009/12/14	Mo	19:18	Snow	Dark	Turning	P.D. only	V1 S V2 N	Loose snow Loose snow	Going ahead Turning left	Automobile, station Passenger van	Other motor vehicle Other motor vehicle	0
62	2010/02/03	We	15:00	Clear	Daylight	Turning	Non-fatal	V1 S V2 N	Dry Dry	Going ahead Turning left	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
63	2010/02/08	Mo	20:21	Clear	Dark	Angle	Non-fatal	V1 W V2 S	Dry Dry	Going ahead Turning left	Passenger van Automobile, station	Other motor vehicle Other motor vehicle	0
64	2010/03/22	Mo	15:50	Clear	Daylight	Rear end	P.D. only	V1 N V2 N	Dry Dry	Going ahead Slowing or	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
65	2010/04/24	Sat	09:57	Clear	Daylight	Rear end	P.D. only	V1 N V2 N	Dry Dry	Changing lanes Stopped	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0
66	2010/05/18	Tue	09:35	Clear	Daylight	Turning	Non-fatal	V1 S V2 N	Dry Dry	Going ahead Turning left	Pick-up truck Pick-up truck	Other motor vehicle Other motor vehicle	0
67	2010/07/09	Frid	14:23	Clear	Daylight	Single vehicle	P.D. only	V1 S	Wet	Slowing or	Automobile, station	Skidding/Sliding	0
68	2010/08/02	Mo	01:57	Clear	Dark	Rear end	P.D. only	V1 N V2 N	Dry Dry	Going ahead Stopped	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
69	2010/08/29	Sun	17:58	Clear	Daylight	Angle	Non-fatal	V1 W V2 S	Dry Dry	Going ahead Going ahead	Automobile, station Passenger van	Other motor vehicle Other motor vehicle	0
70	2010/08/31	Tue	09:10	Clear	Daylight	Turning	P.D. only	V1 N V2 S V3 S V4 S	Dry Dry Dry Dry	Going ahead Turning left Turning left Turning left	Automobile, station Automobile, station Automobile, station Automobile, station	Other motor vehicle Other motor vehicle Other motor vehicle Other motor vehicle	0
71	2010/10/02	Sat	17:34	Clear	Daylight	Turning	P.D. only	V1 N V2 S	Dry Dry	Turning left Going ahead	Passenger van Automobile, station	Other motor vehicle Other motor vehicle	0
72	2010/10/11	Mo	16:17	Clear	Daylight	Single vehicle	Non-fatal	V1 N	Dry	Going ahead	Automobile, station	Pole (sign, parking	0

(Note: Time of Day = "00:00" represents unknown collision time

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

73	2010/10/28	Thu	07:20	Clear	Daylight	Turning	P.D. only	V1 N V2 S	Dry Dry	Going ahead Turning left	Pick-up truck Pick-up truck	Other motor vehicle Other motor vehicle	0
74	2010/12/07	Tue	16:45	Snow	Dusk	Rear end	P.D. only	V1 W V2 W	Slush Slush	Turning right Turning right	Pick-up truck Passenger van	Other motor vehicle Other motor vehicle	0
75	2011/03/15	Tue	10:33	Clear	Daylight	Turning	Non-fatal	V1 N V2 S V3 W	Dry Dry Dry	Going ahead Turning left Turning left	Passenger van Automobile, station Automobile, station	Other motor vehicle Other motor vehicle Other motor vehicle	0
76	2011/05/06	Frid	02:30	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Animal - wild	0
77	2011/06/22	We	23:57	Clear	Dark	Turning	Non-fatal	V1 N V2 S	Dry Dry	Turning left Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
78	2011/08/09	Tue	17:05	Rain	Daylight	Turning	P.D. only	V1 S V2 N	Wet Wet	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
79	2011/08/25	Thu	14:25	Clear	Daylight	Angle	P.D. only	V1 W V2 S V3 S	Dry Dry Dry	Going ahead Going ahead Stopped	Automobile, station Police vehicle Passenger van	Other motor vehicle Other motor vehicle Other Moveable	0
80	2011/09/03	Sat	20:10	Clear	Dark	Single vehicle	P.D. only	V1 E	Dry	Changing lanes	Automobile, station	Curb	0
81	2011/10/10	Mo	13:33	Clear	Daylight	Turning	P.D. only	V1 N V2 N	Dry Dry	Turning left Turning left	Automobile, station Passenger van	Other motor vehicle Other motor vehicle	0
82	2011/12/21	We	13:31	Freezing	Daylight	Rear end	P.D. only	V1 W V2 W	Wet Wet	Going ahead Stopped	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
83	2011/12/30	Frid	16:28	Freezing	Dusk	Turning	P.D. only	V1 N V2 S	Slush Slush	Turning left Going ahead	Passenger van Automobile, station	Other motor vehicle Other motor vehicle	0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

CATTERICK CRES & SHIRLEY'S BROOK DR S

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
1	2009/03/09	Mo	11:00	Snow	Daylight	Single vehicle	P.D. only	V1 S	Loose snow	Turning right	Automobile, station	Skidding/Sliding		0

DUNROBIN RD, HARWOOD LANE to KERWIN RD

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
2	2009/02/11	We	10:05	Clear	Daylight	Single vehicle	P.D. only	V1 S	Wet	Slowing or	Automobile, station	Skidding/Sliding		0
3	2010/03/17	We	17:00	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Passenger van	Animal - wild		0
4	2011/06/20	Mo	06:30	Clear	Daylight	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Animal - wild		0

DUNROBIN RD, KERWIN RD to ROCHON WAY

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
5	2009/06/08	Mo	06:30	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Passenger van	Animal - wild		0
6	2011/06/03	Frid	13:55	Clear	Daylight	Rear end	Non-fatal	V1 S V2 S	Dry Dry	Going ahead Slowing or	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
7	2011/09/17	Sat	06:20	Clear	Dawn	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0

DUNROBIN RD & RIDDELL DR

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
8	2011/08/29	Mo	17:32	Clear	Daylight	Angle	P.D. only	V1 W V2 S	Dry Dry	Turning left Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

DUNROBIN RD, RIDDELL DR to WAYBURN AVE

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
9	2009/10/13	Tue	15:25	Rain	Daylight	Rear end	P.D. only	V1 N V2 N	Wet Wet	Going ahead Slowing or	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0

DUNROBIN RD, ROCHON WAY to WAYBURN AVE

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
10	2009/08/04	Tue	11:45	Clear	Daylight	Approaching	Non-fatal	V1 S V2 N	Dry Dry	Overtaking Going ahead	Truck and trailer Automobile, station	Other motor vehicle Other motor vehicle		0
11	2009/09/12	Sat	22:24	Clear	Dark	Rear end	Non-fatal	V1 N V2 N	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0

DUNROBIN RD & WAYBURN AVE

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
12	2009/06/25	Thu	19:20	Clear	Daylight	Turning	P.D. only	V1 S V2 S	Dry Dry	Going ahead Turning left	Passenger van Automobile, station	Other motor vehicle Other motor vehicle		0

FLAMBOROUGH WAY & GOULBOURN FORCED RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
13	2011/01/06	Thu	16:45	Clear	Dusk	Other	P.D. only	V1 N V2 S	Dry Dry	Reversing Stopped	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
14	2011/01/18	Tue	21:43	Snow	Dark	Angle	P.D. only	V1 W V2 N	Loose snow Loose snow	Going ahead Going ahead	Automobile, station Automobile, station	Other motor vehicle Skidding/Sliding		0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

15	2011/08/09	Tue	18:41	Rain	Daylight	Turning	P.D. only	V1 E V2 W	Wet Wet	Going ahead Turning left	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0
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BRECKEN RIDGE CR & WEATHERSTONE ST

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
16	2009/04/12	Sun	14:00	Clear	Daylight	Angle	Non-fatal	V1 E V2 N	Dry Dry	Turning right Turning left	Passenger van Passenger van	Other motor vehicle Other motor vehicle		0

FLAMBOROUGH WAY, HALTON TER to MORGAN'S GRANT WAY

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
17	2010/12/24	Frid	23:43	Clear	Dark	Single vehicle	P.D. only	V1 E	Dry	Reversing	Automobile, station	Unattended vehicle		0

FLAMBOROUGH WAY & KLONDIKE RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
18	2009/06/05	Frid	19:00	Clear	Daylight	Single vehicle	Non-fatal	V1 N	Dry	Turning left	Automobile, station	Pedestrian		1
19	2010/09/20	Mo	07:45	Clear	Daylight	Angle	P.D. only	V1 E V2 S	Dry Dry	Turning right Going ahead	Passenger van Automobile, station	Other motor vehicle Other motor vehicle		0
20	2010/10/04	Mo	22:10	Clear	Dark	Other	P.D. only	V1 S V2 N	Dry Dry	Reversing Stopped	Automobile, station Passenger van	Other motor vehicle Other motor vehicle		0

FLAMBOROUGH WAY & LAXFORD DR

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

21	2011/04/20	We	19:46	Rain	Dark	Single vehicle	Non-fatal	V1 E	Wet	Slowing or	Motorcycle	Skidding/Sliding	0
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FLAMBOROUGH WAY & MORGAN'S GRANT WAY

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
22	2010/10/19	Tue	07:50	Clear	Daylight	Single vehicle	Non-fatal	V1 S	Dry	Turning left	Automobile, station	Pedestrian		1

FLAMBOROUGH WAY, MORGAN'S GRANT WAY to RUTHERGLEN TER

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
23	2009/12/02	We	19:10	Clear	Dark	Single vehicle	P.D. only	V1 U	Dry	Unknown	Unknown	Unattended vehicle		0

KLONDIKE RD & MARCONI AVE

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
24	2009/01/26	Mo	08:25	Clear	Daylight	Angle	P.D. only	V1 E V2 S	Dry Dry	Going ahead Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0

HALTON TER, HALTON TER to HALTON TER

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
25	2009/01/19	Mo	23:15	Snow	Dark	Single vehicle	P.D. only	V1 W	Loose snow	Going ahead	Automobile, station	Snowbank / drift		0

GOWARD DR & SECOND LINE

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

26	2011/01/07	Frid	21:45	Snow	Dark	Rear end	P.D. only	V1 S V2 S	Loose snow Loose snow	Slowing or Stopped	Passenger van Pick-up truck	Skidding/Sliding Other motor vehicle	0
27	2011/01/29	Sat	13:20	Clear	Daylight	Single vehicle	P.D. only	V1 E	Loose snow	Slowing or	Automobile, station	Skidding/Sliding	0

HALTON TER & MARCH RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 5

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
28	2009/05/27	We	09:20	Rain	Daylight	Angle	P.D. only	V1 N V2 W	Wet Wet	Going ahead Turning left	Delivery van Truck - closed	Other motor vehicle Other motor vehicle		0
29	2009/10/08	Thu	12:30	Clear	Daylight	Turning	Non-fatal	V1 S V2 N	Dry Dry	Going ahead Turning left	Motorcycle Automobile, station	Other motor vehicle Other motor vehicle		0
30	2010/04/23	Frid	21:50	Clear	Dark	Sideswipe	Non-fatal	V1 N V2 N	Dry Dry	Going ahead Turning right	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
31	2010/08/12	Thu	21:58	Clear	Dark	Angle	P.D. only	V1 S V2 W	Dry Dry	Going ahead Turning left	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle		0
32	2011/07/10	Sun	13:10	Clear	Daylight	Angle	Non-fatal	V1 N V2 E	Dry Dry	Going ahead Going ahead	Automobile, station Bicycle	Cyclist Other motor vehicle		0

MAXWELL BRIDGE, PENDRA to WINDANCE

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
33	2009/06/08	Mo	08:33	Clear	Daylight	Single vehicle	P.D. only	V1 U	Dry	Unknown	Unknown	Unattended vehicle		0

HALTON TER & MUSKEGO CRES

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

34	2011/10/06	Thu	16:17	Clear	Daylight	Turning	P.D. only	V1 N V2 N	Dry Dry	Turning left Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0
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HALTON TER, NEWCASTLE AVE to PEPPERIDGE WAY

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
35	2009/01/27	Tue	08:10	Clear	Daylight	Rear end	P.D. only	V1 E V2 E	Dry Dry	Going ahead Stopped	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0

HALTON TER, NEWCASTLE AVE to PEIKOFF CRES

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
36	2010/02/06	Sat	08:15	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Pulling away	Automobile, station	Unattended vehicle		0

HELMSDALE DR & TERRY FOX DR

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
37	2010/04/12	Mo	08:30	Clear	Daylight	Angle	Non-fatal	V1 W V2 S	Dry Dry	Going ahead Going ahead	Bicycle Automobile, station	Other motor vehicle Cyclist		0
38	2010/10/01	Frid	07:59	Clear	Daylight	Angle	Non-fatal	V1 W V2 S	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
39	2011/11/23	We	08:47	Snow	Daylight	Single vehicle	Non-fatal	V1 N	Slush	Turning right	Automobile, station	Pole (sign, parking)		0

KINROSS PRIV & SHIRLEY'S BROOK DR

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
40	2009/09/02	We	16:15	Clear	Daylight	Turning	Non-fatal	V1 W V2 E	Dry Dry	Going ahead Turning left	Motorcycle Automobile, station	Other motor vehicle Other motor vehicle		0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

KLONDIKE RD, HALTON TER to WIMBLEDON WAY

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
41	2009/07/12	Sun	04:57	Clear	Dawn	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Pick-up truck	Curb		0

KLONDIKE RD, KLONDIKE RD to MARCH VALLEY RD

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
42	2009/10/01	Thu	10:20	Clear	Daylight	Single vehicle	P.D. only	V1 W	Wet	Going ahead	Pick-up truck	Unattended vehicle		0
43	2011/11/18	Frid	22:51	Clear	Dark	Single vehicle	P.D. only	V1 E	Dry	Unknown	Unknown	Unattended vehicle		0

KLONDIKE RD & WEATHERSTON

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
44	2011/11/29	Tue	10:40	Rain	Daylight	Single vehicle	P.D. only	V1 N	Wet	Turning left	Passenger van	Curb		0

KLONDIKE RD & MARCH RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 14

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
45	2009/02/09	Mo	09:00	Clear	Daylight	Angle	Non-fatal	V1 S V2 E	Dry Dry	Going ahead Turning left	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
46	2009/07/12	Sun	06:28	Clear	Daylight	Angle	P.D. only	V1 N V2 W	Dry Dry	Going ahead Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
47	2009/08/25	Tue	16:00	Clear	Daylight	Sideswipe	P.D. only	V1 N V2 N	Dry Dry	Changing lanes Turning right	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle		0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

48	2009/09/02	We	11:18	Clear	Daylight	Rear end	P.D. only	V1 N	Dry	Going ahead	Truck - open	Other motor vehicle	0
								V2 N	Dry	Stopped	Automobile, station	Skidding/Sliding	
49	2009/12/23	We	18:29	Clear	Dark	Turning	Non-fatal	V1 N	Wet	Turning left	Automobile, station	Other motor vehicle	0
								V2 S	Wet	Going ahead	Pick-up truck	Other motor vehicle	
50	2010/01/28	Thu	20:30	Snow	Dark	Angle	Non-fatal	V1 S	Wet	Going ahead	Automobile, station	Other motor vehicle	0
								V2 E	Wet	Turning right	Automobile, station	Other motor vehicle	
51	2010/01/28	Thu	13:05	Drifting	Daylight	Angle	Non-fatal	V1 W	Wet	Going ahead	Automobile, station	Other motor vehicle	0
								V2 S	Wet	Going ahead	Pick-up truck	Other motor vehicle	
52	2010/06/29	Tue	13:47	Clear	Daylight	Angle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Other motor vehicle	0
								V2 W	Dry	Turning right	Automobile, station	Other motor vehicle	
53	2010/08/20	Frid	11:28	Clear	Daylight	Turning	P.D. only	V1 N	Dry	Turning right	Pick-up truck	Other motor vehicle	0
								V2 N	Dry	Turning right	Truck and trailer	Other motor vehicle	
54	2010/09/03	Frid	14:45	Clear	Daylight	Angle	Non-fatal	V1 E	Dry	Going ahead	Pick-up truck	Other motor vehicle	0
								V2 N	Dry	Going ahead	Automobile, station	Other motor vehicle	
55	2010/09/24	Frid	16:50	Clear	Daylight	Angle	P.D. only	V1 W	Dry	Turning right	Automobile, station	Other motor vehicle	0
								V2 N	Dry	Going ahead	Automobile, station	Other motor vehicle	
56	2010/12/31	Frid	13:35	Clear	Daylight	Angle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Other motor vehicle	0
								V2 W	Dry	Going ahead	Passenger van	Other motor vehicle	
57	2011/02/09	We	16:20	Snow	Daylight	Rear end	P.D. only	V1 N	Loose snow	Going ahead	Pick-up truck	Skidding/Sliding	0
								V2 N	Loose snow	Slowing or	Automobile, station	Other motor vehicle	
58	2011/08/04	Thu	08:55	Clear	Daylight	Rear end	P.D. only	V1 W	Dry	Turning right	Automobile, station	Other motor vehicle	0
								V2 W	Dry	Turning right	Pick-up truck	Other motor vehicle	

KLONDIKE RD, MARCH RD to SANDHILL RD

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
59	2011/03/02	We	17:00	Clear	Daylight	Angle	P.D. only	V1 N	Loose snow	Going ahead	Automobile, station	Skidding/Sliding		0
								V2 E	Loose snow	Going ahead	Automobile, station	Other motor vehicle		

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

KLONDIKE RD & SECOND LINE RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
60	2011/10/12	We	13:05	Clear	Daylight	Angle	P.D. only	V1 W V2 N	Dry Dry	Reversing Stopped	Truck - dump Automobile, station	Other motor vehicle Other motor vehicle		0

KLONDIKE RD, SECOND LINE RD to WALLSEND AVE

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
61	2009/12/25	Frid	04:53	Clear	Dark	Single vehicle	Non-fatal	V1 W	Wet	Going ahead	Pick-up truck	Unattended vehicle		0

MARCH RD, DUNROBIN RD to SECOND LINE RD

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 9

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
62	2009/05/08	Frid	04:20	Clear	Dark	Single vehicle	P.D. only	V1 E	Wet	Going ahead	Automobile, station	Animal - wild		0
63	2009/05/24	Sun	21:30	Clear	Dark	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Automobile, station	Animal - wild		0
64	2009/07/18	Sat	21:06	Clear	Dark	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Automobile, station	Animal - wild		0
65	2009/10/03	Sat	14:30	Clear	Daylight	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Pick-up truck	Animal - wild		0
66	2009/11/13	Frid	08:15	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0
67	2009/11/18	We	07:30	Clear	Daylight	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Automobile, station	Animal - wild		0
68	2009/11/19	Thu	08:15	Clear	Daylight	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Automobile, station	Animal - wild		0
69	2010/11/25	Thu	18:00	Clear	Dark	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Automobile, station	Animal - wild		0
70	2011/05/08	Sun	22:00	Clear	Dark	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Automobile, station	Animal - wild		0

(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

MARCH RD, DUNROBIN RD to MURPHY CRT

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 13

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
71	2009/01/28	We	08:04	Snow	Daylight	Approaching	Non-fatal	V1 S V2 N	Loose snow Loose snow	Going ahead Going ahead	Automobile, station Automobile, station	Skidding/Sliding Other motor vehicle		0
72	2009/05/22	Frid	22:00	Clear	Dark	Other	P.D. only	V1 W V2 W	Dry Dry	Going ahead Going ahead	Automobile, station Automobile, station	Animal - wild Animal - wild		0
73	2009/09/20	Sun	20:00	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Animal - wild		0
74	2009/10/22	Thu	06:51	Clear	Dawn	Angle	Non-fatal	V1 N V2 W	Wet Wet	Going ahead Turning left	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
75	2009/11/08	Sun	05:44	Clear	Dark	Single vehicle	P.D. only	V1 N	Wet	Going ahead	Automobile, station	Ran off road		0
76	2010/07/26	Mo	05:50	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0
77	2011/10/08	Sat	19:39	Clear	Dark	Rear end	P.D. only	V1 N V2 N	Dry Dry	Going ahead Slowing or	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle		0
78	2011/11/07	Mo	06:00	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Animal - wild		0
79	2011/12/07	We	18:00	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Pick-up truck	Animal - wild		0
80	2011/12/08	Thu	18:00	Clear	Dark	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Passenger van	Animal - wild		0
81	2011/12/12	Mo	18:14	Clear	Dark	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0
82	2011/12/14	We	17:45	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Animal - wild		0
83	2011/12/24	Sat	21:00	Clear	Dark	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0

MARCH RD, KLONDIKE RD to OLD CARP RD E

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 4

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

84	2009/05/16	Sat	18:47	Clear	Daylight	Turning	P.D. only	V1 S V2 N	Wet Wet	Going ahead Turning left	Passenger van Automobile, station	Other motor vehicle Other motor vehicle	0
85	2009/10/28	We	07:58	Clear	Daylight	Rear end	P.D. only	V1 S V2 S	Dry Dry	Slowing or Stopped	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
86	2010/07/22	Thu	15:15	Clear	Daylight	Sideswipe	P.D. only	V1 N V2 N	Dry Dry	Going ahead Pulling away	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
87	2010/10/26	Tue	19:20	Clear	Dark	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild	0

MARCH RD, KLONDIKE RD to MORGAN'S GRANT WAY

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 8

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
88	2009/01/19	Mo	19:50	Snow	Dark	Sideswipe	P.D. only	V1 N V2 N	Loose snow Loose snow	Changing lanes Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		
89	2009/03/01	Sun	07:18	Clear	Daylight	Turning	P.D. only	V1 N V2 N	Dry Dry	Going ahead Making U-Turn	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
90	2009/09/25	Frid	21:30	Clear	Dark	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0
91	2009/11/30	Mo	17:20	Clear	Dark	Rear end	P.D. only	V1 N V2 N V3 N	Wet Wet Wet	Slowing or Slowing or Slowing or	Automobile, station Automobile, station Automobile, station	Other motor vehicle Other motor vehicle Other motor vehicle		0
92	2009/12/01	Tue	17:13	Clear	Dark	Rear end	P.D. only	V1 N V2 N V3 N V4 N	Wet Wet Wet Wet	Going ahead Stopped Stopped Stopped	Automobile, station Automobile, station Automobile, station Automobile, station	Other motor vehicle Other motor vehicle Other motor vehicle Other motor vehicle		0
93	2010/10/28	Thu	18:37	Clear	Dark	Sideswipe	P.D. only	V1 N V2 N	Dry Dry	Merging Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle		0
94	2010/12/03	Frid	18:34	Clear	Dark	Rear end	P.D. only	V1 N V2 N	Dry Dry	Slowing or Stopped	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0
95	2011/08/14	Sun	22:54	Rain	Dark	Rear end	Non-fatal	V1 N V2 N	Wet Wet	Going ahead Going ahead	Automobile, station Police vehicle	Other motor vehicle Other motor vehicle		0

(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

MARCH RD & MAXWELL RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
96	2009/03/29	Sun	10:57	Rain	Daylight	Rear end	Non-fatal	V1 N	Wet	Going ahead	Pick-up truck	Other motor vehicle		0
								V2 N	Wet	Turning left	Automobile, station	Other motor vehicle		
								V3 S	Wet	Going ahead	Pick-up truck	Other motor vehicle		
97	2010/09/08	We	16:04	Clear	Daylight	Angle	P.D. only	V1 W	Dry	Turning right	School bus	Other motor vehicle		0
								V2 N	Dry	Going ahead	Automobile, station	Other motor vehicle		

MARCH RD, MAXWELL RD to OLD CARP RD E

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 7

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
98	2009/01/13	Tue	06:40	Clear	Dark	Single vehicle	P.D. only	V1 S	Wet	Going ahead	Automobile, station	Animal - wild		0
99	2009/09/30	We	23:30	Clear	Dark	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0
100	2010/06/15	Tue	06:00	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0
101	2011/06/01	We	09:43	Clear	Daylight	Rear end	Non-fatal	V1 N	Dry	Going ahead	Pick-up truck	Other motor vehicle		0
								V2 N	Dry	Slowing or	Truck - closed	Other motor vehicle		
								V3 N	Dry	Slowing or	Pick-up truck	Other motor vehicle		
								V4 N	Dry	Stopped	Automobile, station	Other motor vehicle		
102	2011/08/30	Tue	10:55	Clear	Daylight	Rear end	P.D. only	V1 N	Wet	Slowing or	School bus	Other motor vehicle		0
								V2 N	Wet	Going ahead	Automobile, station	Other motor vehicle		
103	2011/09/19	Mo	19:10	Clear	Dusk	Single vehicle	Non-fatal	V1 N	Dry	Going ahead	Pick-up truck	Animal - wild		0
104	2011/09/22	Thu	06:07	Rain	Dark	Single vehicle	P.D. only	V1 S	Wet	Going ahead	Pick-up truck	Animal - wild		0

MARCH RD, MORGAN'S GRANT WAY to TERRY FOX DR

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 4

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

105	2009/03/04	We	19:20	Rain	Dark	Sideswipe	P.D. only	V1 S V2 S	Wet Wet	Going ahead Slowing or	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0
106	2009/07/29	We	21:41	Clear	Dark	Sideswipe	P.D. only	V1 N V2 N	Dry Dry	Changing lanes Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
107	2009/08/23	Sun	21:30	Clear	Dark	Rear end	P.D. only	V1 N V2 N	Dry Dry	Going ahead Slowing or	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
108	2010/10/26	Tue	10:43	Clear	Daylight	Sideswipe	P.D. only	V1 S V2 S	Dry Dry	Changing lanes Going ahead	Automobile, station Passenger van	Other motor vehicle Other motor vehicle	0

MARCH RD, MURPHY to MURPHY CRT

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	IMPACT TYPE LIGHT	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
109	2009/11/16	Mo	12:50	Clear	Daylight	Turning	P.D. only	V1 S V2 N	Dry Dry	Making U-Turn Going ahead	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0

MARCH RD, MURPHY to MURPHY

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	IMPACT TYPE LIGHT	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
110	2009/05/04	Mo	13:30	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Pick-up truck	Debris falling off	0
111	2009/09/17	Thu	21:30	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Turning left	Automobile, station	Ran off road	0
112	2011/09/09	Frid	07:04	Clear	Daylight	Rear end	Non-fatal	V1 S V2 S V3 N	Dry Dry Dry	Slowing or Turning left Going ahead	Delivery van Automobile, station Automobile, station	Other motor vehicle Other motor vehicle Other motor vehicle	0

MARCH RD & SECOND LINE RD

Former Municipality: Kanata

Traffic Control: Traffic signal

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	IMPACT TYPE LIGHT	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

113	2009/04/23	Thu	15:17	Clear	Daylight	Angle	Non-fatal	V1 S V2 E	Dry Dry	Going ahead Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle	0
114	2010/09/13	Mo	07:40	Rain	Daylight	Rear end	P.D. only	V1 S V2 S	Wet Wet	Slowing or Stopped	Automobile, station Passenger van	Skidding/Sliding Other motor vehicle	0
115	2011/01/07	Frid	16:29	Snow	Dusk	Sideswipe	P.D. only	V1 W V2 W	Packed snow Packed snow	Turning right Stopped	School bus Passenger van	Other motor vehicle Other motor vehicle	0

MARCH VALLEY RD, KLONDIKE RD to RIDDELL DR

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
116	2011/11/05	Sat	19:45	Clear	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Pick-up truck	Animal - wild		0

MARCH VALLEY RD, KLONDIKE RD to MARCH VALLEY RD SB CUTOFF

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
117	2010/05/30	Sun	18:57	Clear	Daylight	Single vehicle	P.D. only	V1 N	Loose sand or	Going ahead	Automobile, station	Roll over		0
118	2010/07/29	Thu	17:50	Clear	Daylight	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Automobile, station	Skidding/Sliding		0

MARCH VALLEY RD, MARCH VALLEY RD CUTOFF to TERRY FOX DR

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
119	2010/01/09	Sat	08:30	Clear	Daylight	Approaching	P.D. only	V1 S V2 N	Ice Ice	Going ahead Going ahead	Pick-up truck Truck and trailer	Skidding/Sliding Other motor vehicle		0

MARCHBROOK CIRC & OLD CARP RD

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
120	2009/01/30	Frid	12:00	Snow	Daylight	Single vehicle	P.D. only	V1 W	Loose snow	Turning right	Automobile, station	Skidding/Sliding		0

(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

MCKINLEY DR & TERRY FOX DR

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
121	2010/08/03	Tue	17:55	Clear	Daylight	Angle	P.D. only	V1 W V2 S	Dry Dry	Going ahead Turning left	Passenger van Automobile, station	Other motor vehicle Other motor vehicle		0

OLD CARP RD, MARCH RD to MARCHBROOK CIRC

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
122	2010/12/12	Sun	00:00	Rain	Dark	Single vehicle	P.D. only	V1 W	Slush	Going ahead	Automobile, station	Skidding/Sliding		0

RIDDELL DR, CAMPBELL REID CRT to MORAN ST

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
123	2009/01/03	Sat	10:23	Clear	Daylight	Turning	P.D. only	V1 W V2 E	Loose snow Loose snow	Going ahead Turning left	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle		0
124	2011/08/16	Tue	16:13	Clear	Daylight	Turning	P.D. only	V1 N V2 N	Dry Dry	Going ahead Turning left	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle		0

RIDDELL DR, MARCH VALLEY RD to MORAN ST

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
125	2009/11/10	Tue	18:00	Clear	Dark	Single vehicle	P.D. only	V1 E	Dry	Going ahead	Pick-up truck	Animal - wild		0
126	2011/01/29	Sat	13:26	Snow	Daylight	Single vehicle	Non-fatal	V1 W	Loose snow	Going ahead	Automobile, station	Skidding/Sliding		0

(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

127	2011/05/10	Tue	08:10	Clear	Daylight	Other	Non-fatal	V1 E V2 S	Dry Unknown	Going ahead Going ahead	Pick-up truck Railway train	Pole (utility, tower) Other motor vehicle	0
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MARSON AVE & SHIRLEYS BROOK DR

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
128	2010/04/23	Frid	12:22	Clear	Daylight	Single vehicle	P.D. only	V1 W	Dry	Turning right	Pick-up truck	Unattended vehicle		0

SECOND LINE RD, MALEY LANE to WILD ACRE LANE

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
129	2011/03/25	Frid	07:25	Clear	Daylight	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0

SECOND LINE RD, PANANDRICK VIEW DR to THOMAS FULLER DR

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
130	2009/11/26	Thu	18:16	Fog,	Dark	Single vehicle	P.D. only	V1 N	Dry	Going ahead	Pick-up truck	Animal - wild		0
131	2010/12/09	Thu	22:25	Clear	Dark	Single vehicle	P.D. only	V1 S	Dry	Going ahead	Automobile, station	Animal - wild		0
132	2010/12/22	We	17:53	Clear	Dark	Single vehicle	P.D. only	V1 N	Packed snow	Slowing or	Automobile, station	Animal - wild		0

SECOND LINE RD & SHARNE LANE

Former Municipality: Kanata

Traffic Control: Stop sign

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
133	2010/01/02	Sat	14:20	Snow	Daylight	Single vehicle	P.D. only	V1 N	Slush	Going ahead	Automobile, station	Ran off road		0

(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

SECOND LINE RD, SHARNE LANE to WILD ACRE LANE

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
134	2010/12/20	Mo	12:00	Clear	Daylight	Single vehicle	P.D. only	V1 S	Wet	Going ahead	Automobile, station	Skidding/Sliding		0

SECOND LINE RD & WEATHERLY DR

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
135	2010/06/11	Frid	11:44	Clear	Daylight	Single vehicle	Non-fatal	V1 E	Dry	Going ahead	Bicycle	Ran off road		0

SHIRLEY'S BROOK DR, CATTERICK CRES N to KINROSS PRIV

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
136	2009/08/04	Tue	19:18	Rain	Dusk	Single vehicle	P.D. only	V1 E	Wet	Going ahead	Passenger van	Skidding/Sliding		0
137	2010/08/07	Sat	12:00	Clear	Daylight	Single vehicle	P.D. only	V1 U	Dry	Unknown	Unknown	Unattended vehicle		0
138	2011/09/20	Tue	00:30	Rain	Dark	Single vehicle	P.D. only	V1 W	Wet	Going ahead	Automobile, station	Unattended vehicle		0

SHIRLEY'S BROOK DR, HELMSDALE DR to SANDHILL RD

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
139	2009/05/14	Thu	12:36	Rain	Daylight	Single vehicle	Non-fatal	V1 E	Wet	Going ahead	Delivery van	Pedestrian		1
140	2009/05/27	We	17:36	Clear	Daylight	Approaching	P.D. only	V1 E V2 W	Dry Dry	Going ahead Going ahead	Passenger van Automobile, station	Other motor vehicle Other motor vehicle		0

SHIRLEY'S BROOK DR, INVERARY DR to MARCH RD

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
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(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

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Collision Main Detail Summary

OnTRAC Reporting System

FROM: 2009/01/01 TO: 2012/01/01

141	2009/12/12	Sat	11:51	Clear	Daylight	Angle	P.D. only	V1 N V2 W	Dry Dry	Turning left Slowing or	Automobile, station Pick-up truck	Other motor vehicle Other motor vehicle	0
142	2011/02/05	Sat	16:06	Clear	Daylight	Angle	P.D. only	V1 N V2 W	Dry Dry	Turning left Turning left	Pick-up truck Automobile, station	Other motor vehicle Other motor vehicle	0

TERRY FOX DR, FLAMBOROUGH WAY to MARCH RD

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 3

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
143	2009/01/18	Sun	18:22	Snow	Dark	Approaching	P.D. only	V1 W V2 E	Loose snow Loose snow	Going ahead Going ahead	Passenger van Automobile, station	Other motor vehicle Other motor vehicle		0
144	2010/06/24	Thu	13:26	Rain	Daylight	Rear end	P.D. only	V1 E V2 E	Wet Wet	Slowing or Stopped	Pick-up truck Automobile, station	Skidding/Sliding Other motor vehicle		0
145	2010/10/27	We	16:53	Clear	Daylight	Sideswipe	P.D. only	V1 W V2 W	Dry Dry	Changing lanes Going ahead	Automobile, station Automobile, station	Other motor vehicle Other motor vehicle		0

TERRY FOX DR, HELMSDALE DR to LEGGET DR

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 2

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
146	2010/10/13	We	17:00	Clear	Daylight	Single vehicle	P.D. only	V1 W	Dry	Going ahead	Municipal transit bus	Unattended vehicle		0
147	2011/08/25	Thu	09:16	Clear	Daylight	Sideswipe	P.D. only	V1 E V2 E	Dry Dry	Going ahead Stopped	Unknown Municipal transit bus	Other motor vehicle Other motor vehicle		0

TERRY FOX DR, MARCH RD to MCKINLEY DR

Former Municipality: Kanata

Traffic Control: No control

Number of Collisions: 1

COLLISION ID	DATE	DAY	TIME	ENV	LIGHT	IMPACT TYPE	CLASS	DIR	SURFACE COND'N	VEHICLE MANOEUVRE	VEHICLE TYPE	FIRST EVENT	DRIVER ACTION	No. PED
148	2011/10/17	Mo	22:29	Rain	Dark	Single vehicle	P.D. only	V1 W	Wet	Going ahead	Automobile, station	Animal - wild		0

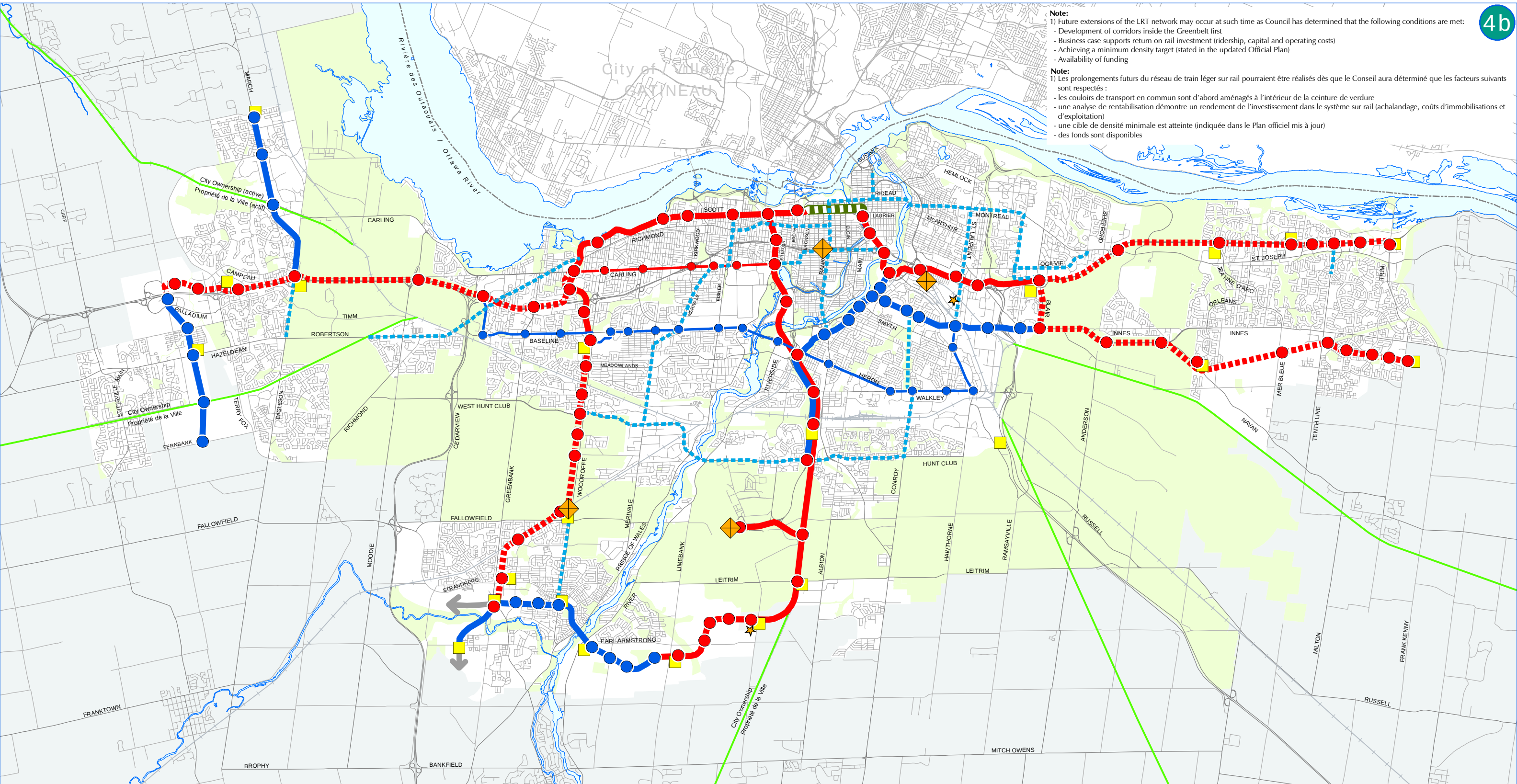
(Note: Time of Day = "00:00" represents unknown collision time)

January 17, 2013

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APPENDIX G

The City of Ottawa TMP Ultimate Rapid Transit Network – Map 4b



Note:
1) Future extensions of the LRT network may occur at such time as Council has determined that the following conditions are met:
- Development of corridors inside the Greenbelt first
- Business case supports return on rail investment (ridership, capital and operating costs)
- Achieving a minimum density target (stated in the updated Official Plan)
- Availability of funding

Note:
1) Les prolongements futurs du réseau de train léger sur rail pourraient être réalisés dès que le Conseil aura déterminé que les facteurs suivants sont respectés :
- les couloirs de transport en commun sont d'abord aménagés à l'intérieur de la ceinture de verdure
- une analyse de rentabilisation démontre un rendement de l'investissement dans le système sur rail (achalandage, coûts d'immobilisations et d'exploitation)
- une cible de densité minimale est atteinte (indiquée dans le Plan officiel mis à jour)
- des fonds sont disponibles

TRANSPORTATION MASTER PLAN - Map 4b
RAPID TRANSIT NETWORK - ULTIMATE

PLAN DIRECTEUR DES TRANSPORTS - Carte 4b
**RÉSEAU DE TRANSPORT EN COMMUN
RAPIDE - ULTIME**

PRIMARY	PRINCIPAL
Light Rail Transit (LRT)	Train léger sur rail (TLR)
Light Rail Transit (LRT) Extension (See Note 1)	L'extension du train léger sur rail (TLR) (consulter la note1)
Bus Rapid Transit (BRT)	Transport en commun rapide par autobus (TCRA)
LRT Downtown Tunnel	TLR Tunnel au centre-ville
SUPPLEMENTARY	SUPPLÉMENTAIRE
Intensive Transit - Bus	Transport en commun intensif - autobus
Intensive Transit - Rail	Transport en commun intensif - train
Transit Priority	Transport prioritaire

Park and Ride	Parc-O-Bus
Transit Station - rail	Station du transport - train
Transit Station - bus	Station du transport - autobus
Conceptual Future Transit Corridor	Avenir conceptuel - Couloir de transport en commun
Abandoned Railway Corridor	Emprises ferroviaires abandonnées
Inter-regional Stations	Stations interrégionales
Potential Rail Yard	Cour de tirage possible pour trains

APPENDIX B

KNCDP TMP Existing Conditions Report Addendum



20th February, 2014

City of Ottawa
Planning and Growth Management Branch
110 Laurier Ave. W., 4th Floor,
Ottawa, Ontario K1P 1J1

Attention: Ms. Wendy Tse
Planner, Community Planning and Urban Design Unit

Dear Madam:

Reference: Kanata North Urban Expansion Study Area
Existing Conditions Report, Addendum #1
Our File No. : 112117

In September 2013, an Existing Conditions Report (ECR) was submitted to the City for review and feedback. This Existing Conditions Report is part of a Transportation Master Plan (TMP) that is being developed as part of the Community Design Plan (CDP) for the Kanata North Urban Expansion Area. The CDP process is being undertaken as a joint venture between the City of Ottawa and the Kanata North Land Owners Group (KNLOG).

Following the submission of the report, NECL received comments from the City on October 18th, 2013. The purpose of this addendum is to address the comments received from the City. The City's comments regarding the original report are provided below, along with NECL's responses.

1. *Title page: As the report discusses about future planned network changes (section 4), its title needs to be revised accordingly.*

NECL Response:

NECL acknowledge that the report discusses the future planned network changes in Section 4, but the main purpose of this report is to identify the existing transportation conditions within the KNUEA. As such the title of the report will be retained as 'Existing Conditions Report', until it is integrated into the overall TMP report.

2. *Section 2.0 Transportation Area of Interest*
 - *Second bullet: As pointed out earlier, southern boundary of TAI to expand to Highway 417.*
 - *TAI in Figure 2 to be expanded accordingly to include intersections up to Highway 417.*
 - *In Figure 2, show 'legend' for other roadways (red, blue, green...) are identified in the figure. March Road (Highway 417 to north of Maxwell Bridge Road) should also be*

M:\2012\112117\DATA\REPORTS\TRAFFIC\CDP_EXISTING CONDITIONS_COMMENT-RESPONSE (TRACKED CHANGES).DOCX

Suite 200, 240 Michael Cowpland Dr., Ottawa ON K2M 1P6 Tel: (613) 254-9643 Fax: (613) 254-5867 www.novatech-eng.com

identified as Bus Rapid Transit (BRT) corridor. Refer to new TMP update for recent information.

NECL Response:

The TAI has now been expanded south to incorporate all intersections along March Road between Terry Fox Drive and Highway 417. Figure 2 has been updated in the report to reflect the expanded TAI, and March Road (between Maxwell Bridge Road and Highway 417) is identified as a Bus Rapid Transit (BRT) corridor.

3. *Section 3.1: Include other intersections in this section covering expanded TAI boundary. Description about relevant roadways in Section 3.1 will need to be revised accordingly.*

NECL Response:

Section 3.1 of the ECR has been updated to include all intersections and roadway facilities within the expanded TAI.

4. *Figure 1 – would be beneficial to identify the urban boundary in this figure.*

NECL Response:

Figure 1 has been updated to show the existing urban boundary.

5. *Section 3.2: Include traffic volume details for other intersections between Terry Fox Drive and Highway 417.*

NECL Response:

Section 3.2 of the ECR has been updated to include traffic volume details for the intersections along March Road, between Terry Fox Drive and Highway 417.

6. *Table 1: 2013 Existing Intersection Operations*

- Given the updated TMP is moving toward LOS over peak period, rather than peak hour, consideration should be given to revising the table (even though the existing LOS analysis for the majority of intersections is A-c)*
- March Road / Terry Fox Drive intersection 'Storage' of EBL movement needs to be corrected to 2 x 80m in AM Peak Hour, same as shown in PM Peak Hour.*

NECL Response:

The intersection capacity analysis presented in the original report is consistent with the requirements of the City of Ottawa *Transportation Impact Assessment (TIA) Guidelines*, published in October 2006. Table 1 has been updated to include all intersections within the expanded TAI. The intersection capacity analysis presented in the ECR will not be updated to reflect peak period, rather than peak hour, until further technical direction is provided by the City

of Ottawa concerning the preferred methodology for completing intersection capacity analysis over peak periods (i.e. greater than one hour).

The storage capacity for the EBL turn lane at the March Road / Terry Fox Drive intersection has been corrected to 2 x 80m in the AM peak hour.

7. *Section 3.4: Due to the expanded TAI, this section needs to be updated covering other transit routes that operate in the expanded TAI.*
- *Clarification is required for what is meant by ‘... it has been derived from its own set of data.’ Wherever it is referred to in this section.*

NECL Response:

The transit routes identified in Section 3.4 of the ECR are the only transit routes to travel north of Terry Fox Drive (i.e. crossing the TAI Screenline identified in Section 3.7), and as such are the only routes of relevance. The ECR need not account for transit routes operating south of Terry Fox Drive, as they do not play a significant role in the transit modal shares crossing the proposed screenline.

Following recent changes to the method of derivation for transit trip volumes within the TAI, the second comment is no longer applicable.

8. *Figure 4 to be updated to capture transit routes operating in the expanded TAI.*

NECL Response:

Figure 4 has been updated to include the transit routes operating within the expanded TAI.

9. *3.4.1 OC Transpo Express Route 60*

- *Should be clarified in report that route 60 only operates in the eastbound direction during the AM peak period, generally 5:30-8:30, and only operates westbound during the PM peak period.*
- *Figure 5 should be revised such that the legend is ‘Total AM Peak Period Bus Stop Activity’; to indicate it is ‘daily’ bus stop activity is misleading as this route only operates in the eastbound direction 5:30-8:30 AM.*
- *Figure 6 should be revised such that the legend is ‘Total PM Peak Period Bus Stop Activity’; to indicate it is ‘daily’ bus stop activity is misleading as this route only operates westbound 3:00-6:00 PM (with the last trip arriving at Maxwell Bridge Road/March Road around 7:00 PM).*
- *Rather than identify the ‘median’ number of passengers boarding/alighting at each stop, statistic is better represented as the ‘average’ number of passengers; all numbers should be revised. Otherwise, clarify why ‘median’ is used, rather than average, which is generally the case.*

- Paragraph starting with 'As shown in Figure 7' may be simplified to 'As shown in Figure 7, the median (or average) ridership of Route 60 (EB) is 30 passengers prior to exiting the TAI.' The ridership number will need to be confirmed after inclusion of area south of Terry Fox Drive to Highway 417 to the TAI, The following sentence in the same paragraph may be revised accordingly.
- Figure 7 & 8: Clarification is required what is meant by 'Median Passenger' in the title 'Transit Route 60 – Eastbound/Westbound Median Passenger Boarding/Alighting'.

NECL Response:

Section 3.4.1 of the ECR has been updated to clarify that express route 60 only operates in the eastbound direction during the AM peak period, and westbound during the PM peak period. The verbiage in the legend of Figures 5 and 6 has been changed to 'Total AM/PM peak Period Bus Stop Activity'. Figures 7 and 8 have been updated to reflect the average ridership instead of the median ridership. Corresponding ridership values in the text have also been updated to reflect the average load.

10. 3.4.2 OC Transpo ~~Regular~~ Transitway Route 93

- Change all references from 'regular' route 93 to 'transitway' as it is its proper classification
- 1st paragraph '... the Lincoln Fields Transit Station provides a connection with the regular route 95...' It should be noted that Lincoln Fields Transit Station is a major bus hub providing connection to a number of routes (not only route 95) that serve various areas across the City. Please also add in the discussion that the purpose of Route 93 is to provide service between central Ottawa/Gatineau and the employment areas of Kanata North during the morning and afternoon peak periods.
- In the westbound direction, during the AM peak period, service is provided from LeBreton Station to Kanata North every 10-15 minutes.
- Following the AM peak period, service is provided every 30 minutes with buses departing from Lincoln Fields Station.
- In the eastbound direction, during the PM peak period, service is provided from Kanata North to LeBreton Station every 10-15 minutes
- Prior to the PM peak period, service is provided every 30 minutes with buses operating between Kanata North and Lincoln Fields Station.
- Data gathered would have been more beneficial if gathered for the AM peak period (6:30-9:30 AM), PM peak period (3:30-6:30 PM) and midday as this would have provided a better picture of passenger activity by time of day, location and travel direction.
- Numbers should be revised to identify the 'average' (not median) number of passengers boarding/alighting at each stop.
- The phrase 'median ridership volume of buses' is unclear; this phrase should be replaced with 'average load'

- *Need to determine the average load during the AM and PM peak periods and update text.*
- *Figures 11 & 12 clarification is required what is meant by 'Median Passenger' in the title.*

NECL Response:

All references to the regular route 93' have been changed to Transitway route 93 in the ECR. Bus operations have been updated to reflect statements 3-6 above. Figures 11 and 12 have been updated to reflect the average ridership instead of the median ridership. Corresponding ridership values in the text have also been updated to reflect the average load.

11. 3.4.3 OC Transpo Route 674

- *Rather than identify 'median' number of passengers boarding/alighting at each stop, statistic is better represented as the 'average' number of passengers; all numbers should be revised.*
- *P-8, 3rd line: '... it should be noted that the travel time of the school route...'. Travel Time is a term which is generally used to measure time between two points. Does it mean 'Time Table' of school route which do not coincide with the peak hour. It requires clarification.*
- *P-8, 1st Paragraph: 'Route 674 being a school route, it seems more appropriate to mention its operating hours AM period or PM period instead of stating it '... daily bus activity...' which sounds more like an all day regular route service.*
- *P-8, Paragraphs 3 and 4*
- *Revise paragraphs to identify the P-8, 2nd Paragraph: '... as students are more inclined to be dropped off at school by their parents in the morning and rely on public transit to return home.' What are the basis of this conclusion?*
 - *average number of passenger boarding/alighting.*
 - *As noted above, the phrase 'median ridership volume of busses' should be removed and replaced with 'average load'.*
 - *Need to determine the average load during the AM and PM peak periods and update text.*
- *Use of 'Total AM/PM period' rather than 'Total Daily' and seems more suitable for Figures 13 & 14 respectively which refer to School Route 674 which operate only in one direction during certain time periods. It is not an all day service.*

NECL Response

Figures 15 and 16 have been updated to reflect the average (i.e. mean) ridership, instead of the median ridership. Corresponding ridership values in the text have also been updated to reflect the average load. The term 'travel time' in the sentence at the end of Paragraph 1, Section 3.4.4 has been changed to 'operating time'. A justification of the conclusion at the end of Paragraph 3, Section 3.4.4 has been provided in the ECR.

12. 3.4.4 2013 Existing Total Volumes

- Table 2 needs to be re-calculated using the applicable average load value ('Average passengers per bus' and 'Average passengers per hour' for footnotes 1 and 3) and the following data:
 - Route 60
 - The number of buses leaving the TAI in the AM peak hour is 6.
 - The number of buses entering the TAI in the PM peak hour is 5.
 - Route 93
 - Since route 93 experiences peak volumes inbound to the TAI in the AM peak period and outbound from the TAI in the PM peak period, cannot apply a daily average load to the number of peak hour buses entering/leaving the TAI.
 - Need to determine the AM and PM peak period average load
 - In the AM peak hour, number of buses into TAI is 8 and out of TAI is 2.
 - In the PM peak hour, number of buses into TAI is 2 and out of TAI is 5.

NECL Response:

Table 2 has been updated to reflect the average load and frequency of buses, as identified above.

13. Section 3.5

- Figure 17: Expand TAI to cover intersections up to Highway 417 and update volumes accordingly.
- The description of the Existing Cycling Network in and around the study area is fairly accurate yet it does not identify problems with that network. The TMP should attempt to explain why cycling volumes are so low and how they could be increased.
- The diagram showing cyclist volumes in the greater area adjacent to the CDP area is beneficial, however the peak hour counts show very low peak hour cycling volumes. The TMP should comment on what this means for transportation. This implies a much lower modal share that what the new TMP will be seeking.
- The report appears to have referenced the old cycling plan (2008) rather than the new, which adds several new cycling routes (notably, on-road and off-road cycling routes in the Innovation Drive ROW). Table 5 indicates how low active transportation modal shares are in comparison to both the City's old target and higher new one, suggesting that greater attention to walking and cycling infrastructure needs to be made. Even though the emphasis may be on detached dwellings, overall existing and planned residential density and the proximity of major employment areas implies walking and especially cycling should be far greater.

- *In terms of off-road facilities, a review of the interconnectivity of the network and the way it integrates with the on-road part of the network would be quite helpful in the TMP. For example reference is made to the pathways, but nothing is said about how well the existing facilities meet the City's multiuse pathway standards or how well they permit people to transfer between the on-road and off-road parts of the network.*

NECL Response

Figure 17 has been updated to reflect the intersections along March Road between Terry Fox Drive and Highway 417. Section 3.5 of the ECR has been updated to reflect the 2013 OCP rather than the 2008 OCP. The KNUEA CDP TMP will identify possible reasons for the low cyclist modal share observed today, and also identify opportunities to address the existing deficiencies in the existing cycling network.

The TMP will also discuss the interconnectivity of the existing on-road and off-road network, and suggest possible strategies to increase the cycling modal share within the Kanata North area.

14. 3.7 Screenline Analysis

- *Figures 18 and 19*
 - *Clarify if the transit trips represent the number of bus trips or ridership (passengers); if it is bus trips, these numbers appear high if it is for the peak hour.*
 - *Update Table 5 with updated information from Table 2.*
 - *Should Table 5 include trips that cross the screenline both into and out of the TAI? If so, the information for transit needs to be revised as it only includes trips outbound in the AM peak hour and inbound in the PM peak hour.*

NECL Response

The transit trips in Figures 18 and 19 illustrate the bus ridership volumes within the TAI, and have been updated to reflect the average (i.e. mean) transit ridership volumes, as calculated in Table 2. The screenline analysis has been completed for peak direction during the weekday AM and PM peak hours, as these represent the 'worst case' scenarios at the TAI Screenline.

15. Section 4.0: New TMP update will need to be referenced wherever it is mentioned in the document.

16. 4.1 City of Ottawa Transportation Master Plan

- *Given this CDP is commencing at the same time as the DRAFT TMP 2013 update has been made public, the existing conditions report should note such and that Council approval of the TMP is targeted for December 2013.*
- *Given the new TMP is anticipated to be approved while the CDP study is in progress, this report should address how it will reflect goals/policies of the 2013 TMP update.*

NECL Response

Section 4.0 of the ECR will be updated to reflect the goals/policies of the 2013 TMP update.

17. *Table 8: what is the relevance of projects identified which are south of Highway 417?*

- *2nd row: Section of Old Carp Road which intersects with March Road has been renamed to Halton Terrace.*

NECL Response

Section 4.1.2 of the ECR has been updated to account for relevant infrastructure projects identified in the Affordable Road Network from the City's 2013 TMP. Table 8 has been removed and replaced with verbiage explaining the relevant infrastructure projects.

18. *Section 4.2*

- *This section references the OCP approval in March 2005; actually this took place in July 2008.*
- *Regards is to be given to the draft 2013 Ottawa Cycling Plan, it is currently seeking approval of a new process for identification of the appropriate cycling facility based not on the network plan but on a new cycling facility selection tool based on traffic operating speeds and motor traffic volumes on recommended cycling routes. This new tool is more likely to recommend dedicated cycling facilities on a given on-road cycling segment of the network and demands more attention to detail when planning the appropriate cycling facility.*

NECL Response

Section 4.2 of the ECR has been updated to account for relevant cycling network projects identified in the City's 2013 OCP.

19. *Description (location, size, etc.) about park and Ride lots at Innovation Drive and north of Maxwell Bridge need to be included in the report. Land for Innovation Drive Park and Ride lot has been acquired by the City and for the other one will be acquired within the KNUESA as identified in the new TMP update and the staff report which was approved by Council in November 2012.*

NECL Response

Subject to ongoing discussions with City staff and other stakeholders, details concerning the location and size of the proposed park and ride lots in the Kanata North area will be provided as part of the overall TMP report, but will not be included in the ECR.

20. *Figure 5 & 6, 9 & 10, 13 & 14: Passenger activity is a function of bus stop. In these figures, the continuous blue lines with varying thickness give an impression that passenger activity continues to occur in between the bus stops also, which is not the case.*



It is more appropriate to show passenger activity only at bus stops, in the same manner as shown in 7 & 8 and other similar figures.

NECL Response

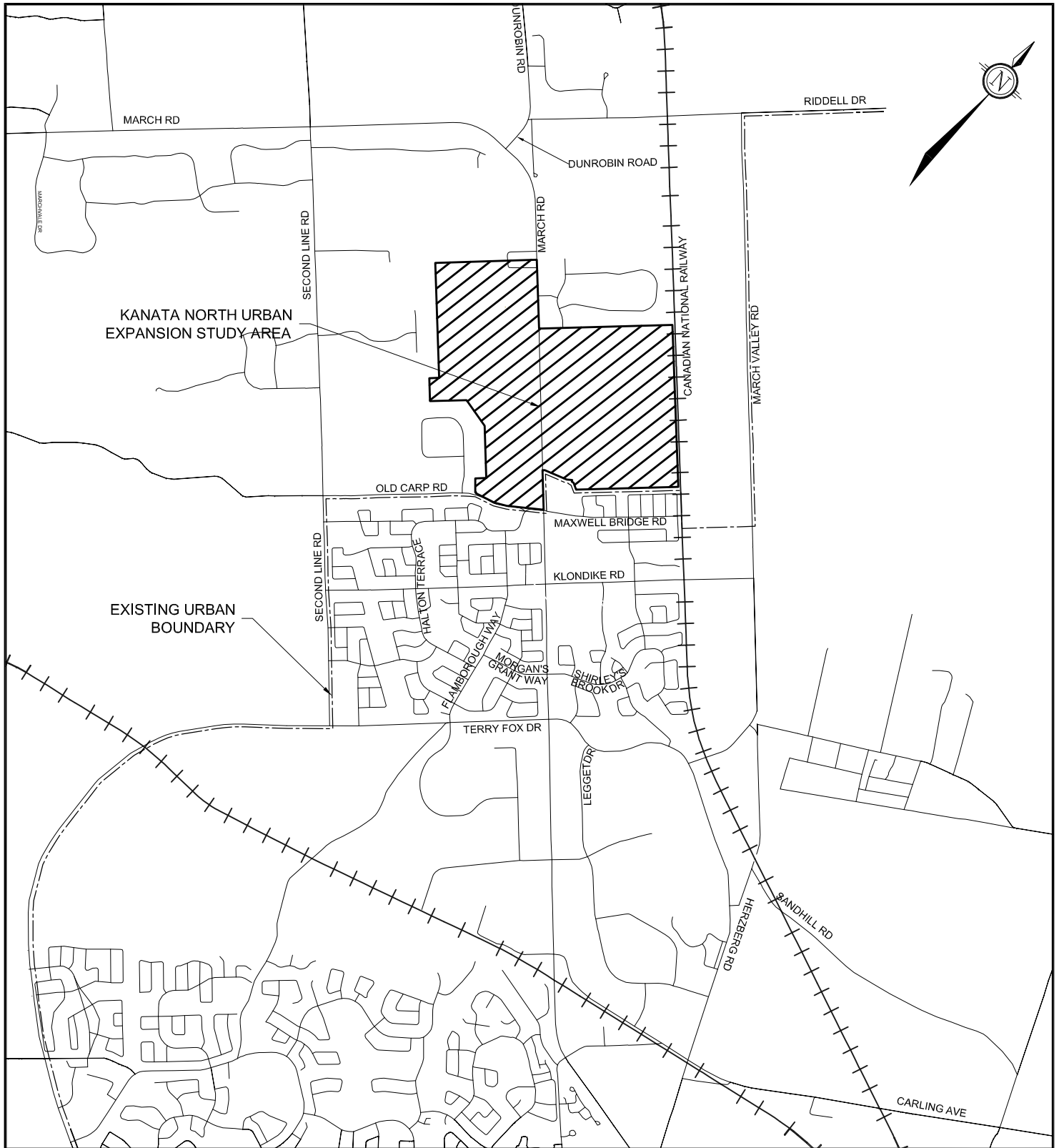
NECL agree with this statement, and have updated Figures 5, 6, 9, 10, 13 and 14 accordingly.

21. *Considerations for the CDP*

- *As per Official Plan (OP)/Transportation Master Plan (TMP)/Ottawa Pedestrian Plan (OPP), sidewalks are required on both sides of:*
 - *Arterial and collector roadways*
 - *Roadways with bus routes*
 - *Local roads with schools, parks, community centres etc.*
- *Ideally, the transportation component of the CDP should actively seek out infrastructure improvements to reduce local trips to be made by bicycle by identification of new cycling facilities over and above what the 2008 OCP recommends. The CDP could be proactive and deliberate in seeking out potential new off-road links to improve and create the attractiveness of the local network for pedestrians and cyclists.*

NECL Response

Acknowledged - the KNUFA CDP TMP will identify infrastructure improvements in an effort to promote cycling trips within the TAI.



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KANATA NORTH URBAN EXPANSION STUDY AREA

KEY PLAN

SCALE

NTS

DATE

FEB 2014

JOB

112117

FIGURE

FIGURE # 1

2.0 TRANSPORTATION AREA OF INTEREST (TAI)

From the perspective of the existing transportation network and operating conditions, the study area for this report extends beyond the limits of the KNUEA. This report addresses the transportation-related matters in an area bounded by the following:

- to the north, March Road;
- to the south, Terry Fox Drive;
- to the east, March Valley Road;
- to the west, Second Line Road;
- all intersections along March Road between Terry Fox Drive and Highway 417.

The foregoing area is described as the Transportation Area of Interest (TAI) and its limits are shown in **Figure 2**.

3.0 EXISTING TRANSPORTATION CONDITIONS

3.1 Existing Major Road Network

The existing major roadways within the TAI are described as follows:

Terry Fox Drive

Terry Fox Drive is an arterial roadway that runs on an east-west alignment within the TAI. Within the TAI, the intersections of Second Line Road, Flamborough Way and March Road at Terry Fox Drive are signalized.

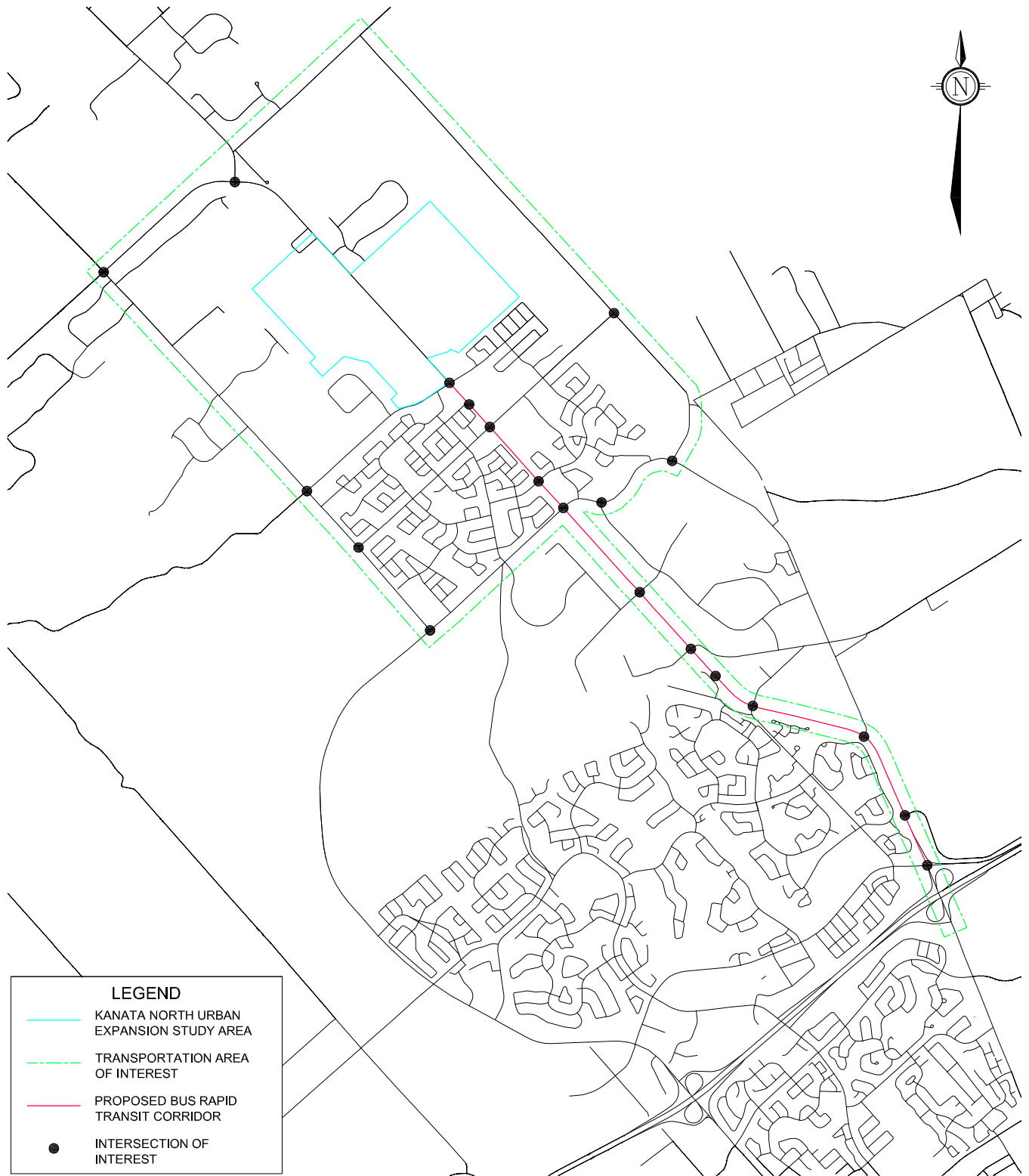
East of March Road, Terry Fox Drive has a two-lane divided urban cross-section with a posted speed limit of 50kph. West of March Road, Terry Fox Drive has a two-lane undivided rural cross-section with a posted speed limit of 60kph.

March Road

March Road is an arterial roadway that generally runs on a north-south alignment. Within the TAI, the intersections of Second Line Road, Dunrobin Road, Maxwell Bridge Road / Halton Terrace, 250m north of Klondike Road (Sobeys), Klondike Road, Morgans Grant Way / Shirley's Brook Drive, Terry Fox Drive, Solandt Road, Carling Avenue / Station Road, Gateway Shopping Centre, Teron Road / Richardson Side Road, Herzberg Road and Highway 417 / Campeau Drive at March Road are signalized.

North of Maxwell Bridge Road, March Road has a two-lane undivided rural cross-section with paved shoulders. South of Maxwell Bridge Road, March Road has a six-lane divided urban cross-section with exception to the segment between Terry Fox Drive and Herzberg Road, where it tapers to a four-lane cross section. March Road has a posted speed limit of 80kph within the TAI.

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LEGEND	
	KANATA NORTH URBAN EXPANSION STUDY AREA
	TRANSPORTATION AREA OF INTEREST
	PROPOSED BUS RAPID TRANSIT CORRIDOR
	INTERSECTION OF INTEREST

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KANATA NORTH URBAN EXPANSION STUDY AREA TRANSPORTATION AREA OF INTEREST (TAI)

FEB 2014 112117 FIGURE # 2



Dunrobin Road

Dunrobin Road is an arterial roadway that runs on a north-south alignment. Dunrobin road has a two-lane undivided rural cross-section with paved shoulders. The posted speed limit along Dunrobin Road is 60kph within the TAI.

Second Line Road

Second Line Road runs on a north-south alignment, and is classified as a major collector roadway south of Old Carp Road, and a collector roadway north of Old Carp Road. Within the TAI, Second Line Road has a two-lane undivided rural cross-section with gravel shoulders. Second Line Road has a posted speed limit of 60kph south of Old Carp Road, and 70kph north of Old Carp Road.

March Valley Road

March Valley Road is a collector roadway that runs on a north-south alignment between Terry Fox Drive and Riddell Drive. March Valley Road has a two-lane undivided rural cross-section with gravel shoulders. The posted speed limit along March Valley Road is 70kph.

Morgan's Grant Way

Morgan's Grant Way is a collector roadway that runs on an east-west alignment between March Road and Flamborough Way. Morgan's Grant Way has a two-lane undivided urban cross-section with a regulatory speed limit of 50kph under the Highway Traffic Act.

Shirley's Brook Drive

Shirley's Brook Drive is a collector roadway that generally runs on an east-west alignment between March Road and Helmsdale Drive. Shirley's Brook Drive has a two-lane undivided urban cross-section with a posted speed limit of 40kph.

Klondike Road

Klondike Road is a collector roadway that runs on an east-west alignment between Second Line Road and March Valley Road. Signalized intersections exist along Klondike Road at March Road and Weatherston Street.

Klondike Road has a two-lane undivided urban cross-section west of March Road. East of March Road, Klondike Road has a rural cross-section with gravel shoulders. The roadway segment between Sandhill Road and the CNR has an urban undivided cross-section. Klondike Road has a posted speed limit of 70kph east of the CNR, and 50kph west of the CNR.

Weatherston Street

Weatherston Street is a local roadway that runs on a north-south alignment between Klondike Road and Breckenridge Crescent. Weatherston Street has a two-lane undivided urban cross-section with a regulatory speed limit of 50kph under the Highway Traffic Act.



Halton Terrace

Halton Terrace is a collector roadway that runs between March Road and Flamborough Way. Halton Terrace has a two-lane undivided urban cross-section with a posted speed limit of 40kph.

Maxwell Bridge Road

Maxwell Bridge Road is a collector roadway that runs on an east-west alignment between March Road and Celtic Ridge Crescent. Maxwell Bridge Road has a two-lane undivided urban cross-section with a regulatory speed limit of 50kph under the Highway Traffic Act.

Flamborough Way

Flamborough Way is a collector roadway that runs on a north-south alignment between Halton Terrace and Terry Fox Drive. The Terry Fox Drive / Flamborough Way intersection is signalized. Flamborough Way has a two-lane undivided urban cross-section with a posted speed limit of 40kph.

Old Carp Road

Old Carp Road is a local roadway that runs on an east-west alignment within the TAI. Within the TAI, Old Carp Road has a two-lane undivided rural cross-section with a posted speed limit of 40kph.

Solandt Road

Solandt Road is a collector roadway that runs on an east west alignment commencing along Hines Road, terminating in a cul-de-sac approximately 450m east of Legget Drive. Solandt Road has a two-lane undivided urban cross-section with a posted speed limit of 50kph.

Carling Avenue

Carling Avenue is an arterial roadway that runs on an east-west alignment between March Road and Bronson Avenue. Carling Avenue has a two-lane undivided rural cross-section with paved shoulders. Carling Avenue is designated as a rural truck route allowing restricted loads and has a posted speed limit of 60kph in the vicinity of the TAI.

Teron Road

Teron Road is a major collector roadway that runs on a north-south alignment between March Road and Campeau Drive. Teron Road has a two-lane undivided urban cross-section with a posted speed limit of 50kph.

Richardson Side Road

Richardson Side Road is a local roadway that runs on an east-west alignment between March Road and Carling Avenue. Richardson Side Road has a two-lane undivided rural cross-section with gravel shoulders and a regulatory speed limit of 50kph under the *Ontario Highway Traffic Act*.

Herzberg Road

Herzberg Road is a major collector roadway that runs on a north-south alignment between Terry Fox Drive and March Road. Herzberg Road has a two-lane undivided urban cross-section with a posted speed limit of 50kph in the vicinity of the TAI. Herzberg Road is designated as a rural truck route, allowing restricted loads.

Corkstown Road

Corkstown Road is an arterial roadway that runs on an east-west alignment between Carling Avenue and March Road. Corkstown Road has a two-lane undivided rural cross section with gravel shoulders and a regulatory speed limit of 50kph under the *Ontario Highway Traffic Act*.

Campeau Drive

Campeau Drive is an arterial roadway that runs on an east-west alignment between March Road and Didsbury Road. Campeau Drive has a two-lane undivided urban cross-section with a posted speed limit of 60kph.

Highway 417

Highway 417 is a provincial highway that runs on an east-west alignment across the City of Ottawa. Highway 417 has three eastbound lanes and two westbound lanes and a speed limit of 100kph in the vicinity of the TAI.

3.2 Existing Traffic Volumes

Traffic counts were obtained from the City of Ottawa to verify the existing traffic volumes at the majority of the major intersections within the TAI. As recent traffic counts at some of the major intersections were unavailable, traffic counts were completed by Novatech Engineering Consultants (NECL) at the remaining major intersections within the TAI. The traffic counts were completed at the following times and locations:

- March Road / Second Line Road – Tuesday, August 7th 2012 (City of Ottawa);
- March Road / Dunrobin Road – Thursday, July 26th 2012 (City of Ottawa);
- March Road / Halton Terrace / Maxwell Bridge Road – Wednesday, January 16th 2013 (NECL);
- March Road / Trinity Common Shopping Center – Wednesday, January 29th, 2014 (City of Ottawa);
- March Road / Klondike Road – Wednesday, January 30th 2013 – (City of Ottawa);
- March Road / Morgan's Grant Way / Shirley's Brook Drive – Tuesday, August 7th 2012 (City of Ottawa);
- March Road / Terry Fox Drive – Wednesday, June 29th 2012 (City of Ottawa);
- March Road / Solandt Road – Thursday, June 30th, 2011 (City of Ottawa);
- March Road / Carling Avenue – Tuesday, June 19th, 2012 (City of Ottawa);
- March Road / Gateway Shopping Centre – Monday, August 27th, 2012 (City of Ottawa);
- March Road / Teron Road / Richardson Side Road – Tuesday, June 21st, 2011 (City of Ottawa);

- March Road / Herzberg Road – Tuesday, August 2nd, 2012 (City of Ottawa);
- March Road / Corkstown Road – Tuesday, May 4th, 2010 (City of Ottawa);
- March Road / Campeau Drive – Wednesday, July 13th, 2011 (City of Ottawa);
- March Road / Highway 417 – Tuesday, August 10th, 2010 (Province of Ontario);
- Terry Fox Drive / Second Line Road – Friday, May 18th 2012 – (City of Ottawa);
- Terry Fox Drive / Flamborough Way – Tuesday, July 12th 2011 – (City of Ottawa);
- Terry Fox Drive / March Valley Road – Tuesday, January 15th 2013 – (NECL);
- Terry Fox Drive / Legget Drive – Thursday, March 7th 2013 – (City of Ottawa);
- Klondike Road / Second Line Road – Wednesday, January 23rd 2013 – (NECL);
- Klondike Road / Weatherston Street – Monday, June 20th 2011 – (City of Ottawa);
- Klondike Road / March Valley Road – Tuesday, January 15th 2013 – (NECL);
- Second Line Road / Old Carp Road – Wednesday, January 16th 2013 – (NECL).

Weekday vehicular peak hour traffic volumes at the aforementioned intersections are shown in **Figure 3**.

3.3 Existing Intersection Operations

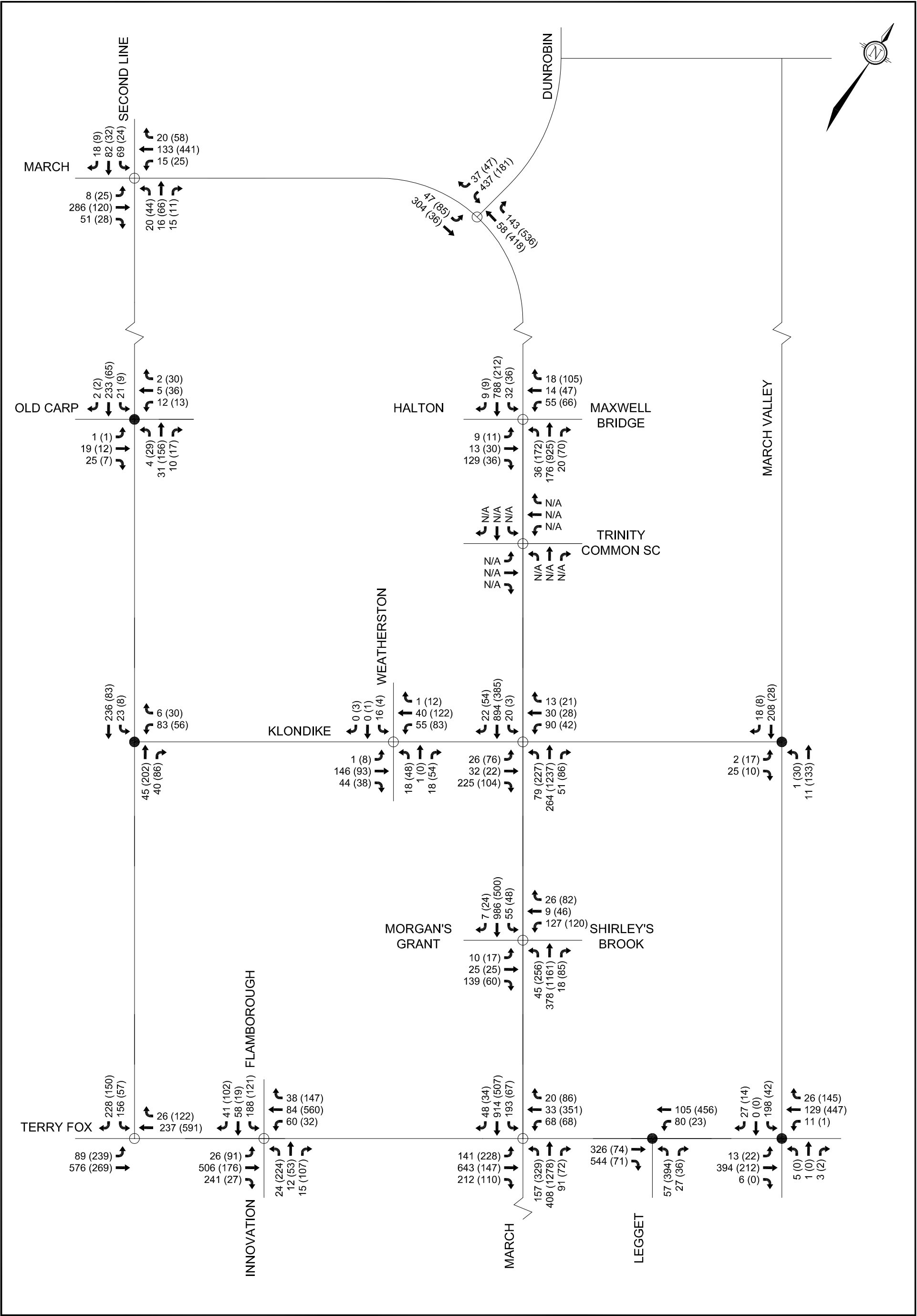
Intersection capacity analysis has been completed using the Synchro 8.0 software package. Operating conditions at signalized intersections have been evaluated in terms of volume to capacity (v/c) ratio and the corresponding Level Of Service (LOS) based on City of Ottawa Criteria. Operating conditions at unsignalized intersections have been evaluated in terms of delay and LOS based on Highway Capacity Manual 2010 (HCM) criteria. Mitigation measures have been identified for movements with LOS E or F.

Intersection capacity analysis has been completed for the existing traffic conditions. The results of the analysis are summarized in the following table for the weekday AM and PM peak hours. Detailed reports are included in Appendix A.

Table 1: 2013 Existing Intersection Operations

Intersection	Lane Group	AM Peak Hour				PM Peak Hour			
		v/c or Delay	LOS	Queue	Storage	v/c or Delay	LOS	Queue	Storage
March Road / Second Line Road ¹	SBL/T/R	0.46	A	25m	-	0.19	A	15m	-
	EBL	0.01		None	35m	0.06		5m	35m
	EBT/R	0.45		40m	-	0.16		5m	-
	WBT	0.15		15m	-	0.46		10m	-
March Road / Dunrobin Road ¹	SBL/R	0.61	B	30m	50m	0.43	B	25m	50m
	WBR	0.21		10m	90	0.64		80m	90m
March Road / Maxwell Bridge Road / Halton Terrace ¹	SBL	0.05	B	5m	40m	0.10	A	5m	40m
	SBT	0.42		65m	-	0.12		15m	-
	SBR	0.01		None	10m	0.01		None	10m

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LEGEND

●

Unsignalized Intersection

○

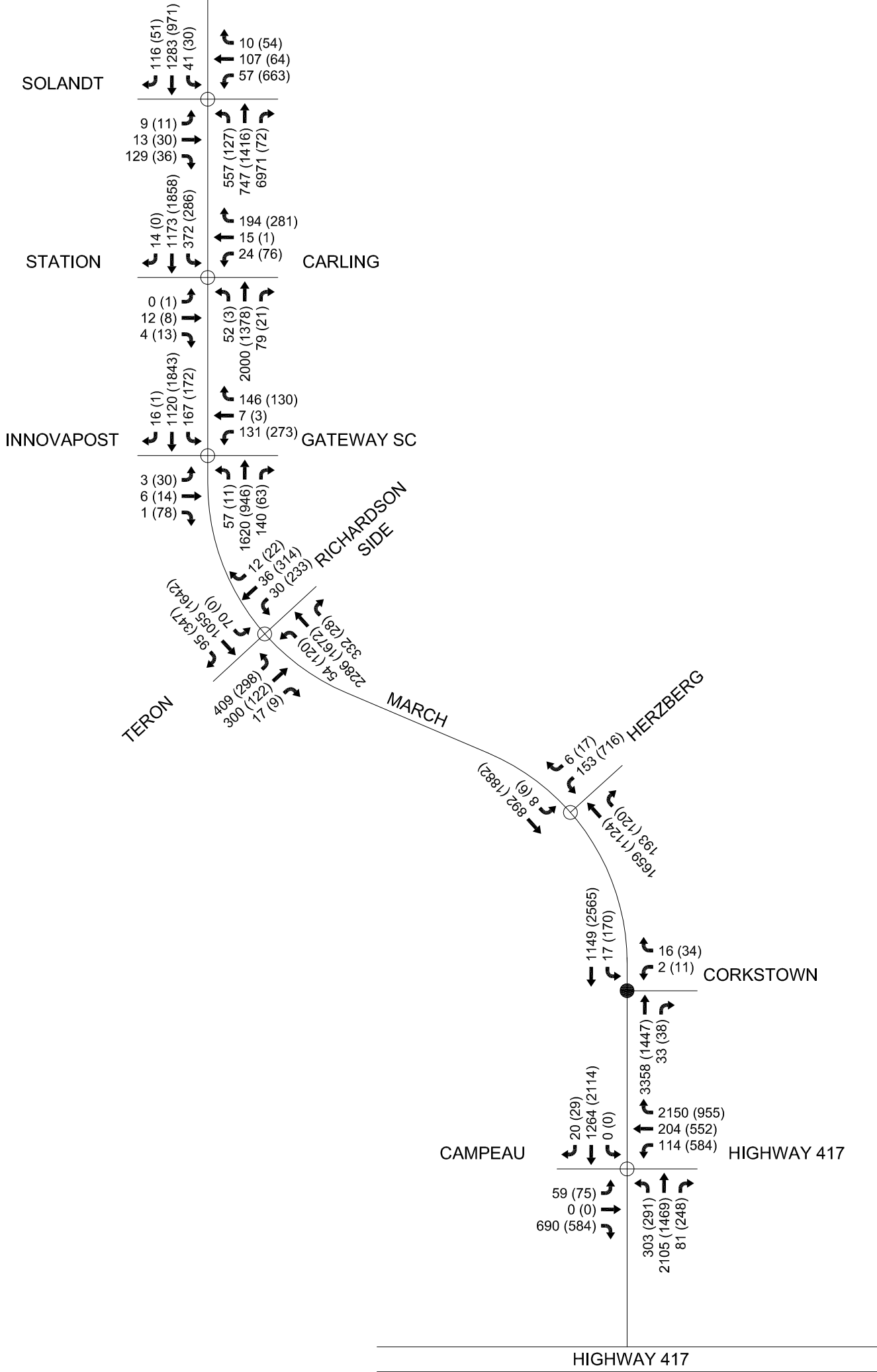
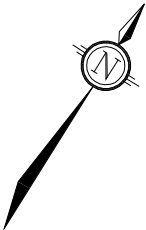
Signalized Intersection

xx VPH AM Peak Hour

(xx) VPH PM Peak Hour

KANATA NORTH URBAN
EXPANSION STUDY AREA

EXISTING TRAFFIC
VOLUMES



Intersection	Lane Group	AM Peak Hour				PM Peak Hour			
		v/c or Delay	LOS	Queue	Storage	v/c or Delay	LOS	Queue	Storage
	WBL	0.63		25m	40m	0.42		25m	40m
	WBT/R	0.12		10m	-	0.55		30m	-
March Road / Trinity Common Shopping Centre ¹	SBL	0.03	A	None	80m	0.08	A	5m	80m
	SBT	0.36		10m	-	0.13		15m	-
	NBT/R	0.09		5m	-	0.39		45m	-
	WBL	0.44		30m	40m	0.59		45m	40m
	WBR	0.05		5m	40m	0.23		10m	40m
March Road / Klondike Road ¹	SBL	0.14	A	10m	50m	0.03	A	5m	50m
	SBT/R	0.47		65m	-	0.26		30m	-
	NBL	0.25		15m	2 x 100m	0.53		30m	2 x 100m
	EBT/R	0.51		20m	-	0.29		15m	-
	WBL	0.49		30m	15m	0.28		15m	15m
	WBT/R	0.15		15m	-	0.24		15m	-
March Road / Morgan's Grant Way / Shirley's Brook Drive ¹	SBT	0.35	B	55m	-	0.20	B	30m	-
	SBR	0.01		None	35m	0.03		None	35m
	NBL	0.13		10m	90m	0.43		30m	90m
	NBT	0.14		20m	-	0.41		70m	-
	NBR	0.02		None	35m	0.09		5m	35m
	WBL	0.65		45m	30m	0.65		45m	30m
March Road / Terry Fox Drive ¹	SBL	1.36	F	105m	60m	0.50	F	30m	60m
	SBT	0.63		85m	-	0.27		40m	-
	SBR	0.09		None	80m	0.05		None	80m
	NBL	0.59		30m	2 x 175m	1.11		75m	2 x 175m
	NBT	0.28		35m	-	0.63		105m	-
	NBR	0.17		None	50m	0.10		None	50m
	EBL	0.24		25m	2 x 80m	0.85		50m	2 x 80m
	EBT	0.76		85m	-	0.23		25m	-
	EBR	0.41		15m	60m	0.28		10m	60m
	WBL	0.28		15m	2 x 70m	0.31		15m	2 x 70m
	WBT	0.05		5m	-	0.69		55m	-
	WBR	0.05		None	50m	0.25		None	50m
March Road / Solandt Road ¹	SBL	0.16	F	20m	150m	0.54	F	20m	150m
	SBT	0.92		250m	-	0.88		160m	-
	SBR	0.18		10m	85m	0.09		5m	85m
	NBL	1.24		250m	160m	0.97		70m	160m
	NBT	0.33		60m	-	0.97		230m	-
	NBR	0.59		25m	-	0.11		5m	-

Intersection	Lane Group	AM Peak Hour				PM Peak Hour			
		v/c or Delay	LOS	Queue	Storage	v/c or Delay	LOS	Queue	Storage
	EBL	0.16		15m	35m	0.14		20m	35m
	EBT	0.38		30m	-	0.24		30m	-
	EBR	0.31		5m	35m	1.42		225m	35m
	WBL	0.31		15m	2 x 65m	0.97		120m	2 x 65m
	WBT/R	0.63		50m	-	0.39		40m	-
March Road / Carling Avenue / Station Road ¹	SBL	1.03	F	85m	2 x 170m	0.72	C	55m	2 x 170m
	SBT	0.53		140m	-	0.75		305m	-
	SBR	0.01		None	20m	0.00		None	20m
	NBL	0.44		20m	90m	0.04		None	90m
	NBT	0.99		375m	-	0.70		210m	-
	NBR	0.09		None	80m	0.03		None	80m
	EBT/L	0.08		10m	-	0.04		5m	-
	EBR	0.02		None	20m	0.06		None	20m
	WBL	0.22		15m	50m	0.53		30m	50m
	WBT	0.09		10m	-	0.00		None	-
	WBR	0.63		20m	140m	0.72		35m	140m
March Road / Gateway Shopping Centre ¹	SBL	0.70	D	60m	60m	0.58	F	20m	60m
	SBT/R	0.48		25m	-	0.89		60m	-
	NBL	0.24		None	50m	0.22		None	50m
	NBT	0.86		25m	-	0.56		105m	-
	NBR	0.16		None	125m	0.08		None	125m
	EBT/L	0.04		5m	20m	0.20		20m	20m
	EBR	0.00		None	-	0.20		10m	-
	WBT/L	0.76		55m	45m	1.03		135m	45m
	WBR	0.44		15m	-	0.31		15m	-
March Road / Teron Road / Richardson Side Road ¹	SBL	0.31	F	20m	30m	0.67	F	75m	30m
	SBT	0.10		20m	-	0.99		145m	-
	SBR	0.03		None	70m	0.06		None	70m
	NBL	2.93		250m	75m	1.60		160m	75m
	NBT	0.63		120m	-	0.38		50m	-
	NBR	0.04		None	75m	0.02		None	75m
	EBL	1.06		50m	75m	0.00		None	75m
	EBT	0.71		125m	-	1.04		290m	-
	EBR	0.15		10m	70m	0.43		25m	70m
	WBL	0.79		30m	70m	1.06		60m	70m
	WBT	1.55		500m	-	0.89		235m	-
	WBR	0.45		40m	75m	0.03		None	75m
	SBL	0.07	C	None	70m	0.03	D	None	70m

Intersection	Lane Group	AM Peak Hour				PM Peak Hour			
		v/c or Delay	LOS	Queue	Storage	v/c or Delay	LOS	Queue	Storage
March Road / Herzberg Road ¹	SBT	0.27		80m	-	0.68		130m	-
	NBT	0.72		145m	-	0.56		105m	-
	NBR	0.18		5m	-	0.13		5m	-
	WBL/R	0.28		30m	130m	0.88		110m	130m
March Road / Corkstown Road	SBL	76s	F	5m	75m	20s	F	15m	75m
	SBT	0s		None	-	0s		None	-
	NBT	0s		None	-	0s		None	-
	NBR	0s		None	50m	0s		None	50m
	WBL	3640s		5m	30m	1014s		15m	30m
	WBR	26s		5m	-	13s		None	-
March Road / Campeau Drive / Highway 417 ¹	SBT	1.28	F	160m	-	0.99	F	275m	-
	SBR	0.04		None	125m	0.04		None	125m
	NBL	0.95		60m	2 x 85m	0.86		70m	2 x 85m
	NBT	1.72		410m	-	0.75		195m	-
	EBL	0.43		25m	60m	0.66		40m	60m
	EBR	0.54		80m	-	0.90		135m	-
	WBL	0.43		20m	2 x 140m	0.96		130m	2 x 140m
	WBT	0.17		25m	-	0.68		105m	-
	WBR	3.30		940m	70m	2.34		560m	70m
Terry Fox Drive / Second Line Road ¹	SBL	0.64	B	50m	40m	0.33	A	25m	40m
	EBL	0.12		10m	60m	0.45		15m	60m
	EBT	0.49		75m	-	0.22		20m	-
	WBT	0.24		40m	-	0.60		100m	-
Terry Fox Drive / Flamborough Way / Innovation Drive ¹	SBL	0.87	D	50m	40m	0.41	C	30m	40m
	NBL	0.12		10m	40m	0.73		50m	40m
Terry Fox Drive / March Valley Road	SBL/T/R	24s	C	25m	-	18s	C	5m	-
Klondike Road / Second Line Road	NBL/T	8s	A	None	-	9s	A	None	-
	EBL/R	9s		None	-	8s		None	-
Klondike Road / Weatherston Street ¹	NBL	0.06	A	5m	-	0.29	A	15m	-
	EBL	0.00		None	15m	0.01		None	15m
	EBT/R	0.14		25m	-	0.13		15m	-
Klondike Road / March Valley Road	EBL/R	10 s	A	None	-	10s	A	None	-
Second Line Road / Old Carp Road	NBL/T/R	9 s	A	None	-	8s	A	None	-
	SBL/T/R	8 s		None	-	9s		None	-

1. Signalized Intersection

3.3.1 March Road / Klondike Road

All movements at the March Road / Klondike Road intersection are currently operating under acceptable conditions during the weekday AM and PM peak hours. The westbound left turn movement at this intersection has a queue length of approximately 30m during the weekday AM peak hour, which exceeds the parallel length of the turn lane.

3.3.2 March Road / Morgan's Grant Way / Shirley's Brook Drive

All movements at the March Road / Morgan's Grant Way / Shirley's Brook Drive intersection are currently operating under acceptable conditions during the weekday AM and PM peak hours. The westbound left turn movement at this intersection has a queue length of approximately 45m during the weekday AM and PM peak hours, which exceeds the parallel length of the turn lane.

3.3.3 March Road / Terry Fox Drive

The southbound left turn movement at the March Road / Terry Fox Drive intersection is currently operating with a v/c ratio of 1.36 during the weekday AM peak hour. The southbound left turn movement has a queue length of approximately 105m during the weekday AM peak hour, which exceeds the parallel length of the turn lane.

The northbound left turn movement at this intersection is operating with a v/c ratio of 1.11 during the weekday PM peak hour.

3.3.4 March Road / Solandt Road

The southbound through movement and northbound left turn movement at the March Road / Solandt Road intersection is currently operating with a v/c ratio of 0.92 and 1.24 respectively during the weekday AM peak hour. The northbound left turn movement has a queue length of approximately 250m during the weekday AM peak hour, which exceeds the parallel length of the turn lane.

The northbound through and left turn movements and westbound left turn movement at this intersection are currently operating with a v/c ratio of 0.97 during the weekday PM peak hour. The eastbound right turn movement is also operating with a v/c of 1.42 during the PM peak hour. The eastbound right turn movement has a queue length of approximately 225m during the weekday PM peak hour, which exceeds the parallel length of the turn lane.

3.3.5 March Road / Carling Avenue / Station Road

The northbound and southbound left turn movements at the March Road / Carling Avenue / Station Road intersection are currently operating with a v/c ratio of 0.99 and 1.03 respectively during the weekday AM peak hour.

3.3.6 March Road / Gateway Shopping Centre

The westbound through/left turn movement at the March Road / Gateway Shopping Centre intersection is currently operating with a v/c ratio of 1.03 during the weekday PM peak hour. The westbound through/left turn movement at this intersection has a queue length of approximately 55m and 135m during the weekday AM and PM peak hours respectively, which extends past the internal drive aisle within the Gateway Shopping Centre.

3.3.7 March Road / Teron Road / Richardson Side Road

The northbound and eastbound left turn movements at the March Road / Teron Road / Richardson Side Road intersection are currently operating with a v/c ratio of 2.93 and 1.06 respectively during the weekday AM peak hour. The westbound through movement is also operating with a v/c ratio of 1.55 during the AM peak hour. The northbound left turn movement has a queue length of approximately 250m during the weekday AM peak hour, which exceeds the parallel length of the turn lane.

The southbound and eastbound through movements at this intersection are currently operating with a v/c ratio of 0.99 and 1.04 respectively during the weekday PM peak hour. The northbound and westbound left turn movements are also operating with a v/c ratio of 1.60 and 1.06 during the PM peak hour. The northbound and southbound left turn movements have a queue length of approximately 160m and 75m during the weekday PM peak hour, which exceeds the parallel length of the turn lane.

3.3.8 March Road / Corkstown Road

The southbound and westbound left turn movements at the March Road / Corkstown Road intersection are currently operating with a delay of 76s and 3640s respectively during the weekday AM peak hour.

The westbound left turn movement is currently operating with a delay of 1014s during the weekday PM peak hour.

3.3.9 March Road / Campeau Drive / Highway 417

The northbound and southbound through movements at the March Road / Campeau Drive / Highway 417 intersection are currently operating with a v/c of 1.28 and 1.72 respectively during the weekday AM peak hour. The northbound left and westbound right turn movements at this intersection are also operating with a v/c ratio of 0.95 and 3.30 during the AM peak hour. The westbound right turn movement has a queue length of approximately 940m during the weekday AM peak hour, which extends back to convergence of the Highway 417 off ramp.

The westbound left and right turn movements at this intersection are currently operating with a v/c ratio of 0.96 and 2.34 during the weekday PM peak hour. The southbound through movement is also operating with a v/c ratio of 0.99 during the PM peak hour. The westbound

right turn movement has a queue length of approximately 560m during the weekday PM peak hour, which exceeds the parallel length of the turn lane.

3.3.10 Terry Fox Drive / Second Line Road

All movements at the Terry Fox Drive / Second Line Road intersection are currently operating under acceptable conditions during the weekday AM and PM peak hours. The southbound left turn movement at this intersection has a queue length of approximately 50m during the weekday AM peak hour, which exceeds the parallel length of the turn lane.

3.3.11 Terry Fox Drive / Flamborough Way / Innovation Drive

All movements at the Terry Fox Drive / Flamborough Way / Innovation Drive intersection are currently operating under acceptable conditions during the weekday AM and PM peak hours. The northbound left turn movement at this intersection has a queue length of approximately 50m during the weekday PM peak hour, which exceeds the parallel length of the turn lane.

3.3.12 Other Study Area intersections

All other study area intersections are currently operating under acceptable conditions during the weekday AM and PM peak hours. The maximum (i.e. 95th percentile) queue lengths highlighted in bold in Table 1, with the exception of the above mentioned queue lengths, identify the maximum queue's that are expected to block access to adjacent auxiliary turning lane, by extending back across its full length. All other queues are expected to be accommodated within their respective storage capacities. Any blocking effects that may be created by the maximum queue lengths identified in Table 1 are expected to be intermittent, and unlikely to have any significant impact on driver delay.

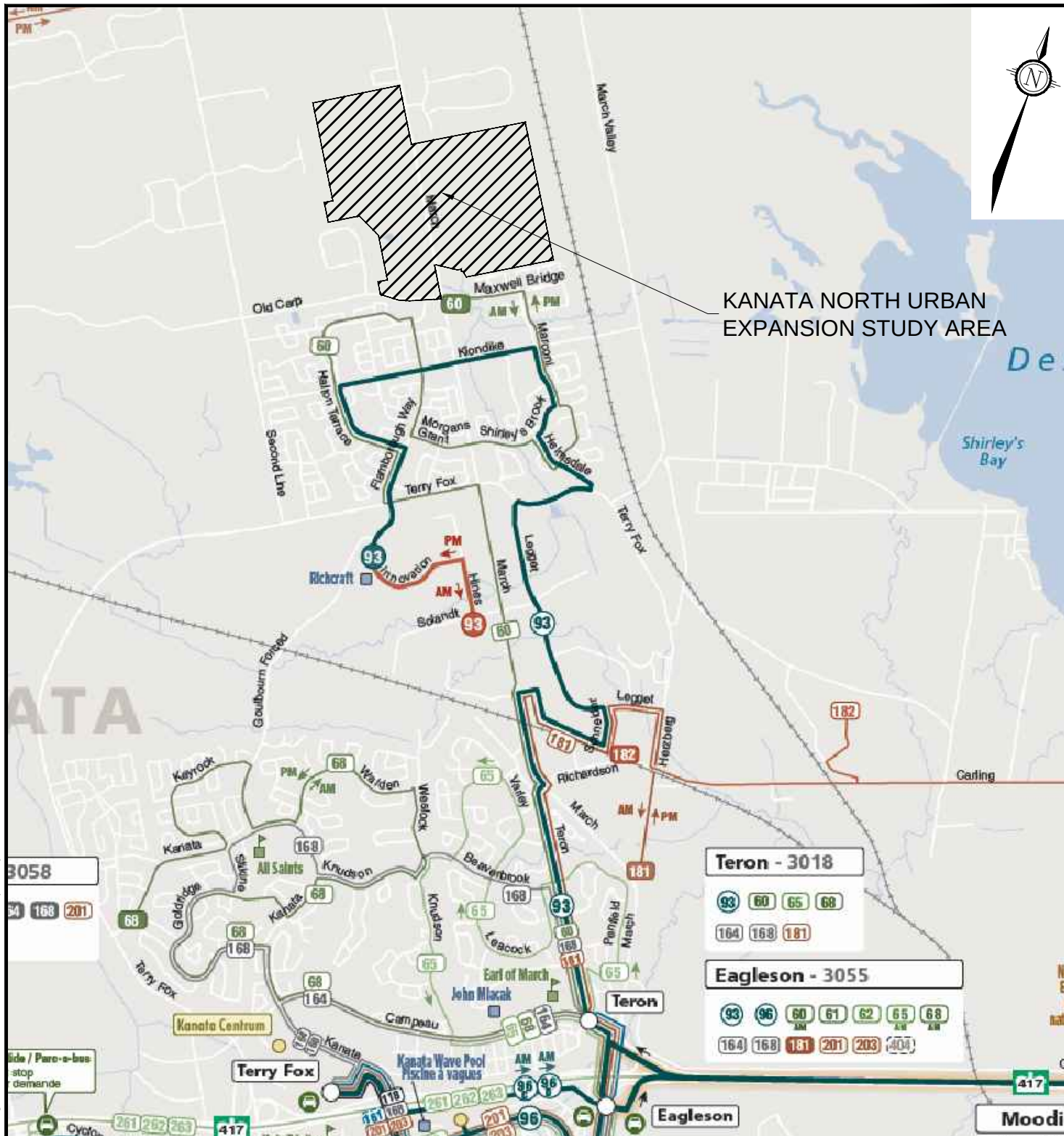
3.4 Existing Transit Network and Volumes

The current network of transit routes operated by OC Transpo in the vicinity of the KNUEA Lands is shown in **Figure 4**.

For the transit routes in the Kanata North Area, observed passenger activity data for each bus stop along the route was obtained from OC Transpo. The transit data collected by OC Transpo between September and December 2012 can be found in **Appendix B**.

3.4.1 OC Transpo Express Route 60

The express route 60 travels through the established communities of Brookside, Briarbrook and Morgan's Grant located within the TAI. The express route 60 provides a transit connection between Kanata North and downtown during the weekday AM and PM peak hours (5:30-08:30 AM, 3:00-6:00 PM). The route 60 travels eastbound during the AM peak hours commencing along Maxwell Bridge Road, with its terminus at the Hurdman Transit Station. The route 60 travels westbound during the PM peak hours commencing at the Hurdman Transit Station, with



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KANATA NORTH URBAN EXPANSION STUDY AREA

CURRENT PUBLIC TRANSIT ROUTES

SCALE

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FIGURE

FIGURE # 4

its terminus along Maxwell Bridge Road. The scheduled travel time from Maxwell Bridge Road to the Mackenzie King Transit Station is approximately 60 minutes with 15 minute headways.

Figures 5 and 6 shows the bus stop locations and total daily bus stop activity within the TAI for the express route 60.

As shown in **Figure 5**, the majority of the activity associated with the eastbound route occurs between bus stop #1165 and #1819. **Figure 6** shows that the majority of the activity associated with the westbound route occurs between bus stop # 1260 and #3676. More activity occurs west of March Road, compared to east of March Road as more residential development currently exists west of March Road. It should also be noted that there is a high amount of activity occurring along the westbound route at the bus stop #4875.

Figures 7 and 8 show the average number of passengers boarding/alighting the bus at each bus stop location, as well as the average ridership volume of buses travelling to/from the TAI.

As shown in **Figure 7**, the average load of route 60 – eastbound is 32 passengers prior to exiting the TAI. **Figure 8** shows that the average load of route 60 – westbound is 33 passengers prior to entering the TAI.

3.4.2 OC Transpo Transitway Route 93

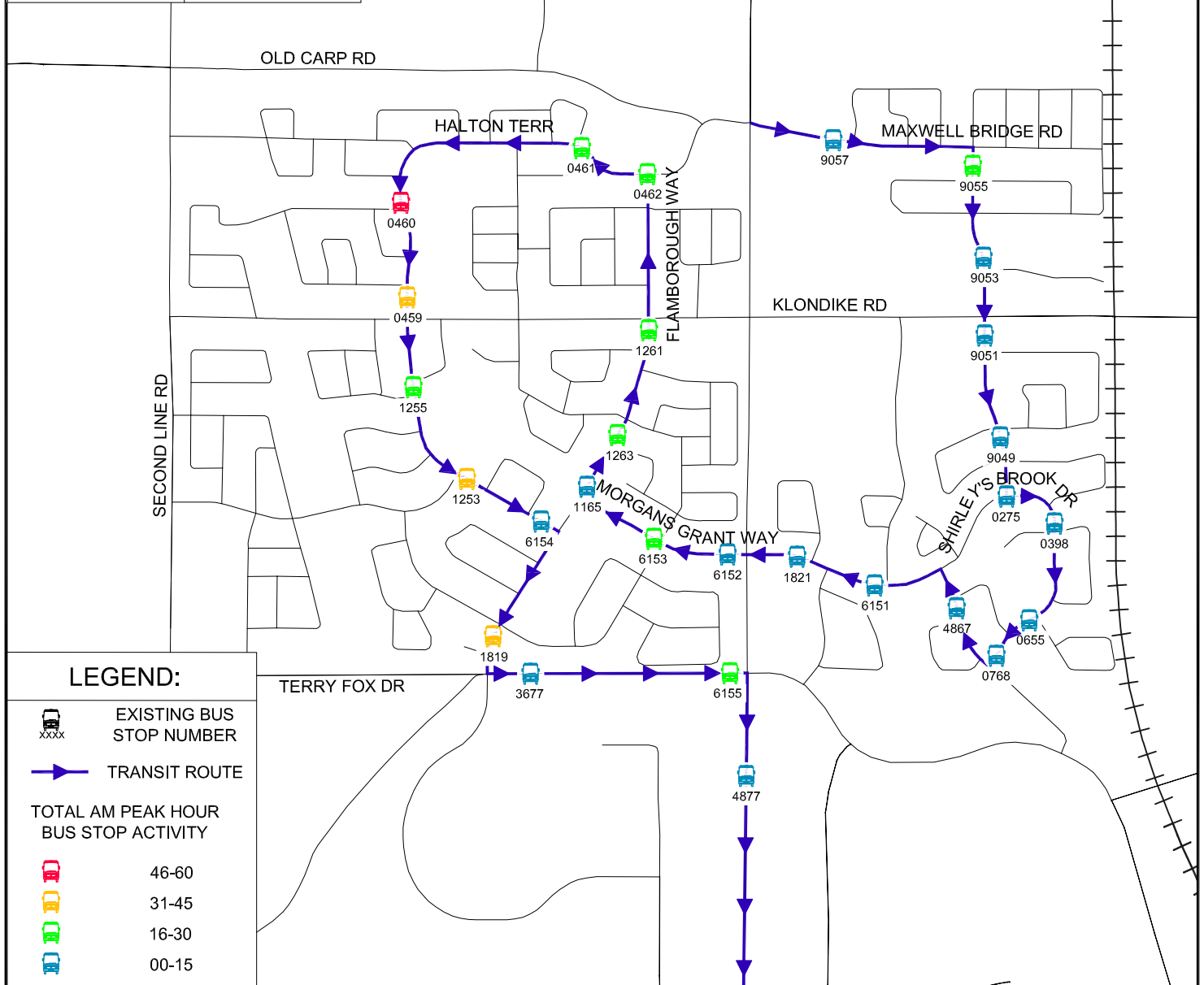
The transitway route 93 travels through the established communities of Morgan's Grant and Shirley's Brook located within the TAI. Service is provided in the westbound direction from the LeBreton Transit Station to Kanata North on 10-15 minute headways during the AM peak hour. Following the AM peak period, service is provided on 30 minute headways with buses commencing at the Lincoln Fields Transit Station. Service is provided in the eastbound direction from Kanata North to the LeBreton Transit Station on 10-15 minute headways during the PM peak period. Prior to the PM peak period, service is provided on 30 minute headways with its terminus at the Lincoln Fields Transit Station.

The scheduled travel time from Klondike Road to the Lincoln Fields Transit Station is approximately 35 minutes. The Lincoln Fields Transit Station is a major bus hub, providing service to numerous bus routes with comprehensive transit coverage across the City of Ottawa.

Figures 9 and 10 show the bus stop locations and total daily bus stop activity within the TAI for the transitway route 93.

As shown in **Figures 9 and 10**, the activity associated with the transitway route 93 is relatively evenly distributed within the TAI. It should be noted that there is a high amount of activity occurring at the bus stop #1489 and #6588 as a result of the retail development located in the southwest quadrant of the March Road / Klondike Road intersection. A high amount of activity exists at the bus stop #1182 & #1183, which is predominantly commuter flow as Innovation Drive provides access to the Kanata North Business Park.

BUS STOP	ACTIVITY	BUS STOP	ACTIVITY
9057	14	1165	8
9055	20	1263	19
9053	7	1261	27
9051	13	0462	19
9049	10	0461	22
0275	6	0460	46
0398	10	0459	45
0655	11	1255	19
0768	6	1253	32
4867	7	6154	12
6151	9	1819	31
1821	9	3677	2
6152	12	6155	20
6153	16	4877	0



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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 60 - EASTBOUND AM PEAK BUS STOP ACTIVITY

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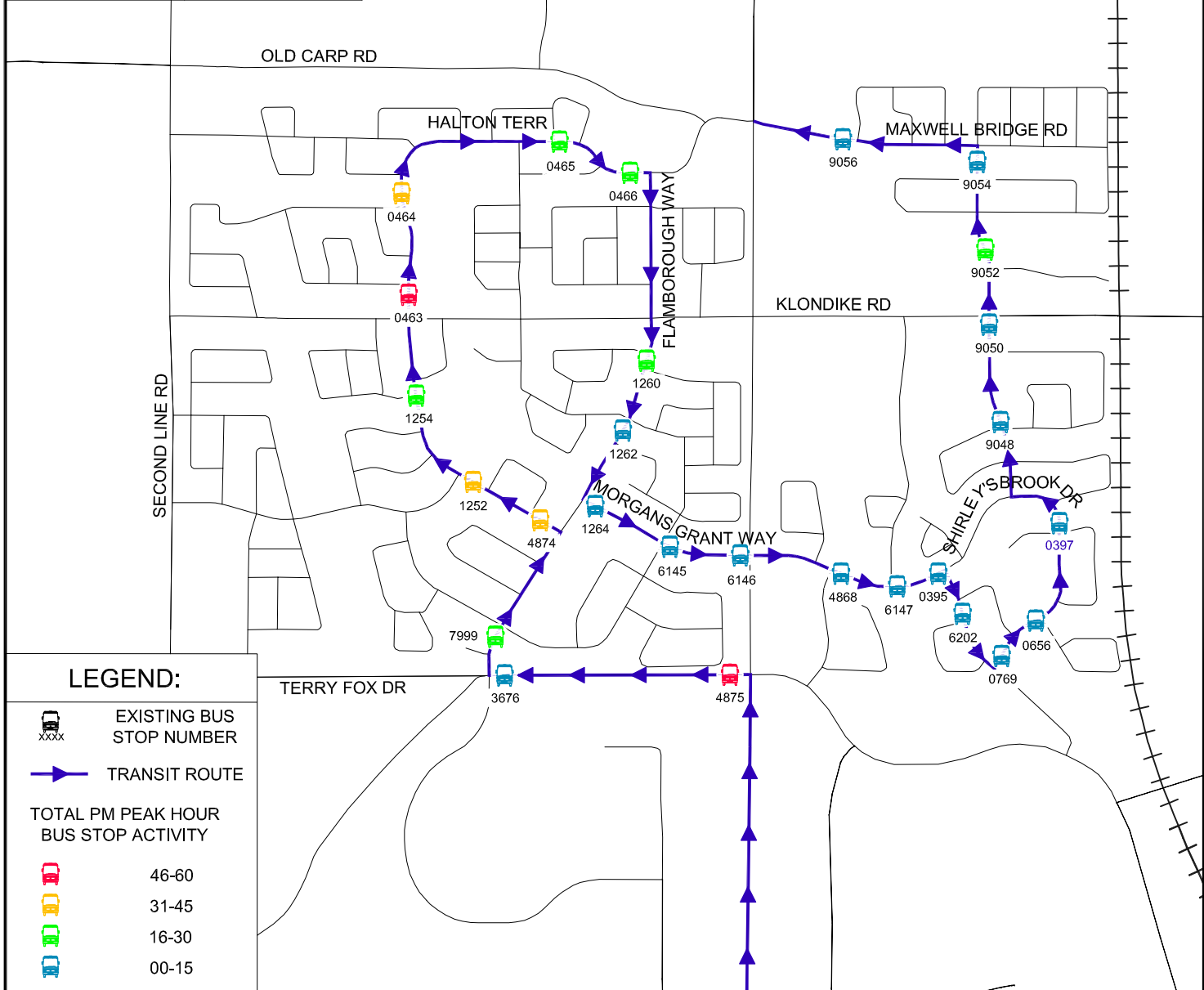
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FIGURE

FIGURE # 5

BUS STOP	ACTIVITY	BUS STOP	ACTIVITY
4875	52	6146	0
3637	1	4868	5
7999	25	6147	1
4874	33	0395	3
1252	41	6202	3
1254	24	0769	6
0463	47	0656	4
0464	35	0397	14
0465	17	9048	8
0466	29	9050	9
1260	24	9052	16
1262	5	9054	9
1264	1	9056	4
6145	2		



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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 60 - WESTBOUND PM PEAK BUS STOP ACTIVITY

SCALE

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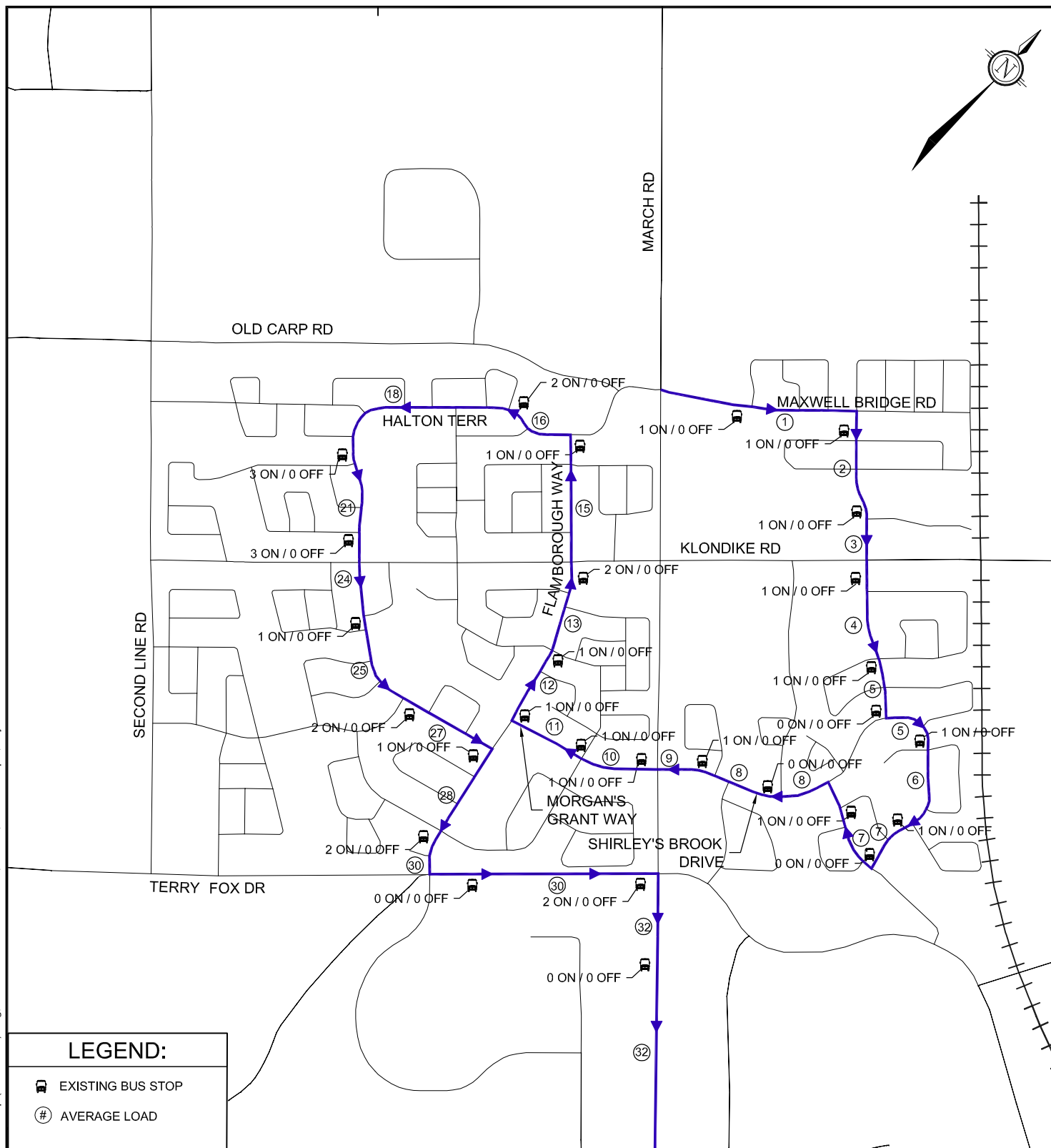
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FIGURE

FIGURE # 6

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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 60 - EASTBOUND AVERAGE PASSENGER BOARDING/ALIGHTING

SCALE

NTS

DATE

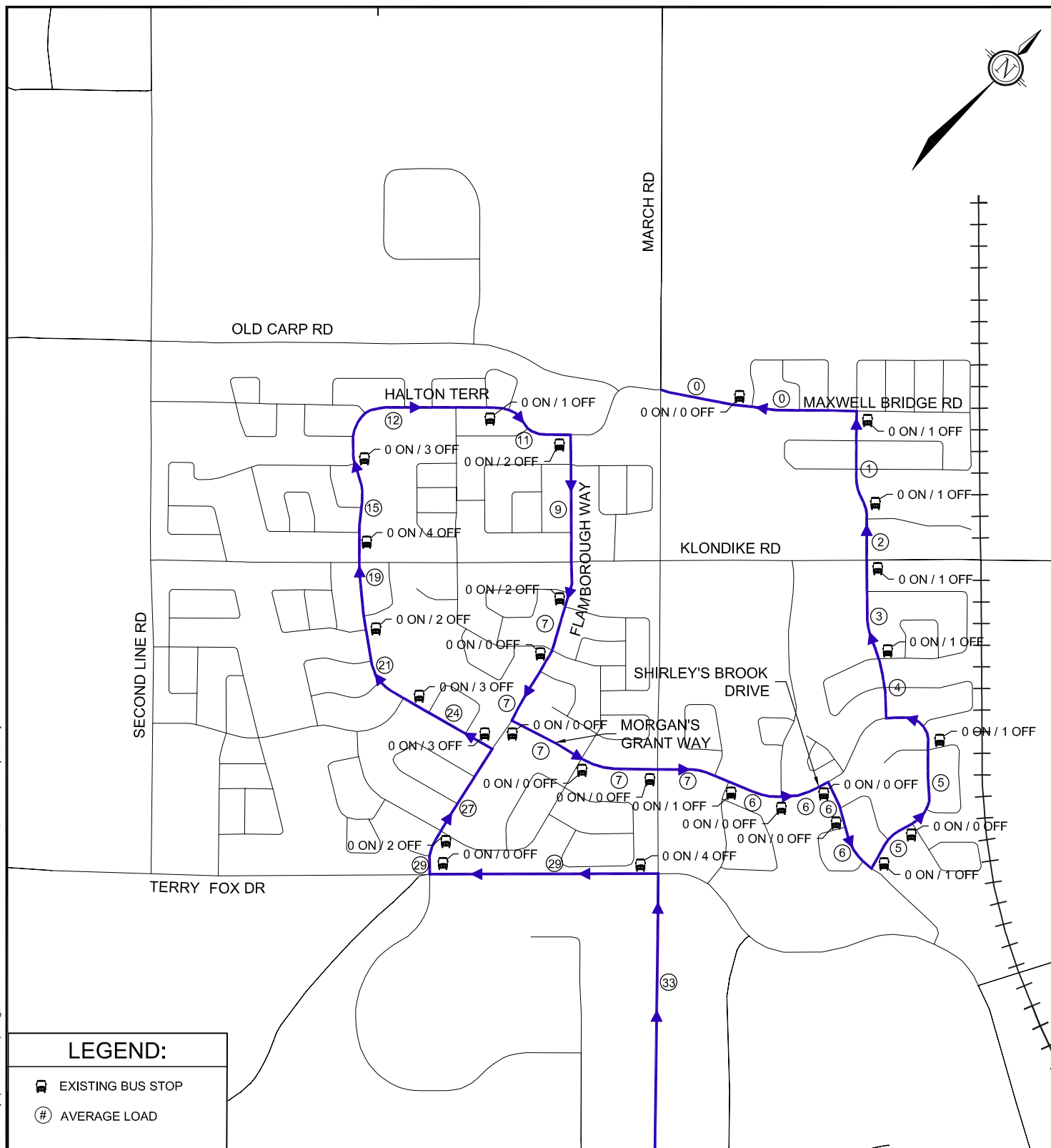
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FIGURE

FIGURE # 7



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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 60 - WESTBOUND
AVERAGE PASSENGER
BOARDING/ALIGHTING

SCALE

NTS

DATE

FEB 2014

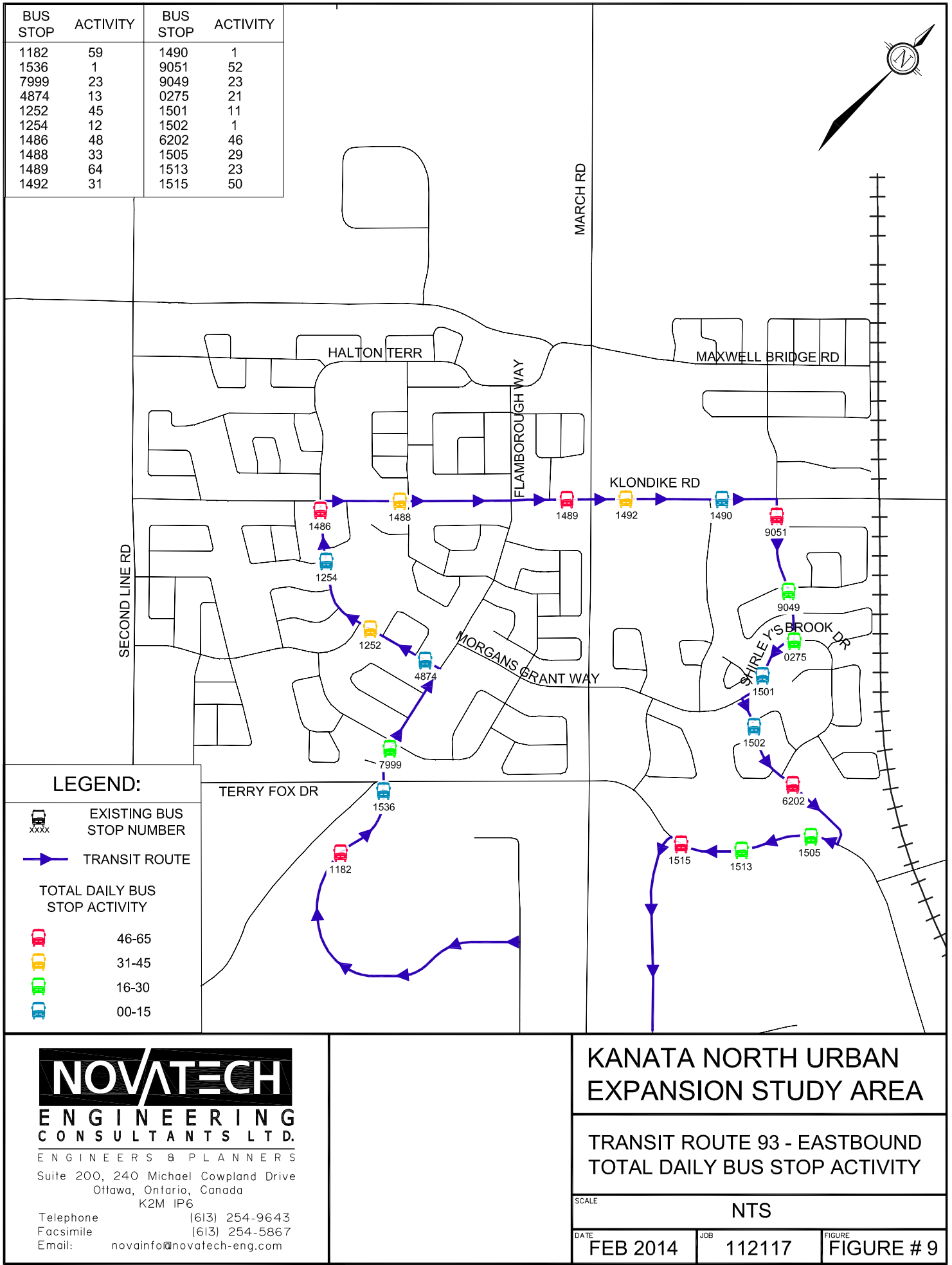
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FIGURE

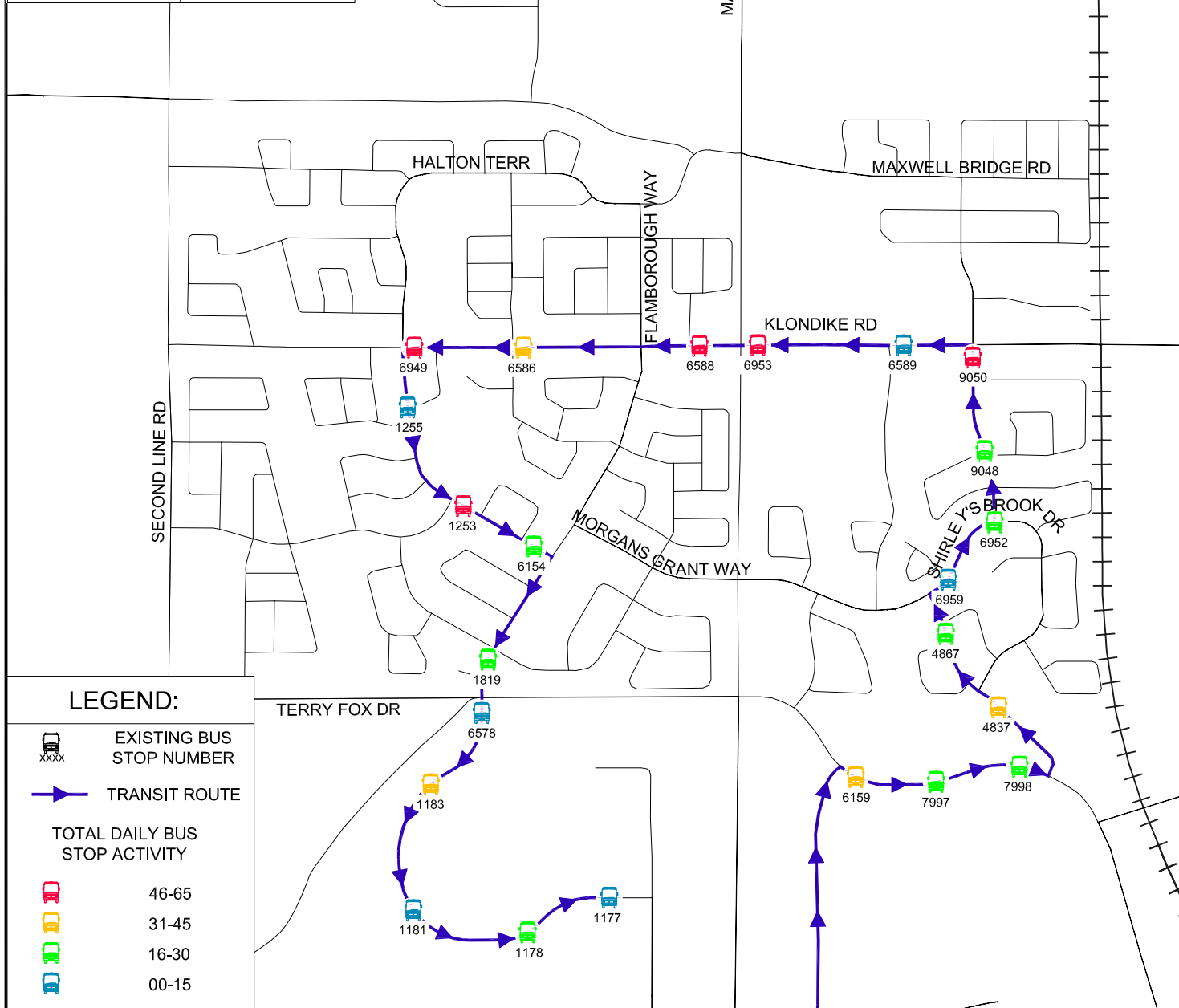
FIGURE # 8

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BUS STOP	ACTIVITY	BUS STOP	ACTIVITY
6159	33	6586	36
7997	16	6949	60
7998	27	1255	11
4837	31	1253	52
4867	22	6154	16
6959	14	1819	21
6952	29	6578	2
9048	29	1183	33
9050	64	1181	7
6589	1	1178	28
6953	53	1177	14
6588	59		



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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 93 - WESTBOUND TOTAL DAILY BUS STOP ACTIVITY

SCALE

NTS

DATE

FEB 2014

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FIGURE

FIGURE # 10

Figures 11 and 12 show the average number of passengers boarding/alighting the bus at each bus stop location, as well as the average ridership volume of buses travelling to/from the TAI.

As shown in **Figure 11**, the average load of transitway route 93 – eastbound is 12 passengers prior to exiting the TAI. **Figure 12** shows the average load of transitway route 93 – westbound is 12 passengers prior to entering the TAI.

3.4.3 OC Transpo School Route 674

The school route 674 provides a transit connection between the Kanata North communities and the All Saints Catholic High School located on Kanata Avenue. The school route 674 is identical to the regular route 93 throughout the TAI. The 674 deviates from the route 93 at the Beaverbrook Road / Teron Road intersection, where it travels west towards Kanata Avenue. Four buses travel to the All Saints Catholic High School between 7:00-8:00 AM, and back to the TAI between 2:30-3:30 PM on weekdays. It should be noted that the operating hours of the school route 674 do not coincide with the peak hour of traffic within the TAI.

Figures 13 and 14 show the bus stop locations and total AM and PM peak period bus stop activity within the TAI for the school route 674.

As shown in **Figures 13 and 14**, more activity occurs west of March Road, compared to east of March Road as more residential development currently exists west of March Road. **Figures 13 and 14** also show an increase in passenger activity along the school route 674 during the PM, suggesting that students are more inclined to be dropped off at school by their parents in the morning and rely on public transit to return home.

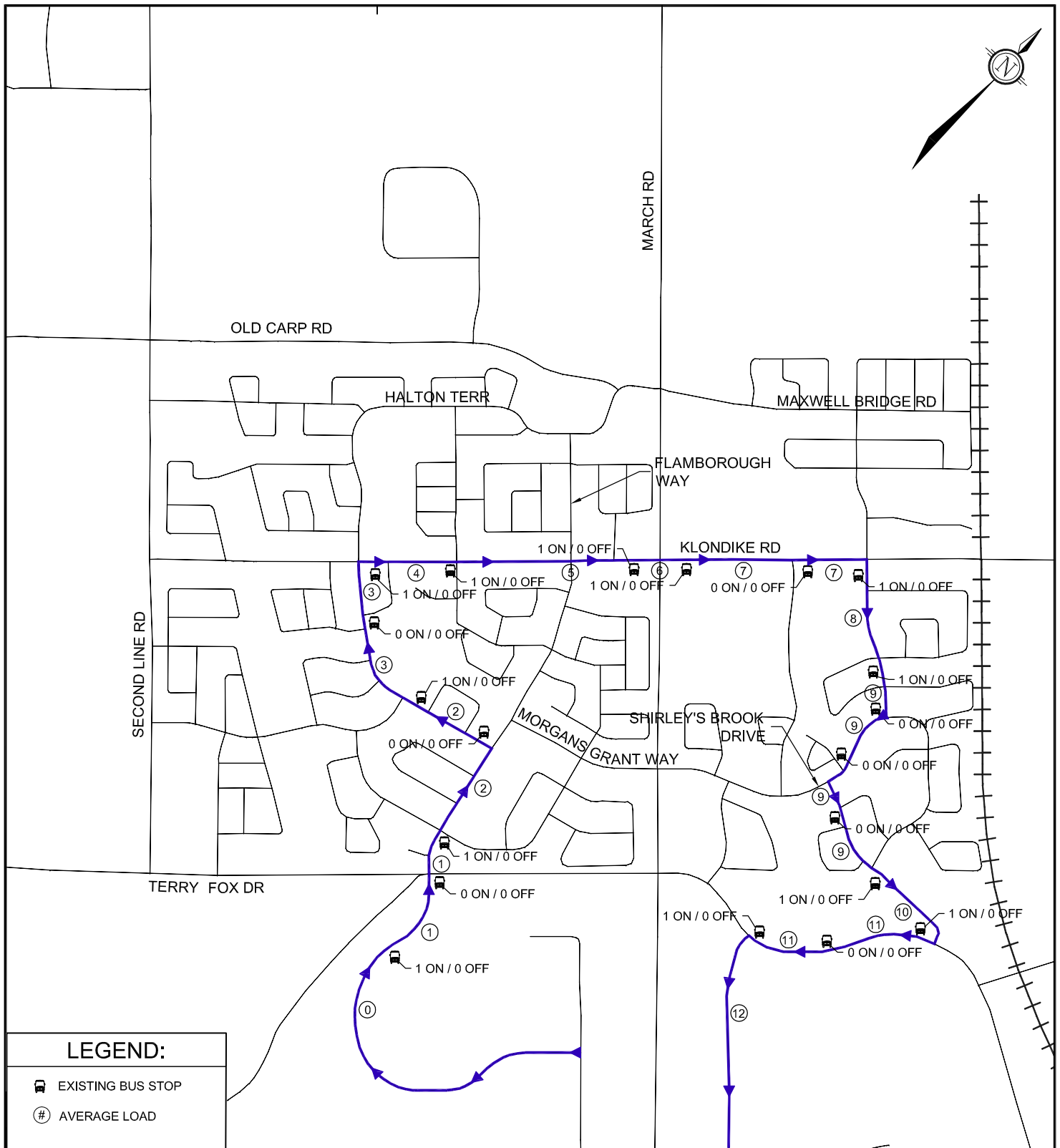
Figures 15 and 16 show the average number of passengers boarding/alighting the bus at each bus stop location, as well as the average load of buses travelling to/from the TAI.

As shown in **Figure 15**, the average load of school route 674 – AM is 10 passengers prior to exiting the TAI. **Figure 16** shows that the average load school route 674 - PM is 34 passengers prior to entering the TAI.

3.4.4 2013 Existing Total Transit Volumes

It should be noted that the transit volumes during the weekday AM and PM peak hours are anticipated to be higher than the average transit volumes shown in **Figures 7, 8, 11, 12, 15 and 16**. In the foregoing calculations it has been assumed that the average peak hour load of each bus will be one standard deviation higher than the average identified in the aforementioned figures.

Existing total transit volumes were calculated for the AM and PM peak hours by multiplying the average peak hour transit ridership for each transit route by the frequency of buses running during the peak hour. The calculations for the AM and PM peak hours are shown in **Table 2**.



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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 93 - EASTBOUND
AVERAGE PASSENGER
BOARDING/ALIGHTING

SCALE

NTS

DATE

FEB 2014

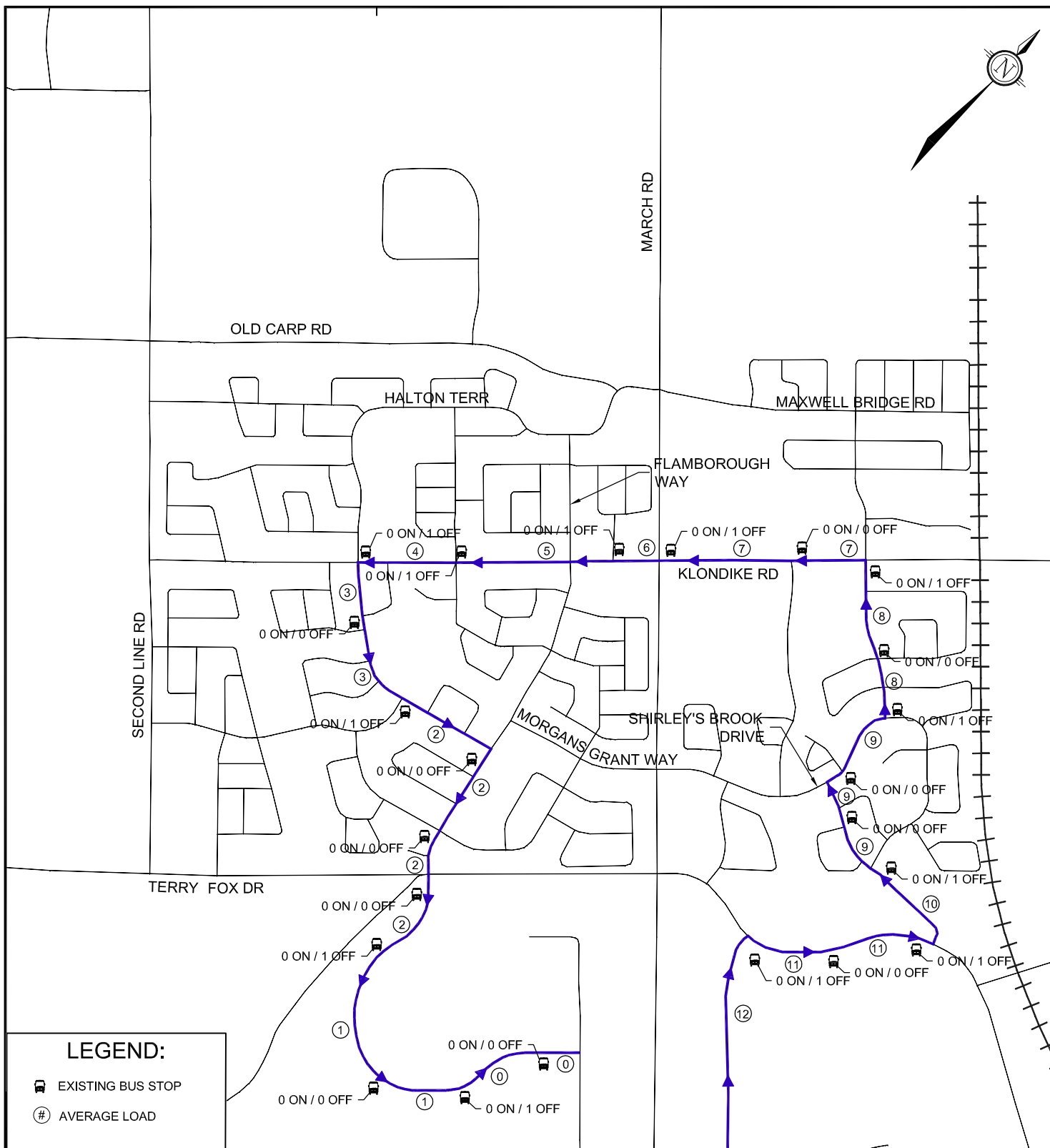
JOB

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FIGURE

FIGURE # 11

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KANATA NORTH URBAN EXPANSION STUDY AREA

**TRANSIT ROUTE 93 - WESTBOUND
AVERAGE PASSENGER
BOARDING/ALIGHTING**

SCALE

NTS

DATE

FEB 2014

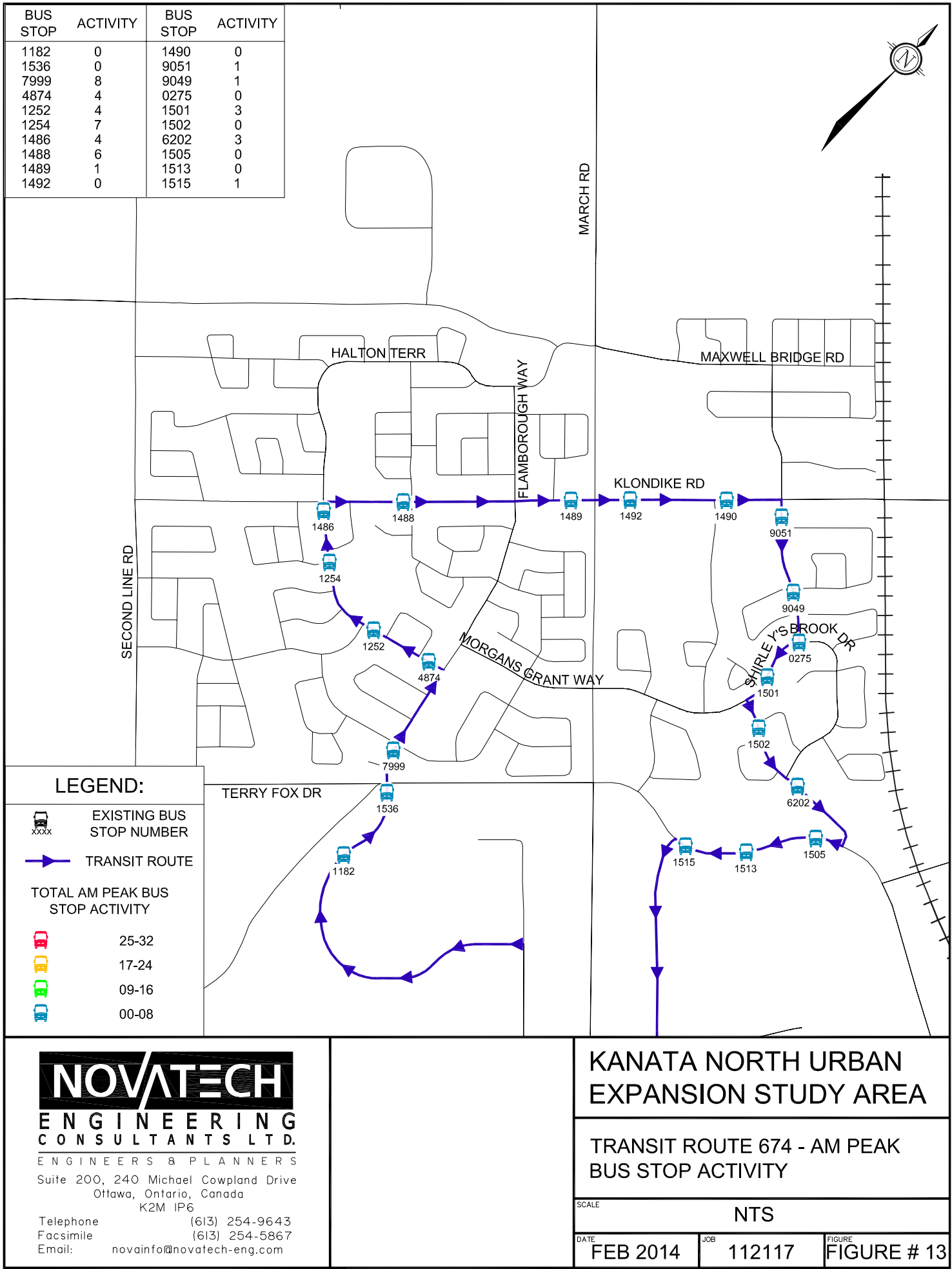
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FIGURE

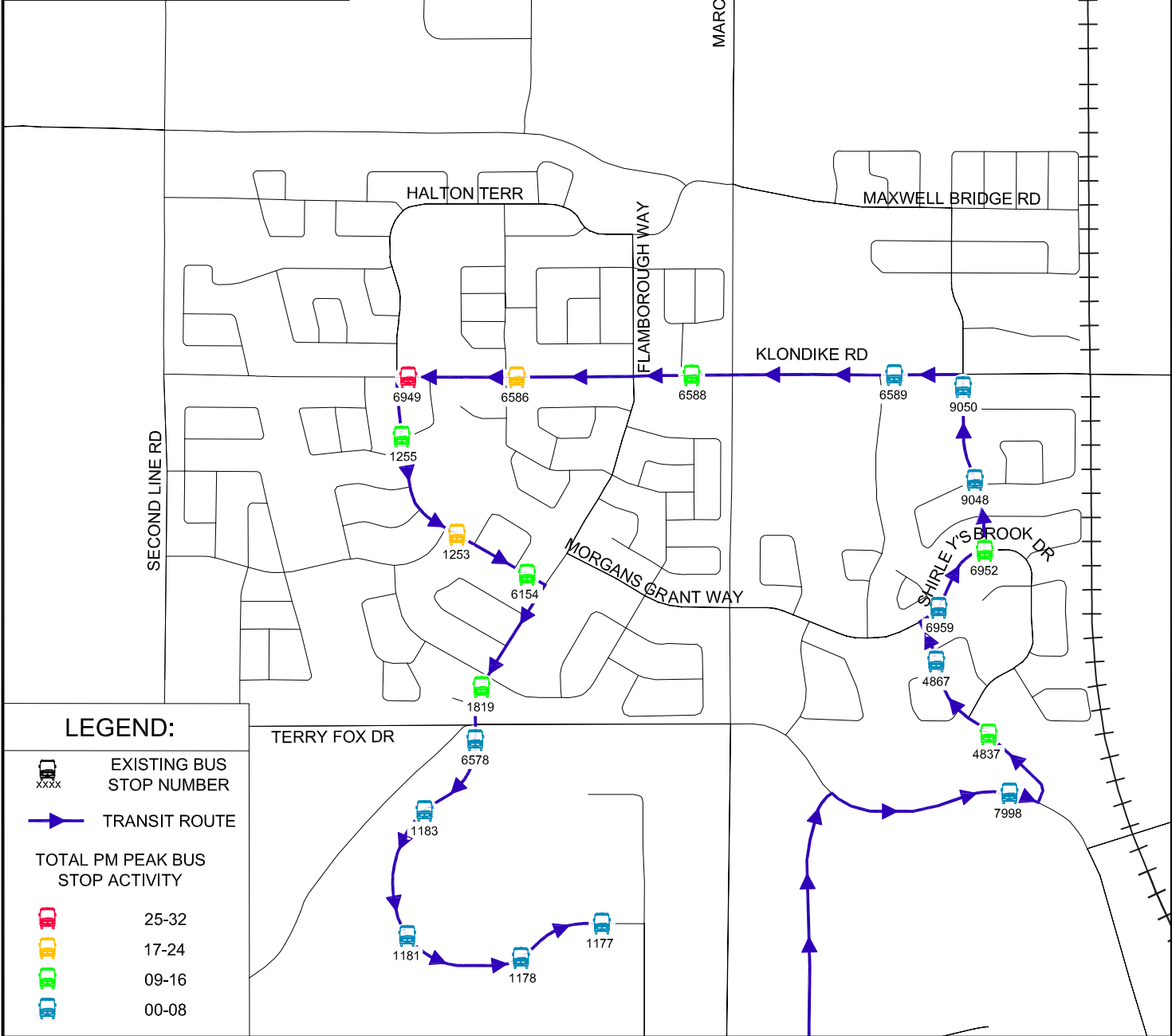
FIGURE # 12

M:\2012\112117\CAD\Design\Figures\Traffic\Transit\Volumes.dwg, ROUTE 674 - EASTBOUND, Feb 03, 2014 - 3:20pm, bbyvelis



M:\2012\112117\CAD\Design\Figures\Traffic\Transit\Volumes.dwg, ROUTE 674 - WESTBOUND, Feb 03, 2014 - 3:20pm, bbyvelds

BUS STOP	ACTIVITY	BUS STOP	ACTIVITY
7998	0	6949	30
4837	12	1255	11
4867	5	1253	21
6959	4	6154	9
6952	10	1819	16
9048	5	6578	0
9050	6	1183	0
6589	1	1181	0
6588	15	1178	0
6586	17	1177	0



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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 674 - PM PEAK BUS STOP ACTIVITY

SCALE

NTS

DATE

FEB 2014

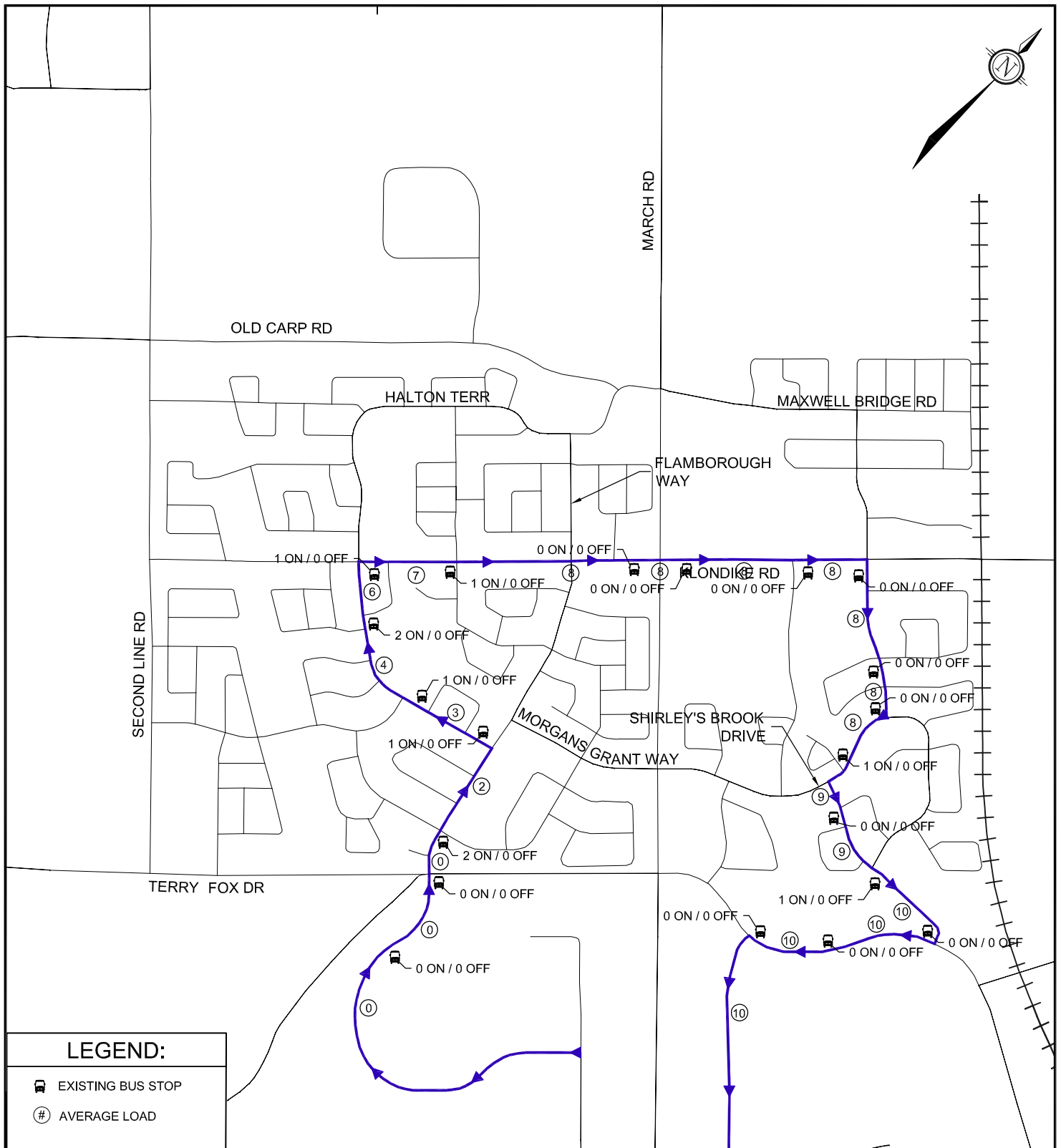
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FIGURE

FIGURE # 14

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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 674 - AM AVERAGE
PASSENGER BOARDING/ALIGHTING

SCALE

NTS

DATE

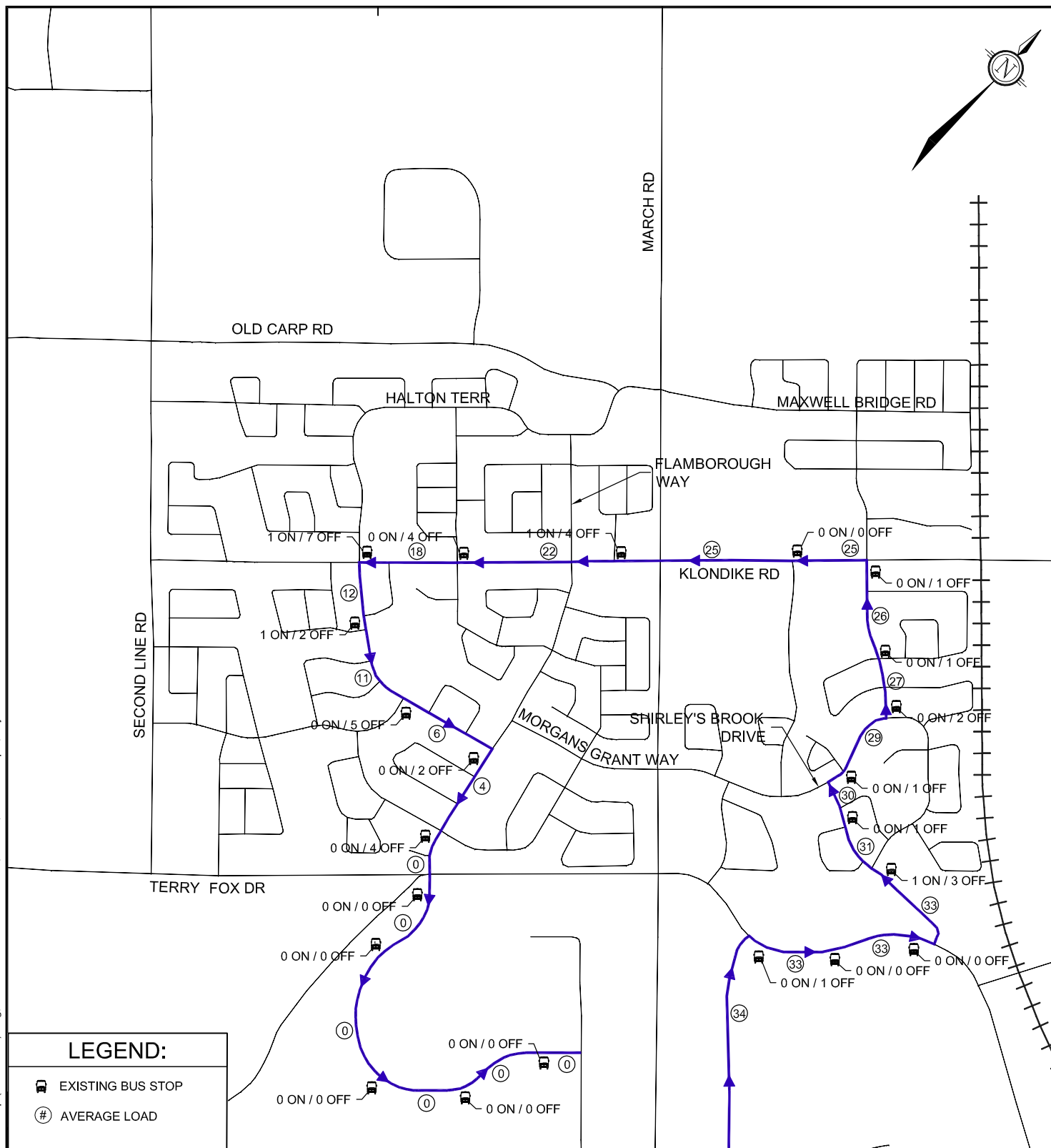
FEB 2014

JOB

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FIGURE

FIGURE # 15



LEGEND:

 EXISTING BUS STOP

⑧ AVERAGE LOAD

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KANATA NORTH URBAN EXPANSION STUDY AREA

TRANSIT ROUTE 674 - PM AVERAGE PASSENGER BOARDING/ALIGHTING

SCALE

NTS

DATE _____

FEB 2014

DATE	JOB	DESCRIPTION	AMOUNT	STATUS
10/1/2023	101	...	...	...
10/2/2023	102	...	...	...
10/3/2023	103	...	...	...
10/4/2023	104	...	...	...
10/5/2023	105	...	...	...
10/6/2023	106	...	...	...
10/7/2023	107	...	...	...
10/8/2023	108	...	...	...
10/9/2023	109	...	...	...
10/10/2023	110	...	...	...
10/11/2023	111	...	...	...
10/12/2023	112	...	...	...
10/13/2023	113	...	...	...
10/14/2023	114	...	...	...
10/15/2023	115	...	...	...
10/16/2023	116	...	...	...
10/17/2023	117	...	...	...
10/18/2023	118	...	...	...
10/19/2023	119	...	...	...
10/20/2023	120	...	...	...
10/21/2023	121	...	...	...
10/22/2023	122	...	...	...
10/23/2023	123	...	...	...
10/24/2023	124	...	...	...
10/25/2023	125	...	...	...
10/26/2023	126	...	...	...
10/27/2023	127	...	...	...
10/28/2023	128	...	...	...
10/29/2023	129	...	...	...
10/30/2023	130	...	...	...
10/31/2023	131	...	...	...
11/1/2023	132	...	...	...
11/2/2023	133	...	...	...
11/3/2023	134	...	...	...
11/4/2023	135	...	...	...
11/5/2023	136	...	...	...
11/6/2023	137	...	...	...
11/7/2023	138	...	...	...
11/8/2023	139	...	...	...
11/9/2023	140	...	...	...
11/10/2023	141	...	...	...
11/11/2023	142	...	...	...
11/12/2023	143	...	...	...
11/13/2023	144	...	...	...
11/14/2023	145	...	...	...
11/15/2023	146	...	...	...
11/16/2023	147	...	...	...
11/17/2023	148	...	...	...
11/18/2023	149	...	...	...
11/19/2023	150	...	...	...
11/20/2023	151	...	...	...
11/21/2023	152	...	...	...
11/22/2023	153	...	...	...
11/23/2023	154	...	...	...
11/24/2023	155	...	...	...
11/25/2023	156	...	...	...
11/26/2023	157	...	...	...
11/27/2023	158	...	...	...
11/28/2023	159	...	...	...
11/29/2023	160	...	...	...
11/30/2023	161	...	...	...
12/1/2023	162	...	...	...
12/2/2023	163	...	...	...
12/3/2023	164	...	...	...
12/4/2023	165	...	...	...
12/5/2023	166	...	...	...
12/6/2023	167	...	...	...
12/7/2023	168	...	...	...
12/8/2023	169	...	...	...
12/9/2023	170	...	...	...
12/10/2023	171	...	...	...
12/11/2023	172	...	...	...
12/12/2023	173	...	...	...
12/13/2023	174	...	...	...
12/14/2023	175	...	...	...
12/15/2023	176	...	...	...
12/16/2023	177	...	...	...
12/17/2023	178	...	...	...
12/18/2023	179	...	...	...
12/19/2023	180	...	...	...
12/20/2023	181	...	...	...
12/21/202				

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FIGURE

FIGURE # 16

Table 2: Existing Transit Volumes

Transit Route	Average Peak Hour Load (ppb ¹)		Frequency (bph ²)				Average Volume (pph ³)			
			AM Peak		PM Peak		AM Peak		PM Peak	
	In	Out	In	Out	In	Out	In	Out	In	Out
60	41	41	0	6	5	0	0	246	205	0
93	19	20	8	2	2	5	152	40	38	100
674	55	27	None ⁴	None ⁴	None ⁴	None ⁴	None ⁴	None ⁴	None ⁴	None ⁴
Total							152	286	243	100

1. ppb = Passengers per Bus
2. bph = Busses per Hour
3. pph = Passengers per Hour
4. Travel times of the school route 674 does not coincide with peak hour of traffic within the TAI

As shown in **Table 2**, during the AM peak hour approximately 152 passengers enter and 286 passengers depart the TAI via transit. Approximately 85% of the outbound passengers during the AM peak hour utilize the express route 60, while the residual use the regular route 93. During the PM peak hour approximately 243 passengers enter and 100 passengers depart the TAI via transit. Approximately 85% of the inbound passengers during the PM peak hour utilize the express route 60, while the residual use the regular route 93.

3.5 Existing Cycling Network and Volumes

The City of Ottawa *Ottawa Cycling Plan* (OCP) identifies the following roadways as Spine or City-wide Cycling Routes:

- Terry Fox Drive;
- March Road;
- Dunrobin Road;
- Second Line Road (South of Old Carp Road);
- Old Carp Road.

Bicycle lanes are provided along both sides of Terry Fox Drive within the TAI, March Road between Highway 417 and approximately 150m north of Maxwell Bridge Road and Legget Drive between Terry Fox Drive and Solandt Road. Paved shoulders are provided for cyclists along March Road between Murphy's Court and approximately 150m north of Maxwell Bridge Road, as well as Second Line Road south of Klondike Road. The OCP identifies the following roadways as Suggested Cycling Routes:

- March Valley Road (south of Klondike Road);
- Old Carp Road;
- Klondike Road;
- Halton Terrace (south of Klondike Road);

- Flamborough Way;
- Morgan's Grant Way;
- Shirley's Brook Drive (west of Helmsdale Drive);
- Helmsdale Drive.

The OCP identifies the following off-road pathways within the TAI:

- East side of Second Line Road between Klondike Road and Terry Fox Drive;
- South side of Terry Fox Drive west of March Road;
- West/South side of Innovation Drive;
- Within hydro corridor east of Second Line Road travelling north between Terry Fox Drive and the existing residential communities.

The aforementioned off-road pathways form part of the well developed off-road cycling network in Kanata, and provide a connection to the already established city wide cycling network. An extensive multi-use pathway network exists within the South March Highlands Conservation Forest, located west of Second Line Road between Terry Fox Drive and Old Carp Road.

The existing cycling lanes along Terry Fox Drive and March Road form more direct cycling routes for commuters travelling to/from the TAI. The cycling lanes along Terry Fox Drive west of Second Line Road provide a more direct cycling route for cyclists commuting to/from the Kanata Centrum shopping centre or the existing Kanata Lakes and Katimavik-Hazeldean communities. The cycling lanes along March Road provide a more direct route for cyclists commuting to/from the Eagleson Park and Ride, which provides a connection to the existing OC Transpo transit network.

Figure 17 uses the cyclist volumes from the traffic counts outlined in **Section 3.2** to show the current AM and PM peak hour cyclist volumes at the study area intersections.

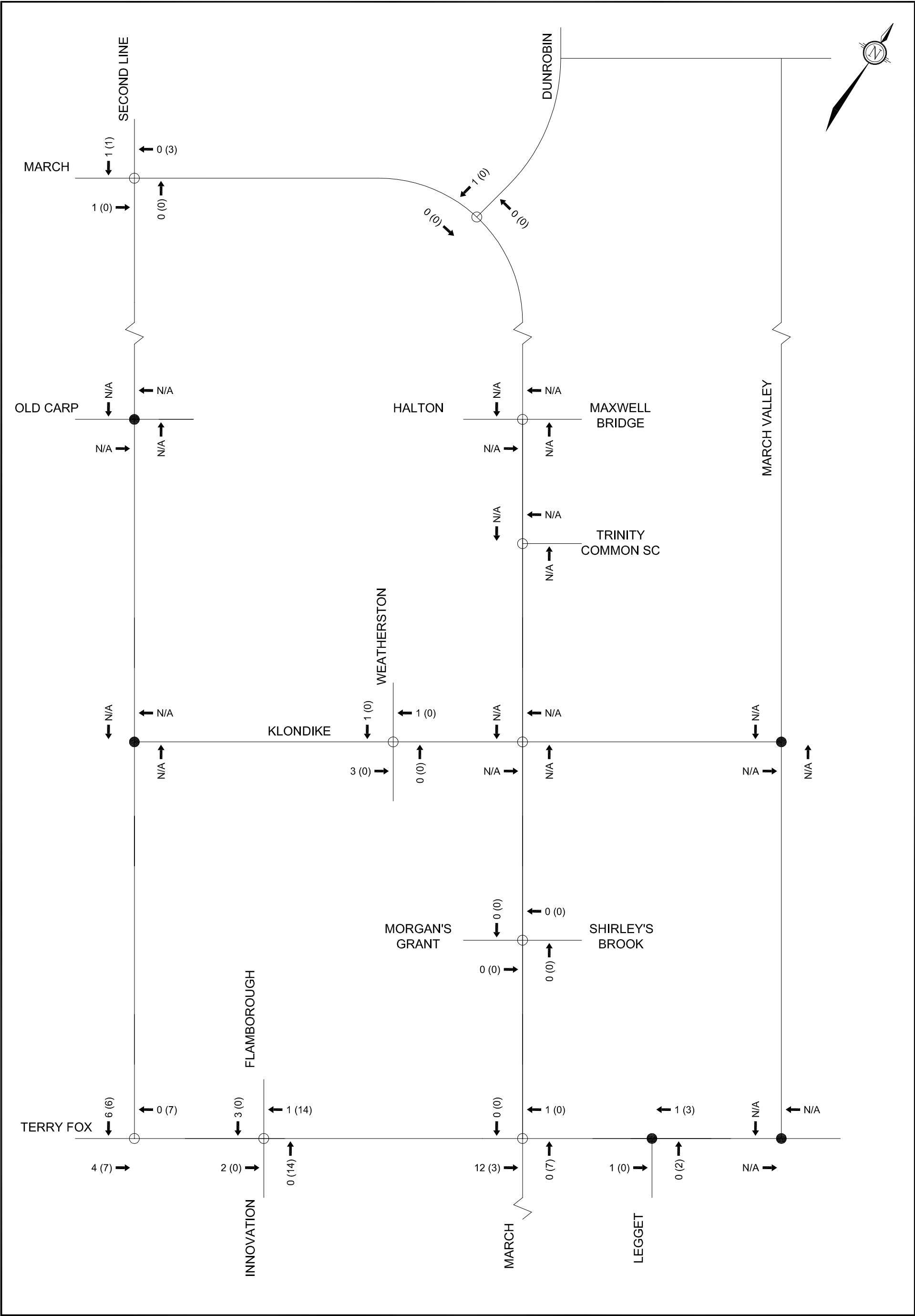
3.7 Screenline Analysis

A screenline is defined as an imaginary finite line that is crossed by a given number of traffic corridors, which is used to determine the existing traffic operating conditions and network capacity deficiencies at a macroscopic level. A strategic screenline has been developed within the TAI to analyse the existing directional peak hour traffic volumes. The foregoing screenline is described as the TAI screenline.

Figures 18 and 19 show the location of the TAI screenline along with the traffic, transit and bicycle volumes crossing the screenline during the AM and PM peak hours. The TAI screenline is described as follows:

- The screenline is located immediately south of the Terry Fox Drive.
- The screenline extends along Terry Fox Drive from west of Second Line Road to east of March Valley Road.

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LEGEND

●

Unsignalized Intersection

○

Signalized Intersection

xx VPH

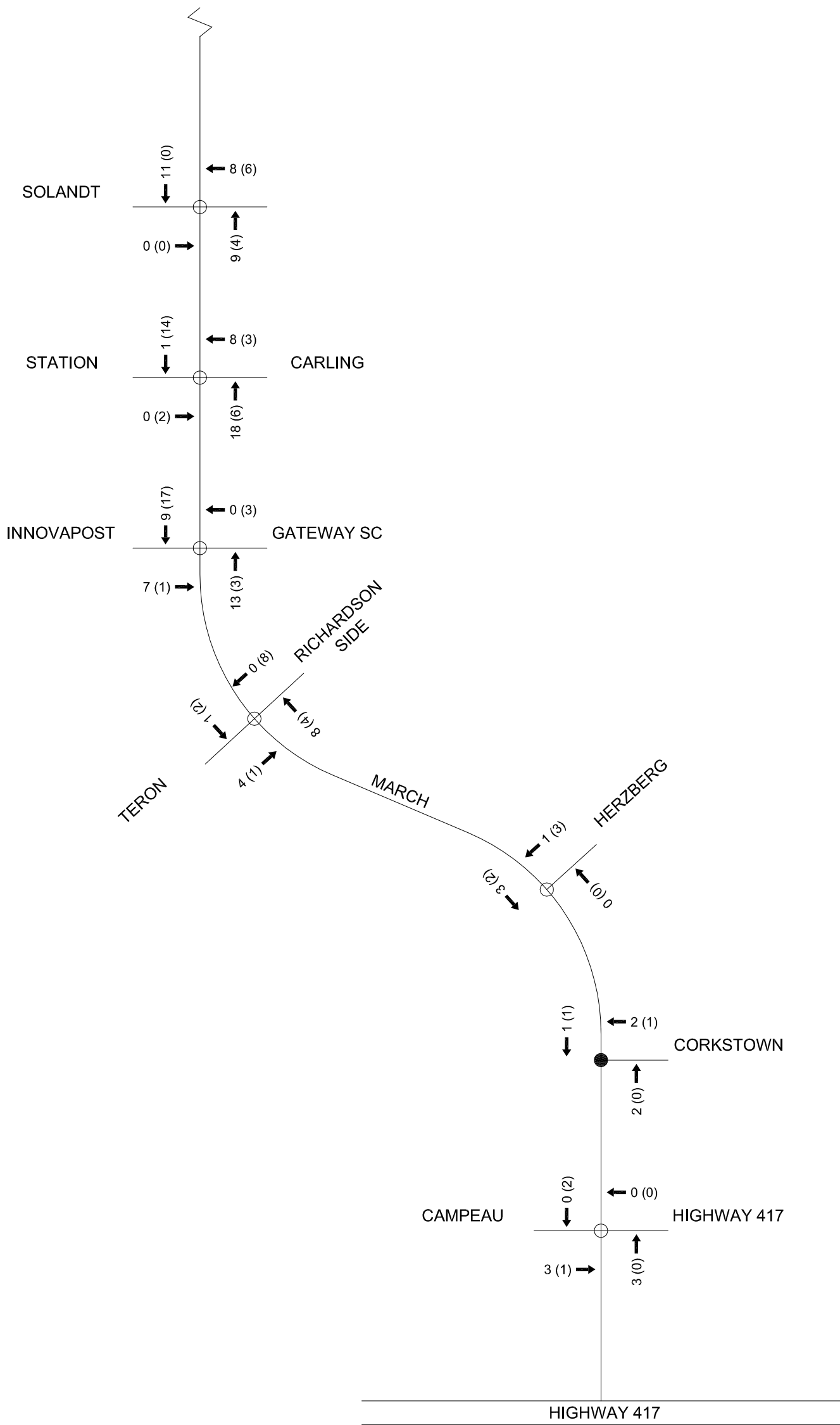
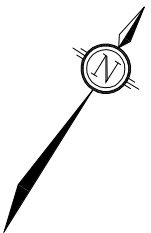
AM Peak Hour

(xx) VPH

PM Peak Hour

KANATA NORTH URBAN
EXPANSION STUDY AREA

EXISTING BICYCLE
VOLUMES



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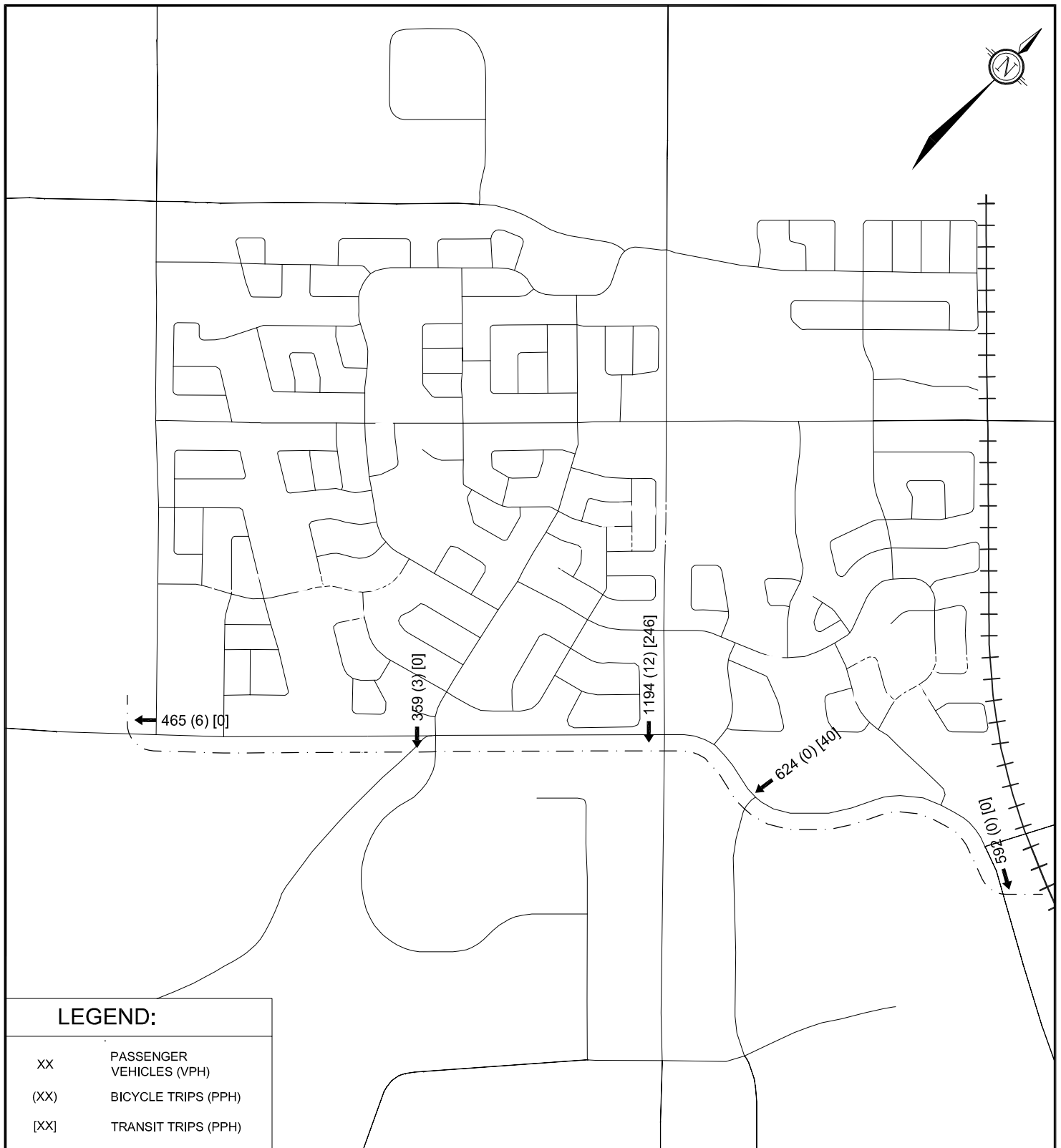
LEGEND

- Unsignalized Intersection
- Signalized Intersection
- xx VPH AM Peak Hour
- (xx) VPH PM Peak Hour

KANATA NORTH URBAN EXPANSION STUDY AREA EXISTING BICYCLE VOLUMES

FEB 2014 112117 FIGURE 17B

M:\2012\112117\CAD\Design\Figures\Traffic\Screenline.dwg, SCREENLINE - AM, Jan 28, 2014 - 4:23pm, bbyvelds



LEGEND:

XX	PASSENGER VEHICLES (VPH)
(XX)	BICYCLE TRIPS (PPH)
[XX]	TRANSIT TRIPS (PPH)

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KANATA NORTH URBAN EXPANSION STUDY AREA

AM PEAK SCREENLINE TRAFFIC VOLUMES

SCALE

NTS

DATE

FEB 2014

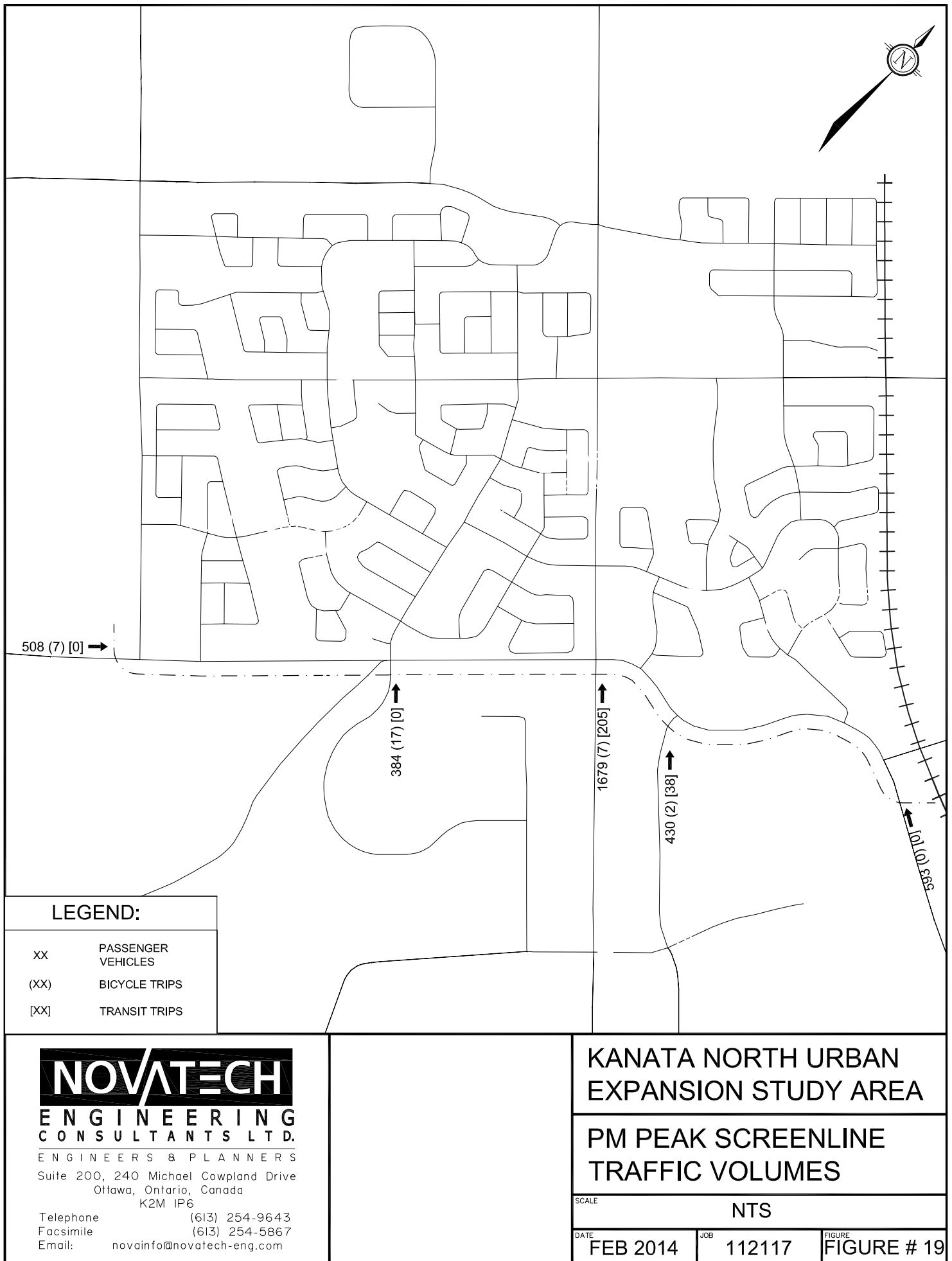
JOB

112117

FIGURE

FIGURE # 18

M:\2012\112117\CAD\Design\Figures\Traffic\Screenline.dwg, SCREENLINE - PM, Jan 28, 2014 - 4:23pm, bboyvelis



- Traffic, transit, and cyclist volumes crossing the screenline are captured at Terry Fox Drive (west of Second Line Road), Innovation Drive, March Road, Legget Drive and Terry Fox Drive (east of March Valley Road).

The existing screenline network elements and directional capacities are shown in **Table 3**.

Table 3: Network Elements and Directional Capacities (PCU's) at the TAI Screenline

Roadway	# Lanes	Assumed Capacity
Terry Fox Drive (west of Second Line Road)	1	900
Innovation Drive	1	900
March Road	3	2700
Legget Drive	1	900
Terry Fox Drive (east of March Valley Road)	1	900
Total	7	6300

Traffic count information outlined in **Section 3.2** was used to estimate the existing peak hour levels of service available over the full length of the TAI screenline. Commercial vehicle volumes at the screenline were accounted for by the application of a 1.16 commercial vehicle factor (5% heavy goods, 6% light goods) to the peak directional traffic volumes. Outside of the urban core, the current City of Ottawa screenline operational standard is LOS 'D' ($v/c \leq 0.90$). **Table 4** shows the LOS currently available at the TAI screenline during the AM and PM peak hours.

Table 4: Existing TAI Screenline Performance, AM and PM Peak Hours

Roadway	Current Directional Capacity (PCU's)	Peak Directional Traffic Volumes		Peak Directional PCU's		Current Volume / Capacity (v/c) Ratios and Levels of Service (LOS)				Current Directional Capacity @ LOS 'D'	Deficiencies	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak		PM Peak				
						v/c	LOS	v/c	LOS			
Terry Fox Drive (west of Second Line)	900	465	508	539	589	0.60	A	0.65	B	810	None	None
Innovation Drive	900	359	384	416	445	0.46	A	0.49	A	810	None	None
March Road	2700	1194	1679	1385	1948	0.51	A	0.72	C	2430	None	None
Legget Drive	900	624	430	724	499	0.80	C	0.55	A	810	None	None
Terry Fox Drive (east of March Valley)	900	592	593	687	688	0.76	C	0.76	C	630	None	None
Overall	6300	3234	3594	3751	4169	0.60	A	0.66	B	5490	None	None

As shown in **Table 4**, the TAI screenline is operating below capacity during the AM and PM peak hours. The TAI screenline is currently operating at a LOS 'B' during the PM peak hour, with overall v/c ratios of 0.66.

Table 5 uses the vehicle, transit, bicycle and pedestrian volumes outlined in **Section 3.2-3.6** to show the modal shares at the TAI screenline in the peak direction of travel. Auto passenger volumes at the screenline were accounted for by the application of a 1.2 private vehicle occupancy rate to the peak hour directional traffic volumes.

Table 5: Existing Screenline Modal Shares (Person Trips)

Mode	AM Peak Hour		PM Peak Hour	
Auto Driver	3234	77%	3594	78%
Auto Passenger	647	15%	719	16%
Public Transit	286	7%	243	5%
Bicycle	21	0.8%	33	0.7%
Pedestrian	9	0.2%	15	0.3%
Total	4197	100%	4604	100%

As the TAI is located along the northern boundary of the Kanata / Stittsville region; the existing screenline modal shares presented in **Table 5** for the AM and PM peak hours were compared with the modal shares observed in the *2011 Trans O-D Survey Report* for the Kanata / Stittsville region.

The transit modal shares crossing the TAI screenline during the AM and PM peak hours are significantly lower than the observed transit modal shares presented in the *2011 Trans O-D Survey Report* for the Kanata / Stittsville region. Since the rapid transit stations within the Kanata / Stittsville region are centralized along Highway 417, transit accessibility and usage is greater south of the TAI. The modal shares observed in the *2011 Trans O-D Survey Report* for the Kanata / Stittsville region are not representative of the modal shares observed within the TAI.

The existing screenline modal shares presented in **Table 5** for the AM and PM peak hours do not reflect the modal shares observed in the Kanata / Stittsville region, mainly due to the lower usage of transit observed within the TAI. It is noteworthy that the observed modal shares within the TAI are much closer to those reported for the Rural West region located immediately north of the TAI. It is possible that the reduced transit usage within the TAI during peak hours is due to the lack of a bus rapid transit hub in this area (such as the Eagleson Park and Ride facility).

During the AM peak hour approximately 14% of the trips exiting the Rural West region utilize other travel modes. Since the other travel modes within the rural west region are unavailable in the Kanata / Stittsville region, it is assumed that the other travel modes would become auto drivers. Based on the foregoing, the existing screenline modal shares during the AM and PM

peak hours are consistent with the observed modal shares within the Rural West region.

Excerpts from the *2011 Trans O-D Survey Report* for the Kanata / Stittsville and Rural West regions are provided in **Appendix E**.

4.0 PLANNED NETWORK CHANGES

4.1 City of Ottawa Transportation Master Plan

The City of Ottawa's *Transportation Master Plan* (TMP) was approved by City Council in December 2013.

The City of Ottawa's TMP identifies the transportation facilities and services the City intends to implement by 2031 to meet the travel needs of residents and businesses, and to support the development pattern outlined in the City of Ottawa Official Plan (OP).

The following will outline the transportation policies and projects that will be relevant to the provision of adequate transportation services to the urban development within the KNUEA and which will be reflected in the forthcoming CDP.

4.1.1 Relevant Rapid Transit Policy

The City of Ottawa TMP recognizes that the City's capital investment into rapid transit projects must be affordable. For that reason, the TMP recommends the implementation of a subset of the 2031 Rapid Transit and Transit Priority (RTTP) Network Concept, called the Affordable RTTP Network that will provide as many of the 2031 RTTP Network Concept's Benefits (i.e. Ridership gains, opportunities for land use intensification and operating cost savings) as possible within the City's projected funding envelope. The projects of the Affordable RTTP Network were strategically selected to maximize gains in transit ridership within available funds.

The Affordable RTTP Network includes Light Rail Transit (LRT), Bus Rapid Transit (BRT) and O-Train projects. RTTP projects in the vicinity of the Kanata/Stittsville Area are described in the TMP as follows:

Table 7: 2013 TMP Affordable Rapid Transit and Transit Priority Projects

RTTP Project	Description	EA Status
West Transitway	Transitway adjacent to the north side of Highway 417 from just east of the Moodie Drive interchange to just west of the Terry Fox Drive interchange to provide fast, reliable service to/from downtown for Kanata, Stittsville and Bayshore area residents	Completed
Kanata North Transitway	Transitway in the median of March Road extending from the Highway 417/March Road interchange to north of Maxwell Bridge Road provides high quality transit access to major employment area in Kanata North along March Road	In Progress

4.1.2 TMP Road Network Capital Works Plan

The City of Ottawa TMP recognizes that it must be financially prudent in constructing new road infrastructure due to the availability of funds. For that reason, the TMP recommends the implementation of a subset of the 2031 RTTP network, referred to as the Affordable Road Network.

The only infrastructure project identified in the 2013 TMP Affordable Road Network within the TAI is the urbanization the existing two-lane rural cross-section of Klondike Road between March Road and Sandhill Road. This project is identified for Phase 1 (2014-2019) implementation in the TMP.

4.2 City of Ottawa Ottawa Cycling Plan

The 2013 OCP is a long-term strategy to develop, strengthen and support a cycling culture in the City of Ottawa. The OCP outlines key objectives and is an overarching vision for cycling in Ottawa. It sets forth the basis for further development and implementation of a comprehensive cycling network.

Cycling facilities and projects that will be relevant to the provision of adequate cycling services to the urban development within the KNUFA and which will be reflected in the forthcoming CDP are outlined in the OCP as follows:

Table 8: 2013 OCP Bicycle Facilities

Bicycle Facility	Description
Bicycle Lanes	Carling Avenue, East of March Road to Herzberg Road (Phase 1)
	Flamborough Way, Hines Road and Innovation Drive (Phase 2)
	Solandt Road, West of March Road (Phase 2)
	Legget Drive, South of Solandt Road (Phase 2)
	Herzberg Road, immediately west of March Road (Phase 2)
	Terry Fox Drive immediately west of March Road (Phase 2)

The City plans to service the KNUEA through the implementation of the aforementioned cycling facilities.

4.3 City of Ottawa Ottawa Pedestrian Plan

The City of Ottawa *Ottawa Pedestrian Plan* (OPP) was approved by City Council in December 2013.

The OPP establishes a culture of walking and improving overall walkability, including the sidewalks and pathways, access to buildings, land use patterns and land use planning, proximity of destinations, community support programs, safety, and security and comfort for walking.

Pedestrian facilities and projects that will be relevant to the provision of adequate pedestrian service to the urban development within the KNUEA and which will be reflected in the forthcoming CDP are outlined in the OPP as follows:

Table 9: 2013 OPP Pedestrian Facilities

Bicycle Facility	Description
Bicycle Lanes	Carling Avenue, East of March Road to Herzberg Road (Phase 1)
	Flamborough Way, Hines Road and Innovation Drive (Phase 2)
	Solandt Road, West of March Road (Phase 2)
	Legget Drive, South of Solandt Road (Phase 2)
	Herzberg Road, immediately west of March Road (Phase 2)
	Terry Fox Drive immediately west of March Road (Phase 2)

The City plans to service the KNUFA through the implementation of the aforementioned pedestrian facilities.

APPENDIX A

Synchro Analysis Reports

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	69	82	18	20	16	15	8	286	51	15	113	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	0.0		0.0	35.0		0.0	35.0		30.0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (m)	7.5			7.5			80.0			80.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.960			0.977				0.850
Flt Protected		0.980			0.981		0.950			0.950		
Satd. Flow (prot)	0	1725	0	0	1687	0	1616	1658	0	1662	1733	1517
Flt Permitted		0.842			0.823		0.681			0.549		
Satd. Flow (perm)	0	1482	0	0	1415	0	1158	1658	0	961	1733	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			16			10				40
Link Speed (k/h)		50			70			80				80
Link Distance (m)		169.4			2437.7			322.8				966.0
Travel Time (s)		12.2			125.4			14.5				43.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	1%	6%	1%	2%	2%	7%	8%	3%	4%	5%	2%
Adj. Flow (vph)	73	86	19	21	17	16	8	301	54	16	119	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	54	0	8	355	0	16	119	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		9.0			9.0			9.0			9.0	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	22.4	22.4		26.4	26.4		25.9	25.9		25.9	25.9	25.9
Total Split (s)	56.4	56.4		56.4	56.4		35.9	35.9		35.9	35.9	35.9
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%	38.9%		38.9%	38.9%	38.9%
Maximum Green (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	30.0
Yellow Time (s)	4.6	4.6		4.6	4.6		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	1.8	1.8		1.8	1.8		2.2	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
Total Lost Time (s)		6.4			6.4		5.9	5.9		5.9	5.9	5.9
Lead/Lag												

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		9.0	9.0		9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		11.5			11.5		21.5	21.5		21.5	21.5	21.5
Actuated g/C Ratio		0.25			0.25		0.47	0.47		0.47	0.47	0.47
v/c Ratio		0.46			0.15		0.01	0.45		0.04	0.15	0.03
Control Delay		17.1			10.4		7.6	10.7		7.9	8.2	2.1
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		17.1			10.4		7.6	10.7		7.9	8.2	2.1
LOS		B			B		A	B		A	A	A
Approach Delay		17.1			10.4			10.7			7.4	
Approach LOS		B			B			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 92.3

Actuated Cycle Length: 45.4

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 11.5

Intersection LOS: B

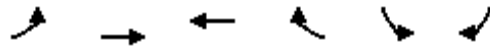
Intersection Capacity Utilization 56.8%

ICU Level of Service B

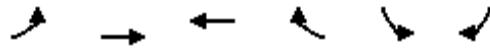
Analysis Period (min) 15

Splits and Phases: 70: March Road /March Road & Second Line Road

 ø2	 ø4
35.9 s	56.4 s
 ø6	 ø8
35.9 s	56.4 s



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	47	304	58	143	437	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0			90.0	50.0	0.0
Storage Lanes	1			1	1	0
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt				0.850	0.988	
Flt Protected	0.950				0.956	
Satd. Flow (prot)	1729	1820	1750	1473	2727	0
Flt Permitted	0.717				0.956	
Satd. Flow (perm)	1305	1820	1750	1473	2727	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				151	14	
Link Speed (k/h)		80	80		48	
Link Distance (m)		374.8	177.0		195.2	
Travel Time (s)		16.9	8.0		14.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	4%	5%	24%	2%
Adj. Flow (vph)	49	320	61	151	460	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	320	61	151	499	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	0.0		8.4	
Link Offset(m)		0.0	1.5		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		CI+Ex	CI+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0	20.0	10.0	
Minimum Split (s)	26.3	26.3	26.3	26.3	22.3	
Total Split (s)	41.3	41.3	41.3	41.3	56.3	
Total Split (%)	42.3%	42.3%	42.3%	42.3%	57.7%	
Maximum Green (s)	35.0	35.0	35.0	35.0	50.0	
Yellow Time (s)	4.6	4.6	4.6	4.6	3.7	
All-Red Time (s)	1.7	1.7	1.7	1.7	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	
Lead/Lag						



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Min	Min	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	9.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	20.1	20.1	20.1	20.1	13.7	
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.30	
v/c Ratio	0.09	0.41	0.08	0.21	0.61	
Control Delay	9.6	11.9	9.3	3.2	17.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	9.6	11.9	9.3	3.2	17.1	
LOS	A	B	A	A	B	
Approach Delay		11.6	5.0		17.1	
Approach LOS		B	A		B	

Intersection Summary

Area Type: Other
 Cycle Length: 97.6
 Actuated Cycle Length: 46.4
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 12.8
 Intersection Capacity Utilization 43.8%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 68: March Road & Dunrobin Road

41.3 s	56.3 s
41.3 s	

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	32	788	9	36	176	20	9	13	279	55	14	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	3.7	3.7	3.7	3.7
Storage Length (m)	40.0		10.0	80.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	60.0			50.0			30.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.857			0.916	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1616	3424	1381	1712	3424	1502	1586	1730	0	1729	1667	0
Flt Permitted	0.635			0.303			0.735			0.323		
Satd. Flow (perm)	1080	3424	1381	546	3424	1502	1227	1730	0	588	1667	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		294			19	
Link Speed (k/h)		80			80			40			50	
Link Distance (m)		118.9			239.9			116.9			761.3	
Travel Time (s)		5.4			10.8			10.5			54.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	1%	12%	1%	1%	3%	9%	2%	1%	0%	0%	0%
Adj. Flow (vph)	34	829	9	38	185	21	9	14	294	58	15	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	829	9	38	185	21	9	308	0	58	34	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			5.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.91	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	1	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.4	34.6	34.6	11.4	34.6	34.6	38.6	38.6		38.6	38.6	
Total Split (s)	20.0	52.0	52.0	20.0	52.0	52.0	48.0	48.0		48.0	48.0	
Total Split (%)	16.7%	43.3%	43.3%	16.7%	43.3%	43.3%	40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	13.6	45.4	45.4	13.6	45.4	45.4	41.4	41.4		41.4	41.4	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.8	2.0	2.0	1.8	2.0	2.0	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.6	6.6	6.4	6.6	6.6	6.6	6.6		6.6	6.6	

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	49.7	45.9	45.9	49.8	46.0	46.0	12.4	12.4		12.4	12.4	
Actuated g/C Ratio	0.63	0.58	0.58	0.63	0.58	0.58	0.16	0.16		0.16	0.16	
v/c Ratio	0.05	0.42	0.01	0.09	0.09	0.02	0.05	0.59		0.63	0.12	
Control Delay	5.0	11.3	0.0	5.3	9.1	0.1	30.6	10.1		63.4	19.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.0	11.3	0.0	5.3	9.1	0.1	30.6	10.1		63.4	19.7	
LOS	A	B	A	A	A	A	C	B		E	B	
Approach Delay		11.0			7.8			10.7			47.3	
Approach LOS		B			A			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 78.8

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 12.6

Intersection LOS: B

Intersection Capacity Utilization 75.3%

ICU Level of Service D

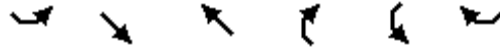
Analysis Period (min) 15

Description: Late AM Timings

Splits and Phases: 46: Halton Terrace/Maxwell Bridge Road & March Road

 Ø1	 Ø2	 Ø4
20 s	52 s	48 s
 Ø5	 Ø6	 Ø8
20 s	52 s	48 s

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	22	976	262	65	65	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0			0.0	0.0	0.0
Storage Lanes	1			0	1	1
Taper Length (m)	50.0				7.5	
Lane Util. Factor	1.00	0.95	0.91	0.91	1.00	1.00
Frt			0.970			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1729	3390	4504	0	1631	1163
Flt Permitted	0.537				0.950	
Satd. Flow (perm)	977	3390	4504	0	1631	1163
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			68			6
Link Speed (k/h)		80	80		40	
Link Distance (m)		239.9	242.2		132.2	
Travel Time (s)		10.8	10.9		11.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	2%	8%	3%	6%	33%
Adj. Flow (vph)	23	1027	276	68	68	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	1027	344	0	68	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		3.7	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (m)	2.0	10.0	10.0		2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	0.6	0.6		2.0	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		CI+Ex	CI+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6					8
Detector Phase	6	6	2		8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0		10.0	10.0
Minimum Split (s)	28.4	28.4	28.4		31.0	31.0
Total Split (s)	79.0	79.0	79.0		41.0	41.0
Total Split (%)	65.8%	65.8%	65.8%		34.2%	34.2%
Maximum Green (s)	72.6	72.6	72.6		35.0	35.0
Yellow Time (s)	4.6	4.6	4.6		3.3	3.3
All-Red Time (s)	1.8	1.8	1.8		2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4		6.0	6.0
Lead/Lag						



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	C-Max	C-Max	C-Max		None	None
Walk Time (s)			7.0		7.0	7.0
Flash Dont Walk (s)			15.0		18.0	18.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)	100.7	100.7	100.7		11.4	11.4
Actuated g/C Ratio	0.84	0.84	0.84		0.10	0.10
v/c Ratio	0.03	0.36	0.09		0.44	0.05
Control Delay	2.8	3.5	2.0		60.0	28.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	2.8	3.5	2.0		60.0	28.0
LOS	A	A	A		E	C
Approach Delay		3.5	2.0		57.4	
Approach LOS		A	A		E	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.44
 Intersection Signal Delay: 5.8
 Intersection Capacity Utilization 47.1%
 Analysis Period (min) 15
 Description: AM Rush Timings

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 81: March Road & Trinity



												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	20	894		79	283	53	26	32	225	90	30	13
Ideal Flow (vphpl)	1800	1800		1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	100.0		0.0	0.0		0.0	15.0		0.0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (m)	70.0			100.0			7.5			30.0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.976			0.869			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1572	4852	0	3288	4747	0	1695	1451	0	1682	1586	0
Flt Permitted	0.950			0.950			0.475			0.593		
Satd. Flow (perm)	1572	4852	0	3288	4747	0	848	1451	0	1050	1586	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			32			237			14	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		242.2			599.2			131.9			200.6	
Travel Time (s)		10.9			27.0			9.5			14.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	2%	2%	2%	2%	3%	2%	16%	8%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	2	17	1
Adj. Flow (vph)	21	941	23	83	298	56	27	34	237	95	32	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	964	0	83	354	0	27	271	0	95	46	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		8.9			8.9			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.07	1.16	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases	1	6		5	2		7	4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0		5.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.2	32.5		11.2	32.5		12.1	44.1		44.1	44.1	
Total Split (s)	20.0	36.0		20.0	36.0		13.0	58.0		45.0	45.0	
Total Split (%)	17.5%	31.6%		17.5%	31.6%		11.4%	50.9%		39.5%	39.5%	
Maximum Green (s)	13.8	29.5		13.8	29.5		5.9	50.9		37.9	37.9	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.6	1.9		1.6	1.9		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.5		6.2	6.5		7.1	7.1		7.1	7.1	

33: Klondike Road & March Road
Kanata North CDP TMP

2013 Existing AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag	Lead	Lead		Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		19.0			19.0			30.0		30.0	30.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	6.8	30.6		7.5	36.7		17.7	17.7		13.4	13.4	
Actuated g/C Ratio	0.09	0.42		0.10	0.50		0.24	0.24		0.18	0.18	
v/c Ratio	0.14	0.47		0.25	0.15		0.10	0.51		0.49	0.15	
Control Delay	38.3	19.1		36.1	12.8		21.3	8.4		39.6	22.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.3	19.1		36.1	12.8		21.3	8.4		39.6	22.9	
LOS	D	B		D	B		C	A		D	C	
Approach Delay		19.5			17.2			9.5			34.1	
Approach LOS		B			B			A			C	

Intersection Summary

Area Type: Other

Cycle Length: 114

Actuated Cycle Length: 73.1

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 18.5

Intersection LOS: B

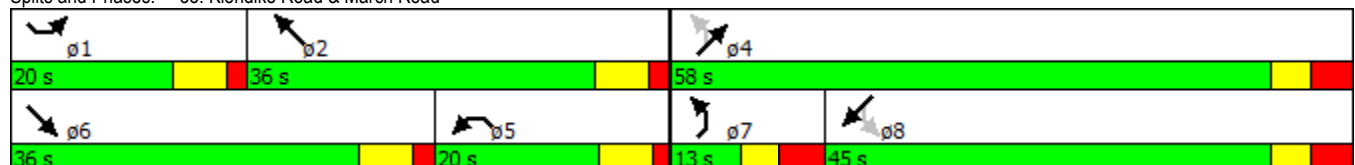
Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

Description: Late AM Timings

Splits and Phases: 33: Klondike Road & March Road



37: Morgan's Grant Way/Shirley's Brook Drive & March Road
Kanata North CDP TMP

2013 Existing AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	55	986	7	45	378	18	10	25	139	127	9	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		35.0	90.0		35.0	0.0		25.0	30.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	35.0			70.0			7.5			40.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.985		0.950		
Satd. Flow (prot)	1695	4824	1502	1712	4824	1547	0	1709	1517	1712	1733	1532
Flt Permitted	0.507			0.245				0.917		0.733		
Satd. Flow (perm)	905	4824	1502	441	4824	1547	0	1590	1517	1321	1733	1511
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98			98			146			91
Link Speed (k/h)		80			80			40			48	
Link Distance (m)		599.2			307.3			460.2			508.2	
Travel Time (s)		27.0			13.8			41.4			38.1	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	3%	1%	3%	0%	0%	7%	2%	1%	5%	1%
Adj. Flow (vph)	58	1038	7	47	398	19	11	26	146	134	9	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1038	7	47	398	19	0	37	146	134	9	27
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	26.5	26.5	11.5	26.5	26.5	33.3	33.3	33.3	33.3	33.3	33.3
Total Split (s)	18.0	66.0	66.0	18.0	66.0	66.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	15.0%	55.0%	55.0%	15.0%	55.0%	55.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Maximum Green (s)	11.5	59.5	59.5	11.5	59.5	59.5	28.7	28.7	28.7	28.7	28.7	28.7
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.9	1.9	1.9	1.9	1.9	1.9	4.3	4.3	4.3	4.3	4.3	4.3
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

37: Morgan's Grant Way/Shirley's Brook Drive & March Road
 Kanata North CDP TMP

2013 Existing AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5		7.3	7.3	7.3	7.3	7.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	19.0	19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	66.8	61.5	61.5	66.4	61.3	61.3		15.7	15.7	15.7	15.7	15.7
Actuated g/C Ratio	0.66	0.61	0.61	0.66	0.61	0.61		0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.09	0.35	0.01	0.13	0.14	0.02		0.15	0.41	0.65	0.03	0.09
Control Delay	5.9	11.6	0.0	6.4	10.1	0.1		38.3	9.9	56.0	36.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	11.6	0.0	6.4	10.1	0.1		38.3	9.9	56.0	36.1	0.5
LOS	A	B	A	A	B	A		D	A	E	D	A
Approach Delay		11.3			9.3			15.6			46.2	
Approach LOS		B			A			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 101.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 14.3

Intersection LOS: B

Intersection Capacity Utilization 55.5%

ICU Level of Service B

Analysis Period (min) 15

Description: Late AM Timings

Splits and Phases: 37: Morgan's Grant Way/Shirley's Brook Drive & March Road

		
ø1	ø2	ø4
18 s	66 s	36 s
		
ø5	ø6	ø8
18 s	66 s	36 s

31: Terry Fox Drive & March Road
Kanata North CDP TMP

2013 Existing AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	193	914	48	157	408	91	141	643	212	68	33	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		80.0	175.0		50.0	80.0		60.0	70.0		50.0
Storage Lanes	1		1	2		1	2		2	2		0
Taper Length (m)	85.0			55.0			70.0			30.0		
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	1.00			1.00		0.96	0.99		0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	4871	1517	3288	4824	1502	3257	3390	1502	3257	3390	1517
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1712	4871	1480	3277	4824	1502	3253	3390	1444	3234	3390	1496
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			160			223			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		307.3			294.7			204.8			237.9	
Travel Time (s)		13.8			13.3			12.3			14.3	
Confl. Peds. (#/hr)			5	5			1		14	14		1
Confl. Bikes (#/hr)			5						14			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	2%	2%	3%	3%	3%	2%	3%	3%	2%	2%
Adj. Flow (vph)	203	962	51	165	429	96	148	677	223	72	35	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	962	51	165	429	96	148	677	223	72	35	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			8.9			8.9			8.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	28.6	28.6	11.8	28.6	28.6	11.7	36.1	36.1	11.7	36.1	36.1
Total Split (s)	15.0	36.0	36.0	15.0	36.0	36.0	23.0	46.0	46.0	23.0	46.0	46.0
Total Split (%)	12.5%	30.0%	30.0%	12.5%	30.0%	30.0%	19.2%	38.3%	38.3%	19.2%	38.3%	38.3%
Maximum Green (s)	8.2	29.4	29.4	8.2	29.4	29.4	16.3	38.9	38.9	16.3	38.9	38.9
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.2	2.0	2.0	3.4	3.8	3.8	3.4	3.8	3.8

31: Terry Fox Drive & March Road
Kanata North CDP TMP

2013 Existing AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
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)	6.8	6.6	6.6	6.8	6.6	6.6	6.7	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		22.0	22.0		22.0	22.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	8.4	30.1	30.1	8.1	29.9	29.9	17.9	25.1	25.1	7.6	19.5	19.5
Actuated g/C Ratio	0.09	0.32	0.32	0.08	0.31	0.31	0.19	0.26	0.26	0.08	0.20	0.20
v/c Ratio	1.36	0.63	0.09	0.59	0.28	0.17	0.24	0.76	0.41	0.28	0.05	0.05
Control Delay	236.0	32.0	0.3	54.1	27.5	1.1	39.7	38.8	6.3	47.3	29.5	0.2
Queue Delay	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 Delay	236.0	32.0	0.3	54.1	27.5	1.1	39.7	38.8	6.3	47.3	29.5	0.2
LOS	F	C	A	D	C	A	D	D	A	D	C	A
Approach Delay		64.8			30.2			32.0			34.7	
Approach LOS		E			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 95.5

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.36

Intersection Signal Delay: 44.6

Intersection LOS: D

Intersection Capacity Utilization 75.6%

ICU Level of Service D

Analysis Period (min) 15

Description: Other AM Timing

Splits and Phases: 31: Terry Fox Drive & March Road

			
15 s	36 s	23 s	46 s
			
15 s	36 s	23 s	46 s

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	41	1283	116	557	747	691	19	70	90	57	107	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.2	3.7	3.7	3.7	3.5	3.7	3.5	3.7	3.7	3.7
Storage Length (m)	150.0		85.0	160.0		0.0	35.0		35.0	65.0		0.0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (m)	30.0			50.0			55.0			100.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00		0.98			0.97			0.95	0.95		
Frt			0.850			0.850			0.850		0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3390	1419	1662	3357	1532	1610	1767	1498	3288	1760	0
Flt Permitted	0.354			0.067			0.950			0.950		
Satd. Flow (perm)	636	3390	1398	117	3357	1490	1610	1767	1418	3113	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138			659			137		3	
Link Speed (k/h)		80			80			50			48	
Link Distance (m)		623.3			313.4			108.2			243.4	
Travel Time (s)		28.0			14.1			7.8			18.3	
Confl. Peds. (#/hr)	2					2			20	20		
Confl. Bikes (#/hr)			5						6			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	3%	4%	3%	1%	5%	3%	1%	2%	2%	3%
Adj. Flow (vph)	43	1351	122	586	786	727	20	74	95	60	113	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	1351	122	586	786	727	20	74	95	60	124	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			8.9	
Link Offset(m)		0.0			0.0			2.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.14	1.06	1.06	1.06	1.09	1.06	1.09	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	1	1	1	1	1	2	1	1	2	
Detector Template	Left					Right		Thru		Left	Thru	
Leading Detector (m)	2.0	15.2	15.2	15.2	15.2	2.0	15.2	10.0	15.2	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	15.2	15.2	15.2	15.2	2.0	15.2	0.6	15.2	2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)								9.4			9.4	
Detector 2 Size(m)								0.6			0.6	
Detector 2 Type								CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		6		5	2		7	4		3		
Permitted Phases	6		6	2		2			4		8	
Detector Phase	6	6	6	5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	4.0	
Minimum Split (s)	26.3	26.3	26.3	11.4	26.3	26.3	11.7	28.4	28.4	11.7	28.4	
Total Split (s)	48.0	48.0	48.0	37.0	85.0	85.0	17.0	28.4	28.4	17.0	28.4	
Total Split (%)	36.8%	36.8%	36.8%	28.4%	65.2%	65.2%	13.0%	21.8%	21.8%	13.0%	21.8%	
Maximum Green (s)	41.7	41.7	41.7	30.6	78.7	78.7	10.3	22.0	22.0	10.3	22.0	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
All-Red Time (s)	1.7	1.7	1.7	1.8	1.7	1.7	3.4	3.1	3.1	3.4	3.1	
Lost Time Adjust (s)	0.0	-2.3	-2.3	-2.4	-2.3	0.0	-2.7	0.0	-2.4	0.0	0.0	
Total Lost Time (s)	6.3	4.0	4.0	4.0	4.0	6.3	4.0	6.4	4.0	6.7	6.4	
Lead/Lag	Lag	Lag	Lag	Lead								
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	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	10.0	10.0	10.0		10.0	10.0		15.0	15.0		15.0	
Pedestrian Calls (#/hr)	2	2	2		2	2		0	0		0	
Act Effct Green (s)	54.2	56.5	56.5	93.5	93.5	91.2	10.4	14.5	16.9	7.8	14.5	
Actuated g/C Ratio	0.42	0.43	0.43	0.72	0.72	0.70	0.08	0.11	0.13	0.06	0.11	
v/c Ratio	0.16	0.92	0.18	1.24	0.33	0.59	0.16	0.38	0.31	0.31	0.63	
Control Delay	30.1	47.1	3.8	157.9	8.3	3.4	57.9	58.2	5.0	62.3	67.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.1	47.1	3.8	157.9	8.3	3.4	57.9	58.2	5.0	62.3	67.4	
LOS	C	D	A	F	A	A	E	E	A	E	E	
Approach Delay		43.1			48.4			31.4			65.8	
Approach LOS		D			D			C			E	

Intersection Summary

Area Type: Other

Cycle Length: 130.4

Actuated Cycle Length: 130.4

Offset: 39 (30%), Referenced to phase 2:NWTL and 6:SETL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.24

Intersection Signal Delay: 46.4

Intersection LOS: D

Intersection Capacity Utilization 95.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Solandt Road & March Road

 $\phi 2$ (R)	 $\phi 3$	 $\phi 4$
85 s	17 s	28.4 s
 $\phi 5$	 $\phi 6$ (R)	 $\phi 7$
37 s	48 s	17 s
		28.4 s

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	372	1173	14	52	2000	79	0	12	4	24	15	194
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.7	3.5	3.7	3.7	3.5
Storage Length (m)	170.0		20.0	90.0		80.0	0.0		20.0	50.0		140.0
Storage Lanes	2		1	1		1	0		1	1		1
Taper Length (m)	75.0			40.0			7.5			50.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.95	0.99		0.98			0.98	0.99		0.95
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3216	3357	1513	1691	3390	1388	0	1685	1513	1429	1767	1469
Flt Permitted	0.950			0.950						0.749		
Satd. Flow (perm)	3214	3357	1431	1681	3390	1361	0	1685	1486	1120	1767	1399
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			84			85			204
Link Speed (k/h)		80			80			50			60	
Link Distance (m)		311.6			207.4			128.2			225.1	
Travel Time (s)		14.0			9.3			9.2			13.5	
Confl. Peds. (#/hr)	4		10	10		4	19		4	4		19
Confl. Bikes (#/hr)			3									9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	0%	0%	2%	9%	0%	8%	0%	21%	3%	3%
Adj. Flow (vph)	392	1235	15	55	2105	83	0	13	4	25	16	204
Shared Lane Traffic (%)												
Lane Group Flow (vph)	392	1235	15	55	2105	83	0	13	4	25	16	204
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		8.5			5.2			5.2			5.2	
Link Offset(m)		0.0			0.0			0.0			-3.5	
Crosswalk Width(m)		8.0			8.0			15.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.06	1.09	1.09	1.06	1.09	1.06	1.06	1.09	1.06	1.06	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.5	26.5	11.6	26.5	26.5	33.4	33.4	33.4	33.4	33.4	33.4
Total Split (s)	22.0	74.0	74.0	22.0	74.0	74.0	34.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	16.9%	56.9%	56.9%	16.9%	56.9%	56.9%	26.2%	26.2%	26.2%	26.2%	26.2%	26.2%
Maximum Green (s)	15.4	67.5	67.5	15.4	67.5	67.5	27.6	27.6	27.6	27.6	27.6	27.6
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.7	3.7	3.7	3.7	3.7	3.7

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
All-Red Time (s)	2.0	1.9	1.9	2.0	1.9	1.9	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.5	6.5	6.6	6.5	6.5		6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		1	1		1	1	1	1	1	1	1	1
Act Effct Green (s)	15.4	90.0	90.0	9.6	81.7	81.7		13.4	13.4	13.4	13.4	13.4
Actuated g/C Ratio	0.12	0.69	0.69	0.07	0.63	0.63		0.10	0.10	0.10	0.10	0.10
v/c Ratio	1.03	0.53	0.01	0.44	0.99	0.09		0.08	0.02	0.22	0.09	0.63
Control Delay	109.9	12.8	0.0	61.1	30.4	2.8		49.8	0.2	55.1	50.3	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	12.8	0.0	61.1	30.4	2.8		49.8	0.2	55.1	50.3	15.1
LOS	F	B	A	E	C	A		D	A	E	D	B
Approach Delay		35.9			30.2			38.2			21.5	
Approach LOS		D			C			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 70 (54%), Referenced to phase 2:NWT and 6:SET, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 31.9

Intersection LOS: C

Intersection Capacity Utilization 102.8%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 22: Station Road/Carling Avenue & March Road

		
ø1	ø2 (R)	ø4
22 s	74 s	34 s
		
ø5	ø6 (R)	ø8
22 s	74 s	34 s

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	167	1120	16	57	1620	140	3	6	1	131	7	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	2.5	2.5	3.7	2.5	2.5
Storage Length (m)	60.0		0.0	50.0		125.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		1	0		1
Taper Length (m)	35.0			35.0			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99		0.97		1.00	0.98		0.99	0.97
Frt		0.998				0.850			0.850			0.850
Flt Protected	0.950			0.950				0.984			0.955	
Satd. Flow (prot)	1712	3380	0	1712	3357	1532	0	1453	1343	0	1490	1330
Flt Permitted	0.052			0.236				0.920			0.730	
Satd. Flow (perm)	94	3380	0	423	3357	1482	0	1352	1313	0	1128	1290
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				147			62			154
Link Speed (k/h)		80			80			48			48	
Link Distance (m)		110.5			385.4			59.2			78.0	
Travel Time (s)		5.0			17.3			4.4			5.9	
Confl. Peds. (#/hr)	5		13	13		5	14		8	8		14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	5%	1%	3%	1%	3%	9%	0%	1%	6%	1%
Adj. Flow (vph)	176	1179	17	60	1705	147	3	6	1	138	7	154
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	1196	0	60	1705	147	0	9	1	0	145	154
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			0.0			1.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		12.0			12.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.26	1.26	1.06	1.26	1.26
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6			2			4			8	
Permitted Phases	6			2		2	4		4	8		8
Detector Phase	1	6		2	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	32.4		32.4	32.4	32.4	36.3	36.3	36.3	36.3	36.3	36.3
Total Split (s)	15.0	85.0		70.0	70.0	70.0	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	11.5%	65.4%		53.8%	53.8%	53.8%	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%
Maximum Green (s)	11.0	78.6		63.6	63.6	63.6	38.7	38.7	38.7	38.7	38.7	38.7
Yellow Time (s)	3.5	4.6		4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	0.5	1.8		1.8	1.8	1.8	3.0	3.0	3.0	3.0	3.0	3.0

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	6.4		6.4	6.4	6.4		6.3	6.3		6.3	6.3
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		19.0		19.0	19.0	19.0	23.0	23.0	23.0	23.0	23.0	23.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0	0
Act Effct Green (s)	97.6	95.2		76.6	76.6	76.6		22.1	22.1		22.1	22.1
Actuated g/C Ratio	0.75	0.73		0.59	0.59	0.59		0.17	0.17		0.17	0.17
v/c Ratio	0.70	0.48		0.24	0.86	0.16		0.04	0.00		0.76	0.44
Control Delay	65.3	4.3		8.0	11.2	0.9		41.0	0.0		74.2	10.4
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	65.3	4.3		8.0	11.2	0.9		41.0	0.0		74.2	10.4
LOS	E	A		A	B	A		D	A		E	B
Approach Delay		12.2			10.3			36.9			41.3	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 75 (58%), Referenced to phase 2:NWTL and 6:SETL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 13.7

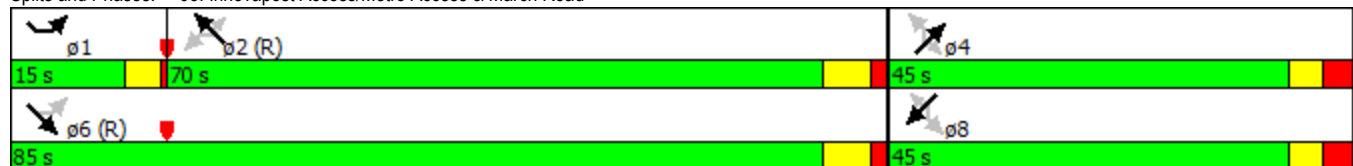
Intersection LOS: B

Intersection Capacity Utilization 89.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 93: Innovapost Access/Metro Access & March Road

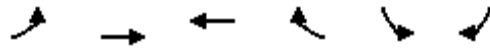


												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	1055	95	54	2286	332	409	300	17	30	36	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	75.0		70.0	70.0		75.0	0.0		0.0	30.0		70.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	25.0			30.0			7.5			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00			0.99		0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	3390	1369	1712	3390	1502	1601	1784	1502	1729	1784	1488
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1662	3390	1337	1710	3390	1502	1581	1784	1458	1709	1784	1451
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134			153			133			133
Link Speed (k/h)		80			80			48			48	
Link Distance (m)		385.4			145.7			77.8			112.7	
Travel Time (s)		17.3			6.6			5.8			8.5	
Confl. Peds. (#/hr)			1	1			8		11	11		8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	2%	13%	1%	2%	3%	8%	2%	3%	0%	2%	4%
Adj. Flow (vph)	74	1111	100	57	2406	349	431	316	18	32	38	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	1111	100	57	2406	349	431	316	18	32	38	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.5	24.4	24.4	10.5	24.4	24.4	10.0	30.5	30.5	10.0	30.5	30.5
Total Split (s)	12.0	66.0	66.0	12.0	66.0	66.0	18.0	34.0	34.0	18.0	34.0	34.0
Total Split (%)	9.2%	50.8%	50.8%	9.2%	50.8%	50.8%	13.8%	26.2%	26.2%	13.8%	26.2%	26.2%
Maximum Green (s)	5.5	59.6	59.6	5.5	59.6	59.6	12.0	27.5	27.5	12.0	27.5	27.5
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.8	1.8	1.9	1.8	1.8	2.7	3.2	3.2	2.7	3.2	3.2
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

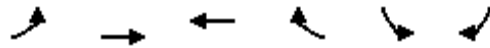
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)	6.5	6.4	6.4	6.5	6.4	6.4	6.0	6.5	6.5	6.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		10.0	10.0		10.0	10.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		1	1		1	1		4	4		4	4
Act Effct Green (s)	5.5	59.6	59.6	5.5	59.6	59.6	12.0	36.4	36.4	7.9	27.5	27.5
Actuated g/C Ratio	0.04	0.46	0.46	0.04	0.46	0.46	0.09	0.28	0.28	0.06	0.21	0.21
v/c Ratio	1.06	0.71	0.15	0.79	1.55	0.45	2.93	0.63	0.04	0.31	0.10	0.03
Control Delay	181.1	26.6	4.1	125.4	275.3	8.4	907.9	49.5	0.1	65.2	42.3	0.2
Queue Delay	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 Delay	181.1	26.6	4.1	125.4	275.3	8.4	907.9	49.5	0.1	65.2	42.3	0.2
LOS	F	C	A	F	F	A	F	D	A	E	D	A
Approach Delay		33.8			239.1			532.0			44.5	
Approach LOS		C			F			F			D	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 60 (46%), Referenced to phase 2:EBT, Start of Green												
Natural Cycle: 150												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 2.93												
Intersection Signal Delay: 227.8						Intersection LOS: F						
Intersection Capacity Utilization 126.4%						ICU Level of Service H						
Analysis Period (min) 15												
Description: AM RUSH												

Splits and Phases: 88: Teron Road & March Road

											
12 s	66 s	66 s	18 s	34 s	34 s	18 s	34 s	34 s	18 s	34 s	34 s
											
12 s	66 s	66 s	18 s	34 s	34 s	18 s	34 s	34 s	18 s	34 s	34 s



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	8	892	1659	193	153	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0			0.0	130.0	0.0
Storage Lanes	1			1	1	0
Taper Length (m)	30.0				40.0	
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.95
Ped Bike Factor	1.00			0.98	1.00	
Frt				0.850	0.995	
Flt Protected	0.950				0.954	
Satd. Flow (prot)	1616	4824	3390	1517	3316	0
Flt Permitted	0.089				0.954	
Satd. Flow (perm)	151	4824	3390	1481	3316	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				203	3	
Link Speed (k/h)		80	80		50	
Link Distance (m)		162.1	728.7		824.4	
Travel Time (s)		7.3	32.8		59.4	
Confl. Peds. (#/hr)	2			2		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	3%	2%	2%	1%	1%
Adj. Flow (vph)	8	939	1746	203	161	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	939	1746	203	167	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		5.2	5.2		8.9	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		8.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		6	2		4	
Permitted Phases	6			2		
Detector Phase	6	6	2	2	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	48.6	48.6	48.6	48.6	29.7	
Total Split (s)	100.0	100.0	100.0	100.0	30.0	
Total Split (%)	76.9%	76.9%	76.9%	76.9%	23.1%	
Maximum Green (s)	93.4	93.4	93.4	93.4	23.3	
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	
All-Red Time (s)	2.0	2.0	2.0	2.0	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	
Walk Time (s)	31.0	31.0	31.0	31.0	7.0	
Flash Dont Walk (s)	7.0	7.0	7.0	7.0	16.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	93.4	93.4	93.4	93.4	23.3	
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.18	
v/c Ratio	0.07	0.27	0.72	0.18	0.28	
Control Delay	12.5	15.7	12.8	1.1	46.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	12.5	15.7	12.8	1.1	46.7	
LOS	B	B	B	A	D	
Approach Delay		15.7	11.5		46.7	
Approach LOS		B	B		D	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 14.7

Intersection LOS: B

Intersection Capacity Utilization 78.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 97: March Road & Herzberg Road



										
Movement	WBL	WBR	NBT	NBR	SBL	SBT				
Lane Configurations										
Volume (veh/h)	2	16	3358	33	17	1149				
Sign Control	Stop		Free		Free					
Grade	0%		0%			0%				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				
Hourly flow rate (vph)	2	17	3535	35	18	1209				
Pedestrians										
Lane Width (m)										
Walking Speed (m/s)										
Percent Blockage										
Right turn flare (veh)										
Median type			None		None					
Median storage (veh)										
Upstream signal (m)										
pX, platoon unblocked										
vC, conflicting volume	3974	1178			3569					
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	3974	1178			3569					
tC, single (s)	6.9	6.9			4.1					
tC, 2 stage (s)										
tF (s)	3.5	3.3			2.2					
p0 queue free %	0	91			74					
cM capacity (veh/h)	2	185			68					
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	2	17	1178	1178	1178	35	18	403	403	403
Volume Left	2	0	0	0	0	0	18	0	0	0
Volume Right	0	17	0	0	0	35	0	0	0	0
cSH	2	185	1700	1700	1700	1700	68	1700	1700	1700
Volume to Capacity	1.37	0.09	0.69	0.69	0.69	0.02	0.26	0.24	0.24	0.24
Queue Length 95th (m)	7.0	2.3	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0
Control Delay (s)	3640.3	26.4	0.0	0.0	0.0	0.0	76.4	0.0	0.0	0.0
Lane LOS	F	D					F			
Approach Delay (s)	428.0		0.0				1.1			
Approach LOS	F									
Intersection Summary										
Average Delay			2.0							
Intersection Capacity Utilization			78.5%		ICU Level of Service				D	
Analysis Period (min)			15							

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	0	690	114	204	2150	303	2105	0	0	1264	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	140.0		70.0	85.0		0.0	0.0		125.0
Storage Lanes	1		2	2		1	2		0	0		1
Taper Length (m)	30.0			60.0			60.0			7.5		
Lane Util. Factor	1.00	1.00	0.88	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1679	0	2643	3225	3390	1532	3225	3424	0	0	4871	1517
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1679	0	2643	3225	3390	1532	3225	3424	0	0	4871	1517
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						181						228
Link Speed (k/h)		100			50			80			50	
Link Distance (m)		229.6			300.3			134.1			450.8	
Travel Time (s)		8.3			21.6			6.0			32.5	
Confl. Peds. (#/hr)									3	3		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	3%	4%	2%	1%	4%	1%	2%	0%	2%	2%
Adj. Flow (vph)	62	0	726	120	215	2263	319	2216	0	0	1331	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	0	726	120	215	2263	319	2216	0	0	1331	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			7.4			8.9			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		60	24		14	24		14
Number of Detectors	1		1	1	2	1	1	2			2	1
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		custom	Prot	NA	Perm	Prot	NA			NA	Perm
Protected Phases	7		4 5	3	8		5	2			6	
Permitted Phases						8						6
Detector Phase	7		4 5	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	4.0			4.0	4.0	4.0	5.0	4.0			4.0	4.0
Minimum Split (s)	10.1			22.7	39.7	39.7	11.5	27.5			27.5	27.5
Total Split (s)	21.0			34.0	40.0	40.0	18.0	49.0			31.0	31.0
Total Split (%)	19.1%			30.9%	36.4%	36.4%	16.4%	44.5%			28.2%	28.2%
Maximum Green (s)	14.9			27.3	33.3	33.3	11.5	41.5			23.5	23.5
Yellow Time (s)	3.7			3.7	3.7	3.7	3.7	3.7			3.7	3.7
All-Red Time (s)	2.4			3.0	3.0	3.0	2.8	3.8			3.8	3.8
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0			0.0	0.0

Lane Group	ø4
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.5
Total Split (s)	27.0
Total Split (%)	25%
Maximum Green (s)	20.5
Yellow Time (s)	3.7
All-Red Time (s)	2.8
Lost Time Adjust (s)	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)	6.1			6.7	6.7	6.7	6.5	7.5			7.5	7.5
Lead/Lag	Lead			Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode	None			None	None	None	Min	C-Max			C-Max	C-Max
Walk Time (s)					7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)					26.0	26.0		13.0			13.0	13.0
Pedestrian Calls (#/hr)					0	0		0			0	0
Act Effct Green (s)	9.4		56.3	9.5	41.2	41.2	11.5	41.5			23.5	23.5
Actuated g/C Ratio	0.09		0.51	0.09	0.37	0.37	0.10	0.38			0.21	0.21
v/c Ratio	0.43		0.54	0.43	0.17	3.30	0.95	1.72			1.28	0.04
Control Delay	56.3		20.3	52.1	25.1	1053.2	86.9	351.9			170.0	0.1
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	56.3		20.3	52.1	25.1	1053.2	86.9	351.9			170.0	0.1
LOS	E		C	D	C	F	F	F			F	A
Approach Delay					921.9			318.6			167.4	
Approach LOS					F			F			F	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 97 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 3.30

Intersection Signal Delay: 474.0

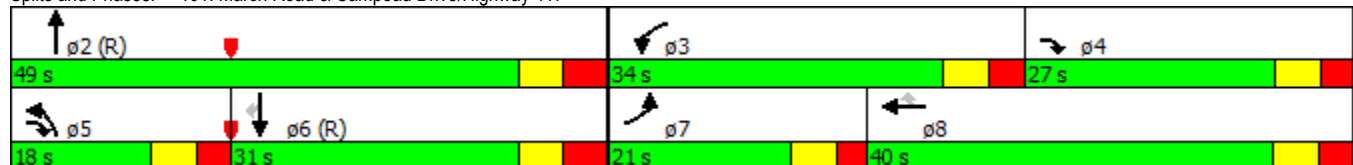
Intersection LOS: F

Intersection Capacity Utilization 220.6%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 101: March Road & Campeau Drive/Highway 417



Lane Group	ø4
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Min
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

						
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	228	156	89	576	237	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0	0.0	60.0			115.0
Storage Lanes	1	1	1			1
Taper Length (m)	50.0		80.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98				
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1517	1679	1701	1701	1532
Flt Permitted	0.950		0.541			
Satd. Flow (perm)	1695	1483	956	1701	1701	1532
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		164				27
Link Speed (k/h)	50			60	60	
Link Distance (m)	421.7			207.4	794.3	
Travel Time (s)	30.4			12.4	47.7	
Confl. Peds. (#/hr)	4	1				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	3%	7%	7%	1%
Adj. Flow (vph)	240	164	94	606	249	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	164	94	606	249	27
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	8.0			8.0	8.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				CI+Ex	CI+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	20.0	20.0	20.0
Minimum Split (s)	28.0	28.0	14.0	26.9	28.0	28.0
Total Split (s)	30.0	30.0	15.0	80.0	65.0	65.0
Total Split (%)	27.3%	27.3%	13.6%	72.7%	59.1%	59.1%
Maximum Green (s)	24.0	24.0	9.1	74.1	59.1	59.1
Yellow Time (s)	3.3	3.3	4.6	4.6	4.6	4.6
All-Red Time (s)	2.7	2.7	1.3	1.3	1.3	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Total Lost Time (s)	6.0	6.0	5.9	5.9	5.9	5.9
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	18.6	18.6	71.2	71.2	59.8	59.8
Actuated g/C Ratio	0.18	0.18	0.70	0.70	0.59	0.59
v/c Ratio	0.77	0.40	0.13	0.51	0.25	0.03
Control Delay	56.9	8.9	6.0	9.6	12.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	8.9	6.0	9.6	12.8	4.5
LOS	E	A	A	A	B	A
Approach Delay	37.4			9.1	12.0	
Approach LOS	D			A	B	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 101.8

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 18.0

Intersection LOS: B

Intersection Capacity Utilization 55.4%

ICU Level of Service B

Analysis Period (min) 15

Description: Late AM Timings

Splits and Phases: 49: Terry Fox Drive & Second Line Road

 Ø2	 Ø4
30 s	30 s
 Ø5	 Ø6
15 s	65 s

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	188	58	41	24	12	15	26	506	241	60	84	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	4.8	4.8	3.7	4.8	4.8	3.7	3.7	3.7	3.7	3.7	3.7
Storage Length (m)	40.0		0.0	40.0		0.0	115.0		115.0	125.0		125.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	50.0			50.0			85.0			65.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99	0.99		1.00					0.97
Frt		0.938			0.917				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1862	0	1631	1691	0	1695	1784	1459	1631	1784	1517
Flt Permitted	0.385			0.976			0.700			0.404		
Satd. Flow (perm)	684	1862	0	1664	1691	0	1243	1784	1459	694	1784	1479
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			16				254			95
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		412.5			314.2			794.3			450.2	
Travel Time (s)		37.1			28.3			47.7			27.0	
Confl. Peds. (#/hr)	2		4	4		2	3					3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	1%	6%	13%	6%	2%	2%	6%	6%	2%	2%
Adj. Flow (vph)	198	61	43	25	13	16	27	533	254	63	88	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	198	104	0	25	29	0	27	533	254	63	88	40
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	0.91	0.91	1.06	0.91	0.91	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	11.3	34.3		11.3	34.3		38.1	38.1	38.1	38.1	38.1	38.1
Total Split (s)	15.0	34.3		15.0	34.3		61.0	61.0	61.0	61.0	61.0	61.0
Total Split (%)	13.6%	31.1%		13.6%	31.1%		55.3%	55.3%	55.3%	55.3%	55.3%	55.3%
Maximum Green (s)	8.7	28.0		8.7	28.0		54.9	54.9	54.9	54.9	54.9	54.9
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	1.7		1.7	1.7		2.8	2.8	2.8	2.8	2.8	2.8

38: Terry Fox Drive & Innovation Drive/Flamborough Way
Kanata North CDP TMP

2013 Existing AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		21.0			21.0		25.0	25.0	25.0	25.0	25.0	25.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	14.1	10.9		10.7	10.5		56.6	56.6	56.6	56.6	56.6	56.6
Actuated g/C Ratio	0.17	0.13		0.13	0.12		0.67	0.67	0.67	0.67	0.67	0.67
v/c Ratio	0.87	0.39		0.12	0.13		0.03	0.45	0.24	0.14	0.07	0.04
Control Delay	67.5	30.2		28.2	24.1		7.3	9.8	1.8	8.3	7.0	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	30.2		28.2	24.1		7.3	9.8	1.8	8.3	7.0	0.1
LOS	E	C		C	C		A	A	A	A	A	A
Approach Delay		54.7			26.0			7.2			6.0	
Approach LOS		D			C			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 110.3

Actuated Cycle Length: 85

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 78.6%

ICU Level of Service D

Analysis Period (min) 15

Description: Late AM Timings

Splits and Phases: 38: Terry Fox Drive & Innovation Drive/Flamborough Way

		
61 s	15 s	34.3 s
		
61 s	15 s	34.3 s

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	394	6	11	129	26	5	1	3	198	0	27
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	14	415	6	12	136	27	5	1	3	208	0	28
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	163			421			646	632	418	622	621	149
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	163			421			646	632	418	622	621	149
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	100	100	47	100	97
cM capacity (veh/h)	1428			1138			367	393	633	393	398	902
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	435	175	9	237								
Volume Left	14	12	5	208								
Volume Right	6	27	3	28								
cSH	1428	1138	430	422								
Volume to Capacity	0.01	0.01	0.02	0.56								
Queue Length 95th (m)	0.2	0.2	0.5	25.5								
Control Delay (s)	0.3	0.6	13.6	23.9								
Lane LOS	A	A	B	C								
Approach Delay (s)	0.3	0.6	13.6	23.9								
Approach LOS			B	C								
Intersection Summary												
Average Delay			7.1									
Intersection Capacity Utilization			52.7%	ICU Level of Service					A			
Analysis Period (min)			15									

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	23	236	45	40	83	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	24	248	47	42	87	6
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total (vph)	273	89	94			
Volume Left (vph)	24	0	87			
Volume Right (vph)	0	42	6			
Hadj (s)	0.05	-0.22	0.22			
Departure Headway (s)	4.3	4.2	4.9			
Degree Utilization, x	0.32	0.10	0.13			
Capacity (veh/h)	812	818	677			
Control Delay (s)	9.3	7.7	8.6			
Approach Delay (s)	9.3	7.7	8.6			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.9			
Level of Service			A			
Intersection Capacity Utilization			33.0%	ICU Level of Service	A	
Analysis Period (min)			15			

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	0	0	18	1	18	1	146	44	55	40	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	4.8	3.7	3.7	3.7
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	45.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			40.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor								0.99		1.00		
Frt					0.857			0.965			0.997	
Flt Protected		0.950		0.950			0.950			0.950		
Satd. Flow (prot)	0	1729	0	1662	1493	0	1517	1894	0	1679	3283	0
Flt Permitted							0.728			0.544		
Satd. Flow (perm)	0	1820	0	1750	1493	0	1162	1894	0	958	3283	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					19			23			1	
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		101.0			84.9			80.9			131.9	
Travel Time (s)		7.6			6.4			5.8			9.5	
Confl. Peds. (#/hr)									3	3		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	14%	4%	13%	4%	14%	4%	1%	3%	5%	6%
Adj. Flow (vph)	17	0	0	19	1	19	1	154	46	58	42	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	19	20	0	1	200	0	58	43	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.91	0.91	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		25.8	25.8		10.8	25.8	
Total Split (s)	30.0	30.0		30.0	30.0		25.8	25.8		11.0	36.8	
Total Split (%)	44.9%	44.9%		44.9%	44.9%		38.6%	38.6%		16.5%	55.1%	
Maximum Green (s)	24.0	24.0		24.0	24.0		20.0	20.0		5.2	31.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.1	2.1		2.1	2.1	

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		10.0		10.0	10.0		39.2	39.2		40.0	43.5	
Actuated g/C Ratio		0.19		0.19	0.19		0.75	0.75		0.77	0.83	
v/c Ratio		0.05		0.06	0.07		0.00	0.14		0.07	0.02	
Control Delay		17.9		18.1	10.2		10.0	7.0		3.8	3.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		17.9		18.1	10.2		10.0	7.0		3.8	3.5	
LOS		B		B	B		A	A		A	A	
Approach Delay		17.9			14.0			7.0			3.7	
Approach LOS		B			B			A			A	
Intersection Summary												
Area Type:	Other											
Cycle Length: 66.8												
Actuated Cycle Length: 52.1												
Natural Cycle: 70												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 0.14												
Intersection Signal Delay: 7.4	Intersection LOS: A											
Intersection Capacity Utilization 56.3%	ICU Level of Service B											
Analysis Period (min) 15												
Description: Late AM Timings												

Splits and Phases: 77: Klondike Road & Weatherston Street

		
11 s	25.8 s	30 s
		
36.8 s	30 s	

						
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	208	18	1	11	2	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	219	19	1	12	2	26
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			238		242	228
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			238		242	228
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1329		733	816
Direction, Lane #	SE 1	NW 1	NE 1			
Volume Total	238	13	28			
Volume Left	0	1	2			
Volume Right	19	0	26			
cSH	1700	1329	809			
Volume to Capacity	0.14	0.00	0.04			
Queue Length 95th (m)	0.0	0.0	0.8			
Control Delay (s)	0.0	0.6	9.6			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.6	9.6			
Approach LOS			A			
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			22.7%	ICU Level of Service		A
Analysis Period (min)			15			

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	233	2	4	31	10	1	19	25	12	5	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	22	245	2	4	33	11	1	20	26	13	5	2
Direction, Lane #	SE 1	NW 1	NE 1	SW 1								
Volume Total (vph)	269	47	47	20								
Volume Left (vph)	22	4	1	13								
Volume Right (vph)	2	11	26	2								
Hadj (s)	0.05	-0.06	-0.26	0.16								
Departure Headway (s)	4.2	4.3	4.4	4.8								
Degree Utilization, x	0.31	0.06	0.06	0.03								
Capacity (veh/h)	851	809	759	689								
Control Delay (s)	9.0	7.5	7.6	7.9								
Approach Delay (s)	9.0	7.5	7.6	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.6									
Level of Service			A									
Intersection Capacity Utilization			32.9%	ICU Level of Service	A							
Analysis Period (min)			15									

70: March Road /March Road & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	24	32	9	44	66	11	25	120	28	25	441	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	0.0		0.0	35.0		0.0	35.0		30.0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (m)	7.5			7.5			80.0			80.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.987			0.972				0.850
Flt Protected		0.982			0.982		0.950			0.950		
Satd. Flow (prot)	0	1720	0	0	1736	0	1616	1652	0	1662	1733	1517
Flt Permitted		0.826			0.852		0.471			0.659		
Satd. Flow (perm)	0	1447	0	0	1506	0	801	1652	0	1153	1733	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			10			12				40
Link Speed (k/h)		50			70			80				80
Link Distance (m)		169.4			2437.7			322.8				966.0
Travel Time (s)		12.2			125.4			14.5				43.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	1%	6%	1%	2%	2%	7%	8%	3%	4%	5%	2%
Adj. Flow (vph)	25	34	9	46	69	12	26	126	29	26	464	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	127	0	26	155	0	26	464	61
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.7				3.7
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		9.0			9.0			9.0				9.0
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	22.4	22.4		26.4	26.4		25.9	25.9		25.9	25.9	25.9
Total Split (s)	61.4	61.4		61.4	61.4		31.9	31.9		31.9	31.9	31.9
Total Split (%)	65.8%	65.8%		65.8%	65.8%		34.2%	34.2%		34.2%	34.2%	34.2%
Maximum Green (s)	55.0	55.0		55.0	55.0		26.0	26.0		26.0	26.0	26.0
Yellow Time (s)	4.6	4.6		4.6	4.6		3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	1.8	1.8		1.8	1.8		2.2	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
Total Lost Time (s)		6.4			6.4		5.9	5.9		5.9	5.9	5.9
Lead/Lag												

70: March Road /March Road & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP

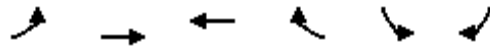
												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		9.0	9.0		9.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		10.3			10.3		24.7	24.7		24.7	24.7	24.7
Actuated g/C Ratio		0.24			0.24		0.58	0.58		0.58	0.58	0.58
v/c Ratio		0.19			0.34		0.06	0.16		0.04	0.46	0.07
Control Delay		13.4			15.8		6.9	6.8		6.6	9.7	3.8
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		13.4			15.8		6.9	6.8		6.6	9.7	3.8
LOS		B			B		A	A		A	A	A
Approach Delay		13.4			15.8			6.8			8.9	
Approach LOS		B			B			A			A	
Intersection Summary												
Area Type:	Other											
Cycle Length: 93.3												
Actuated Cycle Length: 42.7												
Natural Cycle: 55												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 0.46												
Intersection Signal Delay: 9.8							Intersection LOS: A					
Intersection Capacity Utilization 56.8%							ICU Level of Service B					
Analysis Period (min) 15												

Splits and Phases: 70: March Road /March Road & Second Line Road

 ø2	 ø4
31.9 s	61.4 s
 ø6	 ø8
31.9 s	61.4 s

68: March Road & Dunrobin Road
2013 Existing PM Peak

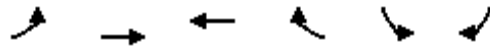
Kanata North CDP TMP



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	85	36	418	536	181	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0			90.0	50.0	0.0
Storage Lanes	1			1	1	0
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97	0.95
Frt				0.850	0.969	
Flt Protected	0.950				0.962	
Satd. Flow (prot)	1729	1820	1750	1473	2754	0
Flt Permitted	0.302				0.962	
Satd. Flow (perm)	550	1820	1750	1473	2754	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				564	32	
Link Speed (k/h)		80	80		48	
Link Distance (m)		374.8	177.0		195.2	
Travel Time (s)		16.9	8.0		14.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	4%	5%	24%	2%
Adj. Flow (vph)	89	38	440	564	191	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	38	440	564	240	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	0.0		8.4	
Link Offset(m)		0.0	1.5		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		CI+Ex	CI+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	NA	
Protected Phases	5	2	6		4	
Permitted Phases	2			6		
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	10.0	20.0	20.0	10.0	
Minimum Split (s)	10.3	26.3	26.3	26.3	22.3	
Total Split (s)	21.3	67.6	46.3	46.3	36.3	
Total Split (%)	20.5%	65.1%	44.6%	44.6%	34.9%	
Maximum Green (s)	15.0	61.3	40.0	40.0	30.0	
Yellow Time (s)	4.6	4.6	4.6	4.6	3.7	
All-Red Time (s)	1.7	1.7	1.7	1.7	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	
Lead/Lag	Lead		Lag	Lag		

68: March Road & Dunrobin Road
2013 Existing PM Peak

Kanata North CDP TMP



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Min	Min	None	
Walk Time (s)		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	9.0	
Pedestrian Calls (#/hr)		0	0	0	0	
Act Effct Green (s)	36.1	36.1	24.0	24.0	11.7	
Actuated g/C Ratio	0.59	0.59	0.39	0.39	0.19	
v/c Ratio	0.18	0.04	0.64	0.61	0.43	
Control Delay	5.8	4.9	21.7	4.8	24.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	5.8	4.9	21.7	4.8	24.0	
LOS	A	A	C	A	C	
Approach Delay		5.5	12.2		24.0	
Approach LOS		A	B		C	

Intersection Summary

Area Type: Other

Cycle Length: 103.9

Actuated Cycle Length: 60.9

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 13.7

Intersection LOS: B

Intersection Capacity Utilization 52.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 68: March Road & Dunrobin Road

67.6 s	36.3 s
21.3 s	46.3 s

46: Halton Terrace/Maxwell Bridge Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	36	212	9	172	925	70	11	30	36	66	47	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	3.7	3.7	3.7	3.7
Storage Length (m)	40.0		10.0	80.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	60.0			50.0			30.0			50.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98	1.00	0.99		1.00	0.99	
Frt			0.850			0.850		0.919			0.896	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1616	3424	1381	1712	3424	1502	1586	1831	0	1729	1612	0
Flt Permitted	0.285			0.552			0.585			0.711		
Satd. Flow (perm)	484	3424	1381	995	3424	1466	973	1831	0	1289	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			91		38			100	
Link Speed (k/h)		80			80			40			50	
Link Distance (m)		118.9			239.9			116.9			761.3	
Travel Time (s)		5.4			10.8			10.5			54.8	
Confl. Peds. (#/hr)	2					2	4		4	4		4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	1%	12%	1%	1%	3%	9%	2%	1%	0%	0%	0%
Adj. Flow (vph)	38	223	9	181	974	74	12	32	38	69	49	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	223	9	181	974	74	12	70	0	69	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			5.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.91	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	1	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	11.4	34.6	34.6	11.4	34.6	34.6	38.6	38.6		38.6	38.6	
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	45.0	45.0		45.0	45.0	
Total Split (%)	16.7%	45.8%	45.8%	16.7%	45.8%	45.8%	37.5%	37.5%		37.5%	37.5%	
Maximum Green (s)	13.6	48.4	48.4	13.6	48.4	48.4	38.4	38.4		38.4	38.4	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3		3.3	3.3	
All-Red Time (s)	1.8	2.0	2.0	1.8	2.0	2.0	3.3	3.3		3.3	3.3	

46: Halton Terrace/Maxwell Bridge Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.6	6.6	6.4	6.6	6.6	6.6	6.6		6.6	6.6	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		None	None	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		21.0	21.0		21.0	21.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	54.7	48.5	48.5	63.0	56.8	56.8	11.3	11.3		11.3	11.3	
Actuated g/C Ratio	0.62	0.55	0.55	0.71	0.64	0.64	0.13	0.13		0.13	0.13	
v/c Ratio	0.10	0.12	0.01	0.23	0.45	0.08	0.10	0.26		0.42	0.55	
Control Delay	5.0	10.5	0.0	4.7	10.1	1.7	36.5	22.2		44.6	23.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.0	10.5	0.0	4.7	10.1	1.7	36.5	22.2		44.6	23.0	
LOS	A	B	A	A	B	A	D	C		D	C	
Approach Delay		9.4			8.8			24.3			29.5	
Approach LOS		A			A			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 88.8

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 12.2

Intersection LOS: B

Intersection Capacity Utilization 60.0%

ICU Level of Service B

Analysis Period (min) 15

Description: Late PM Timings

Splits and Phases: 46: Halton Terrace/Maxwell Bridge Road & March Road

		
ø1	ø2	ø4
20 s	55 s	45 s
		
ø5	ø6	ø8
20 s	55 s	45 s

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	16	306	1112	270	107	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0			0.0	0.0	0.0
Storage Lanes	1			0	1	1
Taper Length (m)	50.0				7.5	
Lane Util. Factor	1.00	0.95	0.91	0.91	1.00	1.00
Ped Bike Factor	1.00		1.00		1.00	0.98
Frt			0.971			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1679	3262	4760	0	1695	1547
Flt Permitted	0.162				0.950	
Satd. Flow (perm)	286	3262	4760	0	1688	1522
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			110			51
Link Speed (k/h)		80	80		40	
Link Distance (m)		239.9	242.2		132.2	
Travel Time (s)		10.8	10.9		11.9	
Confl. Peds. (#/hr)	4			4	3	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	6%	1%	1%	2%	0%
Adj. Flow (vph)	17	322	1171	284	113	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	322	1455	0	113	51
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		3.7	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (m)	2.0	10.0	10.0		2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	2.0	0.6	0.6		2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6					8
Detector Phase	6	6	2		8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0		10.0	10.0
Minimum Split (s)	28.4	28.4	28.4		31.0	31.0
Total Split (s)	89.0	89.0	89.0		31.0	31.0
Total Split (%)	74.2%	74.2%	74.2%		25.8%	25.8%
Maximum Green (s)	82.6	82.6	82.6		25.0	25.0
Yellow Time (s)	4.6	4.6	4.6		3.3	3.3
All-Red Time (s)	1.8	1.8	1.8		2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0

81: March Road & Trinity
2013 Existing PM Peak

Kanata North CDP TMP



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Total Lost Time (s)	6.4	6.4	6.4		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	C-Max	C-Max	C-Max		None	None
Walk Time (s)			7.0		7.0	7.0
Flash Dont Walk (s)			15.0		18.0	18.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)	93.9	93.9	93.9		13.7	13.7
Actuated g/C Ratio	0.78	0.78	0.78		0.11	0.11
v/c Ratio	0.08	0.13	0.39		0.59	0.23
Control Delay	4.6	3.5	4.2		62.3	15.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	4.6	3.5	4.2		62.3	15.0
LOS	A	A	A		E	B
Approach Delay		3.6	4.2		47.6	
Approach LOS		A	A		D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NWT and 6:SETL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 7.8

Intersection LOS: A

Intersection Capacity Utilization 49.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 81: March Road & Trinity



33: Klondike Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	3	385	54	227	1237	86	76	22	104	42	28	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	100.0		0.0	0.0		0.0	15.0		0.0
Storage Lanes	1		0	2		0	1		0	1		0
Taper Length (m)	70.0			100.0			7.5			30.0		
Lane Util. Factor	1.00	0.91	0.91	0.97	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	0.99		1.00	0.99	
Frt		0.981			0.990			0.876			0.935	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1572	4771	0	3288	4809	0	1695	1442	0	1682	1540	0
Flt Permitted	0.950			0.950			0.432			0.673		
Satd. Flow (perm)	1569	4771	0	3284	4809	0	764	1442	0	1190	1540	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			9			109			22	
Link Speed (k/h)		80			80			50			50	
Link Distance (m)		242.2			599.2			131.9			200.6	
Travel Time (s)		10.9			27.0			9.5			14.4	
Confl. Peds. (#/hr)	6		1	1		6	10		1	1		10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	2%	2%	2%	2%	3%	2%	16%	8%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	2	17	1
Adj. Flow (vph)	3	405	57	239	1302	91	80	23	109	44	29	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	462	0	239	1393	0	80	132	0	44	51	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		8.9			8.9			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.07	1.16	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases	1	6		5	2		7	4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0		5.0	20.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.2	32.5		11.2	32.5		12.1	44.1		44.1	44.1	
Total Split (s)	28.0	36.0		28.0	36.0		12.1	56.2		44.1	44.1	
Total Split (%)	23.3%	30.0%		23.3%	30.0%		10.1%	46.8%		36.7%	36.7%	
Maximum Green (s)	21.8	29.5		21.8	29.5		5.0	49.1		37.0	37.0	
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.6	1.9		1.6	1.9		3.8	3.8		3.8	3.8	

33: Klondike Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.5		6.2	6.5		7.1	7.1		7.1	7.1	
Lead/Lag	Lead	Lead		Lag	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		19.0			19.0			30.0		30.0	30.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	5.8	29.8		11.2	44.9		19.8	19.8		10.5	10.5	
Actuated g/C Ratio	0.07	0.37		0.14	0.56		0.25	0.25		0.13	0.13	
v/c Ratio	0.03	0.26		0.53	0.52		0.33	0.30		0.29	0.23	
Control Delay	38.0	18.6		37.5	13.4		27.8	9.5		39.0	25.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.0	18.6		37.5	13.4		27.8	9.5		39.0	25.1	
LOS	D	B		D	B		C	A		D	C	
Approach Delay		18.7			17.0			16.4			31.5	
Approach LOS		B			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 120.2

Actuated Cycle Length: 80.7

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 17.8

Intersection LOS: B

Intersection Capacity Utilization 73.0%

ICU Level of Service D

Analysis Period (min) 15

Description: Late PMTimings

Splits and Phases: 33: Klondike Road & March Road

		
ø1	ø2	ø4
28 s	36 s	56.2 s
		
ø6	ø5	ø7
36 s	28 s	12.1 s
		ø8
		44.1 s

37: Morgan's Grant Way & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	48	500	24	256	1161	85	17	25	60	120	46	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	65.0		35.0	90.0		35.0	0.0		25.0	30.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	35.0			70.0			7.5			40.0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.980		0.950		
Satd. Flow (prot)	1695	4824	1502	1712	4824	1547	0	1713	1517	1712	1733	1532
Flt Permitted	0.218			0.401				0.859		0.728		
Satd. Flow (perm)	389	4824	1502	723	4824	1547	0	1501	1517	1312	1733	1532
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98			98			91			91
Link Speed (k/h)		80			80			40			48	
Link Distance (m)		599.2			307.3			460.2			508.2	
Travel Time (s)		27.0			13.8			41.4			38.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	3%	1%	3%	0%	0%	7%	2%	1%	5%	1%
Adj. Flow (vph)	51	526	25	269	1222	89	18	26	63	126	48	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	526	25	269	1222	89	0	44	63	126	48	86
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Detector Phase	1	6	6	5	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	26.5	26.5	11.5	26.5	26.5	33.3	33.3	33.3	33.3	33.3	33.3
Total Split (s)	23.0	62.0	62.0	23.0	62.0	62.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	19.2%	51.7%	51.7%	19.2%	51.7%	51.7%	29.2%	29.2%	29.2%	29.2%	29.2%	29.2%
Maximum Green (s)	16.5	55.5	55.5	16.5	55.5	55.5	27.7	27.7	27.7	27.7	27.7	27.7
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.9	1.9	1.9	1.9	1.9	1.9	4.3	4.3	4.3	4.3	4.3	4.3
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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5		7.3	7.3	7.3	7.3	7.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						

37: Morgan's Grant Way & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	19.0	19.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	62.2	55.7	55.7	74.1	64.3	64.3		15.5	15.5	15.5	15.5	15.5
Actuated g/C Ratio	0.60	0.54	0.54	0.71	0.62	0.62		0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.16	0.20	0.03	0.43	0.41	0.09		0.20	0.21	0.65	0.19	0.28
Control Delay	7.4	13.8	0.1	7.7	11.9	2.2		41.0	5.1	57.6	40.5	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	13.8	0.1	7.7	11.9	2.2		41.0	5.1	57.6	40.5	10.0
LOS	A	B	A	A	B	A		D	A	E	D	A
Approach Delay		12.7			10.6			19.9			38.7	
Approach LOS		B			B			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 104.1

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 14.4

Intersection LOS: B

Intersection Capacity Utilization 62.2%

ICU Level of Service B

Analysis Period (min) 15

Description: Late PMTimings

Splits and Phases: 37: Morgan's Grant Way & March Road

		
ø1	ø2	ø4
23 s	62 s	35 s
		
ø5	ø6	ø8
23 s	62 s	35 s

31: Terry Fox Drive & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	67	507	34	329	1278	72	228	147	110	68	351	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		80.0	175.0		50.0	80.0		60.0	70.0		50.0
Storage Lanes	1		1	2		1	2		2	2		0
Taper Length (m)	85.0			55.0			70.0			30.0		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	1.00		0.98	0.99		0.99			0.96	0.99		0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	4871	1517	3288	4824	1502	3257	3390	1502	3257	3390	1517
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1711	4871	1484	3271	4824	1482	3257	3390	1442	3214	3390	1497
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			160			155			155
Link Speed (k/h)		80			80			60			60	
Link Distance (m)		307.3			294.7			204.8			232.3	
Travel Time (s)		13.8			13.3			12.3			13.9	
Confl. Peds. (#/hr)	1		4	4		1			13	13		
Confl. Bikes (#/hr)			5						14			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	2%	2%	3%	3%	3%	2%	3%	3%	2%	2%
Adj. Flow (vph)	71	534	36	346	1345	76	240	155	116	72	369	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	534	36	346	1345	76	240	155	116	72	369	91
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			8.9			8.9			8.9	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.8	28.6	28.6	11.8	28.6	28.6	11.7	36.1	36.1	11.7	36.1	36.1
Total Split (s)	17.0	50.0	50.0	17.0	50.0	50.0	16.0	37.0	37.0	16.0	37.0	37.0
Total Split (%)	14.2%	41.7%	41.7%	14.2%	41.7%	41.7%	13.3%	30.8%	30.8%	13.3%	30.8%	30.8%
Maximum Green (s)	10.2	43.4	43.4	10.2	43.4	43.4	9.3	29.9	29.9	9.3	29.9	29.9
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.2	2.0	2.0	3.4	3.8	3.8	3.4	3.8	3.8

31: Terry Fox Drive & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
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)	6.8	6.6	6.6	6.8	6.6	6.6	6.7	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		15.0	15.0		15.0	15.0		22.0	22.0		22.0	22.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	8.8	43.5	43.5	10.2	47.5	47.5	9.3	21.1	21.1	7.7	16.8	16.8
Actuated g/C Ratio	0.08	0.41	0.41	0.10	0.44	0.44	0.09	0.20	0.20	0.07	0.16	0.16
v/c Ratio	0.50	0.27	0.05	1.11	0.63	0.10	0.85	0.23	0.28	0.31	0.69	0.25
Control Delay	60.1	22.0	0.1	127.3	26.1	0.3	75.1	38.7	4.3	51.2	49.9	2.0
Queue Delay	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 Delay	60.1	22.0	0.1	127.3	26.1	0.3	75.1	38.7	4.3	51.2	49.9	2.0
LOS	E	C	A	F	C	A	E	D	A	D	D	A
Approach Delay		25.0			44.8			48.0			41.9	
Approach LOS		C			D			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 107

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 41.2

Intersection LOS: D

Intersection Capacity Utilization 71.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 31: Terry Fox Drive & March Road

			
17 s	50 s	16 s	37 s
			
17 s	50 s	16 s	37 s

1: Solandt Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	971	51	127	1416	72	52	73	550	663	64	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.2	3.7	3.7	3.7	3.5	3.7	3.5	3.7	3.7	3.7
Storage Length (m)	150.0		85.0	160.0		0.0	0.0		0.0	65.0		0.0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (m)	30.0			50.0			7.5			100.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor			0.98			0.98	1.00		0.96	0.97	0.99	
Frt			0.850			0.850			0.850		0.931	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1712	3390	1419	1662	3357	1532	1610	1767	1498	3288	1641	0
Flt Permitted	0.103			0.950			0.950			0.950		
Satd. Flow (perm)	186	3390	1398	1662	3357	1496	1605	1767	1442	3201	1641	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150			92			149		31	
Link Speed (k/h)		80			80			50			48	
Link Distance (m)		623.3			313.4			108.2			243.4	
Travel Time (s)		28.0			14.1			7.8			18.3	
Confl. Peds. (#/hr)	1					1	3		13	13		3
Confl. Bikes (#/hr)			5						6			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	3%	4%	3%	1%	5%	3%	1%	2%	2%	3%
Adj. Flow (vph)	32	1022	54	134	1491	76	55	77	579	698	67	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	1022	54	134	1491	76	55	77	579	698	124	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			8.9	
Link Offset(m)		0.0			0.0			2.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.14	1.06	1.06	1.06	1.09	1.06	1.09	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	1	1	1	1	1	2	1	1	2	
Detector Template	Left					Right		Thru		Left	Thru	
Leading Detector (m)	2.0	15.2	15.2	15.2	15.2	2.0	15.2	10.0	15.2	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	15.2	15.2	15.2	15.2	2.0	15.2	0.6	15.2	2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)								9.4			9.4	
Detector 2 Size(m)								0.6			0.6	
Detector 2 Type								CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		6		5	2		7	4		3	8	
Permitted Phases	6		6			2			4			
Detector Phase	6	6	6	5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	5.0	20.0	20.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	26.3	26.3	26.3	11.4	26.3	26.3	11.7	16.4	16.4	11.7	16.4	
Total Split (s)	45.0	45.0	45.0	14.0	59.0	59.0	33.0	28.0	28.0	33.0	28.0	
Total Split (%)	37.5%	37.5%	37.5%	11.7%	49.2%	49.2%	27.5%	23.3%	23.3%	27.5%	23.3%	
Maximum Green (s)	38.7	38.7	38.7	7.6	52.7	52.7	26.3	21.6	21.6	26.3	21.6	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	

1: Solandt Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
All-Red Time (s)	1.7	1.7	1.7	1.8	1.7	1.7	3.4	3.1	3.1	3.4	3.1	
Lost Time Adjust (s)	0.0	-2.3	-2.3	-2.4	-2.3	0.0	-2.7	0.0	-2.4	0.0	0.0	
Total Lost Time (s)	6.3	4.0	4.0	4.0	4.0	6.3	4.0	6.4	4.0	6.7	6.4	
Lead/Lag	Lag	Lag	Lag	Lead								
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	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0						
Flash Dont Walk (s)	10.0	10.0	10.0		10.0	10.0						
Pedestrian Calls (#/hr)	2	2	2		2	2						
Act Effct Green (s)	38.7	41.0	41.0	10.0	55.0	52.7	29.0	21.6	24.0	26.3	21.6	
Actuated g/C Ratio	0.32	0.34	0.34	0.08	0.46	0.44	0.24	0.18	0.20	0.22	0.18	
v/c Ratio	0.54	0.88	0.09	0.97	0.97	0.11	0.14	0.24	1.42	0.97	0.39	
Control Delay	71.6	50.8	4.8	124.6	48.8	3.1	37.0	44.6	231.6	73.6	36.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.6	50.8	4.8	124.6	48.8	3.1	37.0	44.6	231.6	73.6	36.3	
LOS	E	D	A	F	D	A	D	D	F	E	D	
Approach Delay		49.2			52.8			196.3			68.0	
Approach LOS		D			D			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 16 (13%), Referenced to phase 2:NWT and 6:SETL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.42

Intersection Signal Delay: 78.2

Intersection LOS: E

Intersection Capacity Utilization 98.5%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Solandt Road & March Road

 ø2 (R)	 ø3	 ø4
59 s	33 s	28 s
 ø5	 ø7	 ø8
14 s	33 s	28 s
 ø6 (R)		
45 s		

22: Station Road/Carling Avenue & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	286	1858	0	3	1378	21	1	8	13	76	1	281
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.7	3.5	3.5	3.7	3.5	3.7	3.7	3.5	3.7	3.7	3.5
Storage Length (m)	170.0		20.0	90.0		80.0	0.0		20.0	50.0		140.0
Storage Lanes	2		1	1		1	0		1	1		1
Taper Length (m)	75.0			40.0			7.5			50.0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00					0.97		1.00	0.98	1.00		0.97
Frt						0.850			0.850			0.850
Flt Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	3248	3424	1780	1691	3424	1375	0	1809	1513	1586	1820	1498
Flt Permitted	0.950			0.950				0.979		0.752		
Satd. Flow (perm)	3237	3424	1780	1691	3424	1338	0	1781	1488	1250	1820	1460
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						84			85			269
Link Speed (k/h)		80			80			50			60	
Link Distance (m)		311.6			207.4			128.2			225.1	
Travel Time (s)		14.0			9.3			9.2			13.5	
Confl. Peds. (#/hr)	8					8	3		3	3		3
Confl. Bikes (#/hr)			3									9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	0%	0%	1%	10%	0%	0%	0%	9%	0%	1%
Adj. Flow (vph)	301	1956	0	3	1451	22	1	8	14	80	1	296
Shared Lane Traffic (%)												
Lane Group Flow (vph)	301	1956	0	3	1451	22	0	9	14	80	1	296
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		8.5			5.2			5.2			5.2	
Link Offset(m)		0.0			0.0			0.0			-3.5	
Crosswalk Width(m)		8.0			8.0			15.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.06	1.09	1.09	1.06	1.09	1.06	1.06	1.09	1.06	1.06	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.6	26.5	26.5	11.6	26.5	26.5	33.4	33.4	33.4	33.2	33.2	33.2
Total Split (s)	26.0	70.0	70.0	26.0	70.0	70.0	34.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	20.0%	53.8%	53.8%	20.0%	53.8%	53.8%	26.2%	26.2%	26.2%	26.2%	26.2%	26.2%
Maximum Green (s)	19.4	63.5	63.5	19.4	63.5	63.5	27.6	27.6	27.6	27.8	27.8	27.8
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.7	3.7	3.7	3.5	3.5	3.5

22: Station Road/Carling Avenue & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
All-Red Time (s)	2.0	1.9	1.9	2.0	1.9	1.9	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.5	6.5	6.6	6.5	6.5		6.4	6.4	6.2	6.2	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		13.0	13.0		13.0	13.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		1	1		1	1	1	1	1	1	1	1
Act Effct Green (s)	16.8	99.0		5.9	78.3	78.3		15.5	15.5	15.7	15.7	15.7
Actuated g/C Ratio	0.13	0.76		0.05	0.60	0.60		0.12	0.12	0.12	0.12	0.12
v/c Ratio	0.72	0.75		0.04	0.70	0.03		0.04	0.06	0.53	0.00	0.72
Control Delay	64.3	13.5		64.0	17.1	0.0		46.6	0.4	64.9	44.0	18.4
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	13.5		64.0	17.1	0.0		46.6	0.4	64.9	44.0	18.4
LOS	E	B		E	B	A		D	A	E	D	B
Approach Delay		20.2			16.9			18.5			28.4	
Approach LOS		C			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 86 (66%), Referenced to phase 2:NWT and 6:SET, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 19.8

Intersection LOS: B

Intersection Capacity Utilization 89.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 22: Station Road/Carling Avenue & March Road

		
ø1	ø2 (R)	ø4
26 s	70 s	34 s
		
ø5	ø6 (R)	ø8
26 s	70 s	34 s

93: Innovapost Access/Metro Access & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	172	1843	1	11	946	63	30	14	78	273	3	130
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	2.5	2.5	3.7	2.5	2.5
Storage Length (m)	60.0		0.0	50.0		125.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		1	0		1
Taper Length (m)	35.0			35.0			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00				0.97		1.00	0.99		1.00	0.98
Frt						0.850			0.850			0.850
Flt Protected	0.950			0.950				0.967			0.953	
Satd. Flow (prot)	1712	3390	0	1712	3357	1532	0	1456	1343	0	1490	1330
Flt Permitted	0.191			0.058				0.605			0.694	
Satd. Flow (perm)	344	3390	0	105	3357	1482	0	908	1325	0	1084	1302
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						81			82			137
Link Speed (k/h)		80			80			48			48	
Link Distance (m)		110.5			385.4			59.2			78.0	
Travel Time (s)		5.0			17.3			4.4			5.9	
Confl. Peds. (#/hr)	5		4	4		5	7		1	1		7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	5%	1%	3%	1%	3%	9%	0%	1%	6%	1%
Adj. Flow (vph)	181	1940	1	12	996	66	32	15	82	287	3	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	181	1941	0	12	996	66	0	47	82	0	290	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			0.0			1.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		12.0			12.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.26	1.26	1.06	1.26	1.26
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6			2			4			8	
Permitted Phases	6			2		2	4		4	8		8
Detector Phase	1	6		2	2	2	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	14.5	32.4		32.4	32.4	32.4	36.3	36.3	36.3	36.3	36.3	36.3
Total Split (s)	15.0	90.0		75.0	75.0	75.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	11.5%	69.2%		57.7%	57.7%	57.7%	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%
Maximum Green (s)	8.6	83.6		68.6	68.6	68.6	33.7	33.7	33.7	33.7	33.7	33.7
Yellow Time (s)	4.6	4.6		4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.8	1.8		1.8	1.8	1.8	3.0	3.0	3.0	3.0	3.0	3.0

93: Innovapost Access/Metro Access & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	6.4	6.4		6.4	6.4	6.4		6.3	6.3		6.3	6.3
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		19.0		19.0	19.0	19.0	23.0	23.0	23.0	23.0	23.0	23.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0	0
Act Effct Green (s)	83.6	83.6		68.7	68.7	68.7		33.7	33.7		33.7	33.7
Actuated g/C Ratio	0.64	0.64		0.53	0.53	0.53		0.26	0.26		0.26	0.26
v/c Ratio	0.58	0.89		0.22	0.56	0.08		0.20	0.20		1.03	0.31
Control Delay	15.8	18.5		31.4	28.9	7.0		40.5	8.9		109.3	8.0
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	15.8	18.5		31.4	28.9	7.0		40.5	8.9		109.3	8.0
LOS	B	B		C	C	A		D	A		F	A
Approach Delay		18.3			27.6			20.4			76.8	
Approach LOS		B			C			C			E	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 84 (65%), Referenced to phase 2:NWTL and 6:SETL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 27.7

Intersection LOS: C

Intersection Capacity Utilization 96.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 93: Innovapost Access/Metro Access & March Road

		
ø1	ø2 (R)	ø4
15 s	75 s	40 s
		
ø6 (R)	ø8	
90 s	40 s	

88: Teron Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1642	347	120	1672	28	298	122	9	233	314	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	75.0		70.0	70.0		75.0	0.0		0.0	30.0		70.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	25.0			30.0			7.5			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1820	3390	1488	1601	3390	1502	1662	1784	1369	1712	1784	1502
Flt Permitted				0.057			0.165			0.632		
Satd. Flow (perm)	1820	3390	1488	96	3390	1502	289	1784	1369	1139	1784	1502
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			222			134			133			133
Link Speed (k/h)		80			80			48			48	
Link Distance (m)		385.4			145.7			77.8			112.7	
Travel Time (s)		17.3			6.6			5.8			8.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	2%	4%	8%	2%	3%	4%	2%	13%	1%	2%	3%
Adj. Flow (vph)	0	1728	365	126	1760	29	314	128	9	245	331	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1728	365	126	1760	29	314	128	9	245	331	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			5.2			5.2			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.5	24.4	24.4	10.5	24.4	24.4	10.0	30.5	30.5	10.0	30.5	30.5
Total Split (s)	12.0	70.0	70.0	12.0	70.0	70.0	17.0	31.0	31.0	17.0	31.0	31.0
Total Split (%)	9.2%	53.8%	53.8%	9.2%	53.8%	53.8%	13.1%	23.8%	23.8%	13.1%	23.8%	23.8%
Maximum Green (s)	5.5	63.6	63.6	5.5	63.6	63.6	11.0	24.5	24.5	11.0	24.5	24.5
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.9	1.8	1.8	1.9	1.8	1.8	2.7	3.2	3.2	2.7	3.2	3.2
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)	6.5	6.4	6.4	6.5	6.4	6.4	6.0	6.5	6.5	6.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag

88: Teron Road & March Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		10.0	10.0		10.0	10.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)		63.6	63.6	75.5	75.6	75.6	36.0	24.5	24.5	36.0	24.5	24.5
Actuated g/C Ratio		0.49	0.49	0.58	0.58	0.58	0.28	0.19	0.19	0.28	0.19	0.19
v/c Ratio		1.04	0.43	1.06	0.89	0.03	1.60	0.38	0.02	0.67	0.99	0.06
Control Delay		59.1	6.7	125.1	30.9	0.1	321.3	50.0	0.1	47.5	98.0	0.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		59.1	6.7	125.1	30.9	0.1	321.3	50.0	0.1	47.5	98.0	0.3
LOS		E	A	F	C	A	F	D	A	D	F	A
Approach Delay		50.0			36.7			237.9			73.6	
Approach LOS		D			D			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 79 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.60

Intersection Signal Delay: 64.5

Intersection LOS: E

Intersection Capacity Utilization 111.0%

ICU Level of Service H

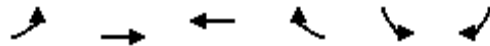
Analysis Period (min) 15

Splits and Phases: 88: Teron Road & March Road

								
17 s	31 s	12 s	70 s	17 s	31 s	12 s	70 s	12 s
								
17 s	31 s	12 s	70 s	17 s	31 s	12 s	70 s	12 s

97: March Road & Herzberg Road
2013 Existing PM Peak

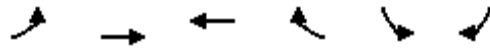
Kanata North CDP TMP



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	6	1882	1124	120	716	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0			0.0	130.0	0.0
Storage Lanes	1			1	1	0
Taper Length (m)	30.0				40.0	
Lane Util. Factor	1.00	0.91	0.95	1.00	0.97	0.95
Ped Bike Factor	1.00			0.98		
Frt				0.850	0.997	
Flt Protected	0.950				0.953	
Satd. Flow (prot)	1679	4644	3390	1517	3322	0
Flt Permitted	0.184				0.953	
Satd. Flow (perm)	325	4644	3390	1484	3322	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				126	2	
Link Speed (k/h)		80	80		50	
Link Distance (m)		162.1	728.7		824.4	
Travel Time (s)		7.3	32.8		59.4	
Confl. Peds. (#/hr)	1			1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	7%	2%	2%	1%	1%
Adj. Flow (vph)	6	1981	1183	126	754	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	1981	1183	126	772	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		5.2	5.2		8.9	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		8.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24			14	24	14
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	NA	
Protected Phases		2	6		7	
Permitted Phases	2			6	7	
Detector Phase	2	2	6	6	7	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	44.6	44.6	46.0	46.0	29.7	
Total Split (s)	79.0	79.0	79.0	79.0	41.0	
Total Split (%)	65.8%	65.8%	65.8%	65.8%	34.2%	
Maximum Green (s)	72.4	72.4	72.4	72.4	34.3	
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	
All-Red Time (s)	2.0	2.0	2.0	2.0	3.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	

97: March Road & Herzberg Road
2013 Existing PM Peak

Kanata North CDP TMP



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.7	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max	Max	Max	None	
Walk Time (s)	31.0	31.0	31.0	31.0	7.0	
Flash Dont Walk (s)	7.0	7.0	7.0	7.0	16.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	75.1	75.1	75.1	75.1	31.6	
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.26	
v/c Ratio	0.03	0.68	0.56	0.13	0.88	
Control Delay	10.2	16.6	14.6	2.0	58.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	10.2	16.6	14.6	2.0	58.6	
LOS	B	B	B	A	E	
Approach Delay		16.6	13.3		58.6	
Approach LOS		B	B		E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 23.5

Intersection LOS: C

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 97: March Road & Herzberg Road



16: March Road & Corkstown Road
2013 Existing PM Peak

Kanata North CDP TMP

										
Movement	WBL	WBR	NBT	NBR	SBL	SBT				
Lane Configurations										
Volume (veh/h)	11	34	1447	38	170	2565				
Sign Control	Stop		Free		Free	Free				
Grade	0%		0%			0%				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				
Hourly flow rate (vph)	12	36	1523	40	179	2700				
Pedestrians										
Lane Width (m)										
Walking Speed (m/s)										
Percent Blockage										
Right turn flare (veh)										
Median type			None		None					
Median storage (veh)										
Upstream signal (m)										
pX, platoon unblocked										
vC, conflicting volume	2781	508			1563					
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	2781	508			1563					
tC, single (s)	6.9	6.9			4.1					
tC, 2 stage (s)										
tF (s)	3.5	3.3			2.2					
p0 queue free %	0	93			58					
cM capacity (veh/h)	9	513			423					
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	12	36	508	508	508	40	179	900	900	900
Volume Left	12	0	0	0	0	0	179	0	0	0
Volume Right	0	36	0	0	0	40	0	0	0	0
cSH	9	513	1700	1700	1700	1700	423	1700	1700	1700
Volume to Capacity	1.35	0.07	0.30	0.30	0.30	0.02	0.42	0.53	0.53	0.53
Queue Length 95th (m)	17.3	1.7	0.0	0.0	0.0	0.0	15.6	0.0	0.0	0.0
Control Delay (s)	1013.9	12.5	0.0	0.0	0.0	0.0	19.6	0.0	0.0	0.0
Lane LOS	F	B					C			
Approach Delay (s)	257.3		0.0				1.2			
Approach LOS	F									
Intersection Summary										
Average Delay			3.5							
Intersection Capacity Utilization			62.3%		ICU Level of Service				B	
Analysis Period (min)			15							

101: March Road & Campeau Drive/Highway 417
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	0	584	584	552	955	291	1469	0	0	2114	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	140.0		70.0	85.0		0.0	0.0		125.0
Storage Lanes	1		2	2		1	2		0	0		1
Taper Length (m)	30.0			60.0			60.0			7.5		
Lane Util. Factor	1.00	1.00	0.88	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00
Ped Bike Factor				0.99								
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1679	0	2643	3225	3390	1532	3225	3424	0	0	4871	1517
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1679	0	2643	3196	3390	1532	3225	3424	0	0	4871	1517
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						66						95
Link Speed (k/h)		100			50			80			50	
Link Distance (m)		229.6			300.3			134.1			450.8	
Travel Time (s)		8.3			21.6			6.0			32.5	
Confl. Peds. (#/hr)			6	6					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	3%	4%	2%	1%	4%	1%	2%	0%	2%	2%
Adj. Flow (vph)	79	0	615	615	581	1005	306	1546	0	0	2225	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	0	615	615	581	1005	306	1546	0	0	2225	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.2			7.4			8.9			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		60	24		14	24		14
Number of Detectors	1		1	1	2	1	1	2			2	1
Detector Template	Left		Right	Left	Thru	Right	Left	Thru			Thru	Right
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0			10.0	2.0
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6			0.6	2.0
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(m)					9.4			9.4				9.4
Detector 2 Size(m)					0.6			0.6				0.6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		custom	Prot	NA	Perm	Prot	NA			NA	Perm
Protected Phases	7		4 5	3	8		5	2			6	
Permitted Phases						8						6
Detector Phase	7		4 5	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	4.0			4.0	4.0	4.0	4.0	4.0			4.0	4.0
Minimum Split (s)	8.0			20.0	37.0	37.0	8.0	24.0			24.0	24.0
Total Split (s)	16.0			34.0	40.0	40.0	21.0	94.0			73.0	73.0
Total Split (%)	10.7%			22.7%	26.7%	26.7%	14.0%	62.7%			48.7%	48.7%
Maximum Green (s)	12.0			30.0	36.0	36.0	17.0	90.0			69.0	69.0
Yellow Time (s)	3.5			3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)	0.5			0.5	0.5	0.5	0.5	0.5			0.5	0.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0			0.0	0.0

Lane Group	ø4
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	22.0
Total Split (%)	15%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5
Lost Time Adjust (s)	

101: March Road & Campeau Drive/Highway 417
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)	4.0			4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lead/Lag	Lead			Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes				Yes	Yes
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0			3.0	3.0
Recall Mode	None			None	None	None	None	C-Max			C-Max	C-Max
Walk Time (s)					7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)					26.0	26.0		13.0			13.0	13.0
Pedestrian Calls (#/hr)					0	0		0			0	0
Act Effct Green (s)	10.8		38.7	29.9	37.2	37.2	16.6	90.0			69.4	69.4
Actuated g/C Ratio	0.07		0.26	0.20	0.25	0.25	0.11	0.60			0.46	0.46
v/c Ratio	0.66		0.90	0.96	0.69	2.34	0.86	0.75			0.99	0.04
Control Delay	92.6		71.2	85.4	56.5	634.8	87.9	24.9			55.9	0.1
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	92.6		71.2	85.4	56.5	634.8	87.9	24.9			55.9	0.1
LOS	F		E	F	E	F	F	C			E	A
Approach Delay					328.6			35.3			55.2	
Approach LOS					F			D			E	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 79 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 2.34

Intersection Signal Delay: 137.7

Intersection LOS: F

Intersection Capacity Utilization 119.7%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 101: March Road & Campeau Drive/Highway 417

 ø2 (R)		 ø3		 ø4	
94 s		34 s		22 s	
 ø5		 ø6 (R)		 ø7	
21 s		73 s		40 s	

Lane Group	ø4
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

49: Terry Fox Drive & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	57	150	239	269	591	122
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0	0.0	60.0			115.0
Storage Lanes	1	1	1			1
Taper Length (m)	50.0		80.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.97
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1712	1517	1679	1701	1701	1532
Flt Permitted	0.950		0.299			
Satd. Flow (perm)	1712	1517	528	1701	1701	1489
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		158				128
Link Speed (k/h)	50			60	60	
Link Distance (m)	421.7			207.4	794.3	
Travel Time (s)	30.4			12.4	47.7	
Confl. Peds. (#/hr)			3			3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	2%	3%	7%	7%	1%
Adj. Flow (vph)	60	158	252	283	622	128
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	158	252	283	622	128
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			3.7	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	8.0			8.0	8.0	
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24	14	24			14
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	2.0	2.0	2.0	10.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				CI+Ex	CI+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	NA	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	20.0	20.0	20.0
Minimum Split (s)	28.0	28.0	14.0	26.9	29.3	29.3
Total Split (s)	30.0	30.0	15.0	80.0	65.0	65.0
Total Split (%)	27.3%	27.3%	13.6%	72.7%	59.1%	59.1%
Maximum Green (s)	24.0	24.0	9.1	74.1	59.1	59.1
Yellow Time (s)	3.3	3.3	4.6	4.6	4.6	4.6
All-Red Time (s)	2.7	2.7	1.3	1.3	1.3	1.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0

49: Terry Fox Drive & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Total Lost Time (s)	6.0	6.0	5.9	5.9	5.9	5.9
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0		14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	10.4	10.4	74.1	74.1	59.1	59.1
Actuated g/C Ratio	0.11	0.11	0.77	0.77	0.61	0.61
v/c Ratio	0.33	0.52	0.49	0.22	0.60	0.13
Control Delay	44.9	13.3	6.5	3.6	14.5	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	13.3	6.5	3.6	14.5	1.8
LOS	D	B	A	A	B	A
Approach Delay	22.0			5.0	12.3	
Approach LOS	C			A	B	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 96.4

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 11.1

Intersection LOS: B

Intersection Capacity Utilization 70.0%

ICU Level of Service C

Analysis Period (min) 15

Description: Late PM Timings

Splits and Phases: 49: Terry Fox Drive & Second Line Road



38: Terry Fox Drive & Innovation Drive/Flamborough Way
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	121	19	102	224	53	107	91	176	27	32	560	147
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	4.8	4.8	3.7	4.8	4.8	3.7	3.7	3.7	3.7	3.7	3.7
Storage Length (m)	40.0		0.0	40.0		0.0	115.0		115.0	125.0		125.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	50.0			50.0			85.0			65.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		1.00	0.98				0.97	0.99		
Frt		0.874			0.900				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1730	0	1631	1659	0	1695	1784	1459	1631	1784	1517
Flt Permitted	0.600			0.658			0.318			0.641		
Satd. Flow (perm)	1061	1730	0	1128	1659	0	567	1784	1413	1091	1784	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		107			100				95			155
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		412.5			314.2			794.3			450.2	
Travel Time (s)		37.1			28.3			47.7			27.0	
Confl. Peds. (#/hr)	6		1	1		6			7	7		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	1%	6%	13%	6%	2%	2%	6%	6%	2%	2%
Adj. Flow (vph)	127	20	107	236	56	113	96	185	28	34	589	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	127	0	236	169	0	96	185	28	34	589	155
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		8.0			8.0			8.0			8.0	
Two way Left Turn Lane												
Headway Factor	1.06	0.91	0.91	1.06	0.91	0.91	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	11.3	34.3		11.3	34.3		38.1	38.1	38.1	38.1	38.1	38.1
Total Split (s)	15.0	44.0		15.0	44.0		51.0	51.0	51.0	51.0	51.0	51.0
Total Split (%)	13.6%	40.0%		13.6%	40.0%		46.4%	46.4%	46.4%	46.4%	46.4%	46.4%
Maximum Green (s)	8.7	37.7		8.7	37.7		44.9	44.9	44.9	44.9	44.9	44.9
Yellow Time (s)	4.6	4.6		4.6	4.6		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	1.7		1.7	1.7		2.8	2.8	2.8	2.8	2.8	2.8

38: Terry Fox Drive & Innovation Drive/Flamborough Way
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		21.0			21.0		25.0	25.0	25.0	25.0	25.0	25.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	0
Act Effct Green (s)	19.4	11.0		20.1	11.4		44.9	44.9	44.9	44.9	44.9	44.9
Actuated g/C Ratio	0.23	0.13		0.24	0.14		0.54	0.54	0.54	0.54	0.54	0.54
v/c Ratio	0.41	0.40		0.73	0.54		0.31	0.19	0.03	0.06	0.61	0.17
Control Delay	25.8	13.5		39.2	22.0		14.7	10.8	0.1	10.0	17.0	2.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	13.5		39.2	22.0		14.7	10.8	0.1	10.0	17.0	2.4
LOS	C	B		D	C		B	B	A	A	B	A
Approach Delay		19.7			32.0			11.1			13.8	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 83.3

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 18.4

Intersection LOS: B

Intersection Capacity Utilization 90.4%

ICU Level of Service E

Analysis Period (min) 15

Description: Late PM Timings

Splits and Phases: 38: Terry Fox Drive & Innovation Drive/Flamborough Way

		
51 s	15 s	44 s
		
51 s	15 s	44 s

64: Terry Fox Drive & March Valley Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	212	0	1	447	145	0	0	2	42	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	23	223	0	1	471	153	0	0	2	44	0	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	623			223			833	895	223	821	818	547
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			223			833	895	223	821	818	547
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	100	85	100	97
cM capacity (veh/h)	968			1346			275	275	814	290	305	541
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	246	624	2	59								
Volume Left	23	1	0	44								
Volume Right	0	153	2	15								
cSH	968	1346	814	328								
Volume to Capacity	0.02	0.00	0.00	0.18								
Queue Length 95th (m)	0.6	0.0	0.1	4.9								
Control Delay (s)	1.0	0.0	9.4	18.4								
Lane LOS	A	A	A	C								
Approach Delay (s)	1.0	0.0	9.4	18.4								
Approach LOS			A	C								
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			51.1%	ICU Level of Service		A						
Analysis Period (min)			15									

34: Second Line Road & Klondike Road
2013 Existing PM Peak

Kanata North CDP TMP

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	8	83	202	86	56	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	87	213	91	59	32
Direction, Lane #	SE 1	NW 1	SW 1			
Volume Total (vph)	96	303	91			
Volume Left (vph)	8	0	59			
Volume Right (vph)	0	91	32			
Hadj (s)	0.05	-0.13	0.02			
Departure Headway (s)	4.5	4.1	4.8			
Degree Utilization, x	0.12	0.35	0.12			
Capacity (veh/h)	766	854	691			
Control Delay (s)	8.1	9.3	8.4			
Approach Delay (s)	8.1	9.3	8.4			
Approach LOS	A	A	A			
Intersection Summary						
Delay			8.9			
Level of Service			A			
Intersection Capacity Utilization			28.6%	ICU Level of Service	A	
Analysis Period (min)			15			

77: Klondike Road & Weatherston Street
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	4	1	3	48	0	54	8	93	38	83	112	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.8	4.8	3.7	3.7	3.7
Storage Length (m)	0.0		0.0	0.0		0.0	15.0		0.0	45.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			40.0			30.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor		1.00			0.98		1.00	0.99		1.00	1.00	
Frt		0.949			0.850			0.957			0.984	
Flt Protected		0.976		0.950			0.950			0.950		
Satd. Flow (prot)	0	1602	0	1662	1463	0	1517	1879	0	1679	3230	0
Flt Permitted		0.833		0.752			0.668			0.596		
Satd. Flow (perm)	0	1364	0	1316	1463	0	1064	1879	0	1049	3230	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			863			29			14	
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		101.0			84.9			80.9			131.9	
Travel Time (s)		7.6			6.4			5.8			9.5	
Confl. Peds. (#/hr)	4					4	1		2	2		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	14%	4%	13%	4%	14%	4%	1%	3%	5%	6%
Adj. Flow (vph)	4	1	3	51	0	57	8	98	40	87	118	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	51	57	0	8	138	0	87	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.91	0.91	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		25.8	25.8		10.8	25.8	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		15.0	60.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		50.0%	50.0%		16.7%	66.7%	
Maximum Green (s)	24.0	24.0		24.0	24.0		39.2	39.2		9.2	54.2	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.1	2.1		2.1	2.1	

77: Klondike Road & Weatherston Street
2013 Existing PM Peak

Kanata North CDP TMP

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		10.3		10.3	10.3		48.7	48.7		57.7	58.9	
Actuated g/C Ratio		0.13		0.13	0.13		0.64	0.64		0.75	0.77	
v/c Ratio		0.04		0.29	0.06		0.01	0.11		0.10	0.05	
Control Delay		24.8		34.5	0.1		8.6	7.2		3.7	3.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		24.8		34.5	0.1		8.6	7.2		3.7	3.0	
LOS		C		C	A		A	A		A	A	
Approach Delay		24.8			16.3			7.3			3.3	
Approach LOS		C			B			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 76.6

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 7.8

Intersection LOS: A

Intersection Capacity Utilization 57.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 77: Klondike Road & Weatherston Street



52: Klondike Road & March Valley Road
2013 Existing PM Peak

Kanata North CDP TMP

						
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	28	8	30	133	17	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	29	8	32	140	18	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			38		237	34
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			38		237	34
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			98		98	99
cM capacity (veh/h)			1572		724	1045
Direction, Lane #	SE 1	NW 1	NE 1			
Volume Total	38	172	28			
Volume Left	0	32	18			
Volume Right	8	0	11			
cSH	1700	1572	817			
Volume to Capacity	0.02	0.02	0.03			
Queue Length 95th (m)	0.0	0.5	0.8			
Control Delay (s)	0.0	1.5	9.6			
Lane LOS		A	A			
Approach Delay (s)	0.0	1.5	9.6			
Approach LOS			A			
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization			25.8%	ICU Level of Service		A
Analysis Period (min)			15			

47: Old Carp Road & Second Line Road
2013 Existing PM Peak

Kanata North CDP TMP

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	65	2	29	156	17	1	12	7	13	36	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	9	68	2	31	164	18	1	13	7	14	38	32
Direction, Lane #	SE 1	NW 1	NE 1	SW 1								
Volume Total (vph)	80	213	21	83								
Volume Left (vph)	9	31	1	14								
Volume Right (vph)	2	18	7	32								
Hadj (s)	0.05	0.03	-0.12	-0.13								
Departure Headway (s)	4.4	4.3	4.5	4.5								
Degree Utilization, x	0.10	0.25	0.03	0.10								
Capacity (veh/h)	776	819	727	749								
Control Delay (s)	7.9	8.7	7.7	8.0								
Approach Delay (s)	7.9	8.7	7.7	8.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			32.2%	ICU Level of Service					A			
Analysis Period (min)			15									