APPENDIX A

Detailed Synchro Reports

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	128	593	67	17	302
Future Volume (vph)	70	128	593	67	17	302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	0.98		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.91		1.00	0.85		1.00
Flt Protected	0.98		1.00	1.00		1.00
Satd. Flow (prot)	1578		3500	1396		3245
Flt Permitted	0.98		1.00	1.00		0.91
Satd. Flow (perm)	1578		3500	1396		2971
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	75	138	638	72	18	325
RTOR Reduction (vph)	97	0	0	34	0	0
Lane Group Flow (vph)	116	0	638	38	0	343
Confl. Peds. (#/hr)				1	1	
Heavy Vehicles (%)	6%	9%	2%	12%	12%	7%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	11.7		26.1	26.1		26.1
Effective Green, g (s)	11.7		26.1	26.1		26.1
Actuated g/C Ratio	0.23		0.52	0.52		0.52
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	370		1834	731		1557
v/s Ratio Prot	c0.07		c0.18			
v/s Ratio Perm				0.03		0.12
v/c Ratio	0.31		0.35	0.05		0.22
Uniform Delay, d1	15.7		6.9	5.8		6.4
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.5		0.5	0.1		0.3
Delay (s)	16.2		7.4	5.9		6.7
Level of Service	B		A	A		A
Approach Delay (s)	16.2		7.3			6.7
Approach LOS	B		A			A

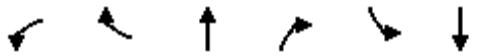
Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	49.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	94	23	438	37	10	334
Future Volume (vph)	94	23	438	37	10	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.99			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1668	1597	3360			3225
Flt Permitted	0.95	1.00	1.00			0.94
Satd. Flow (perm)	1668	1597	3360			3032
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	100	24	466	39	11	355
RTOR Reduction (vph)	0	20	7	0	0	0
Lane Group Flow (vph)	100	4	498	0	0	366
Confl. Peds. (#/hr)				2	2	
Heavy Vehicles (%)	7%	0%	5%	3%	0%	7%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.4	8.4	30.1			30.1
Effective Green, g (s)	8.4	8.4	30.1			30.1
Actuated g/C Ratio	0.17	0.17	0.60			0.60
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	277	265	2002			1807
v/s Ratio Prot	c0.06		c0.15			
v/s Ratio Perm		0.00				0.12
v/c Ratio	0.36	0.02	0.25			0.20
Uniform Delay, d1	18.7	17.6	4.8			4.7
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.0	0.3			0.3
Delay (s)	19.0	17.6	5.1			4.9
Level of Service	B	B	A			A
Approach Delay (s)	18.7		5.1			4.9
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	50.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	15	2	80	10	135	3	314	71	67	317	14
Future Volume (vph)	27	15	2	80	10	135	3	314	71	67	317	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1818			1637	1521	1685	1729	1414	1425	1696	
Flt Permitted		0.79			0.71	1.00	0.54	1.00	1.00	0.46	1.00	
Satd. Flow (perm)		1483			1222	1521	961	1729	1414	690	1696	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	17	2	89	11	150	3	349	79	74	352	16
RTOR Reduction (vph)	0	2	0	0	0	122	0	0	37	0	2	0
Lane Group Flow (vph)	0	47	0	0	100	28	3	349	42	74	366	0
Confl. Peds. (#/hr)	2		3	3		2			5	5		
Heavy Vehicles (%)	8%	7%	0%	7%	40%	7%	0%	5%	5%	18%	5%	8%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		12.4			12.4	12.4	35.6	35.6	35.6	44.7	44.7	
Effective Green, g (s)		12.4			12.4	12.4	35.6	35.6	35.6	44.7	44.7	
Actuated g/C Ratio		0.18			0.18	0.18	0.53	0.53	0.53	0.67	0.67	
Clearance Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0			5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		274			225	281	509	917	750	515	1129	
v/s Ratio Prot								c0.20		0.01	c0.22	
v/s Ratio Perm		0.03			c0.08	0.02	0.00		0.03	0.08		
v/c Ratio		0.17			0.44	0.10	0.01	0.38	0.06	0.14	0.32	
Uniform Delay, d1		23.0			24.3	22.7	7.4	9.3	7.6	4.3	4.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.6			2.9	0.3	0.0	1.2	0.1	0.1	0.8	
Delay (s)		23.7			27.2	23.0	7.4	10.5	7.8	4.4	5.5	
Level of Service		C			C	C	A	B	A	A	A	
Approach Delay (s)		23.7			24.7			9.9			5.3	
Approach LOS		C			C			A			A	

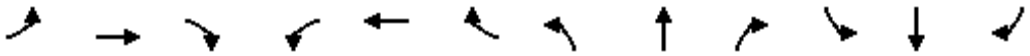
Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	67.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	16	14	383	33	8	380
Future Volume (Veh/h)	16	14	383	33	8	380
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)	17	15	403	35	8	400
Pedestrians	3					
Lane Width (m)	2.8					
Walking Speed (m/s)	1.1					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	840	424			441	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	840	424			441	
tC, single (s)	6.4	6.4			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	95	98			99	
cM capacity (veh/h)	335	602			1127	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	17	15	438	8	400
Volume Left	17	0	0	8	0
Volume Right	0	15	35	0	0
cSH	335	602	1700	1127	1700
Volume to Capacity	0.05	0.02	0.26	0.01	0.24
Queue Length 95th (m)	1.2	0.6	0.0	0.2	0.0
Control Delay (s)	16.3	11.1	0.0	8.2	0.0
Lane LOS	C	B		A	
Approach Delay (s)	13.9		0.0	0.2	
Approach LOS	B				

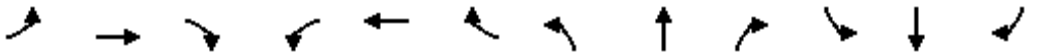
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	4	0	0	2	2	397	5	6	376	4
Future Volume (Veh/h)	6	0	4	0	0	2	2	397	5	6	376	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	0	4	0	0	2	2	427	5	6	404	4
Pedestrians		1			1							
Lane Width (m)		4.1			3.0							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								237				
pX, platoon unblocked	0.91	0.91		0.91	0.91	0.91				0.91		
vC, conflicting volume	852	856	407	854	856	430	409			433		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	784	789	407	787	788	319	409			321		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	100	100	100	100			99		
cM capacity (veh/h)	280	292	648	278	292	657	1159			1131		

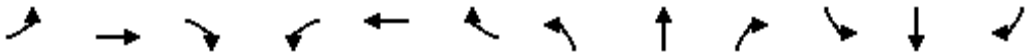
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	10	2	2	432	6	408
Volume Left	6	0	2	0	6	0
Volume Right	4	2	0	5	0	4
cSH	363	657	1159	1700	1131	1700
Volume to Capacity	0.03	0.00	0.00	0.25	0.01	0.24
Queue Length 95th (m)	0.6	0.1	0.0	0.0	0.1	0.0
Control Delay (s)	15.2	10.5	8.1	0.0	8.2	0.0
Lane LOS	C	B	A		A	
Approach Delay (s)	15.2	10.5	0.0		0.1	
Approach LOS	C	B				

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	33.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	25	3	42	52	66	14	275	18	32	288	65
Future Volume (vph)	35	25	3	42	52	66	14	275	18	32	288	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1607	1638	1489		1710		1744	1868	1610	1695	1908	1502
Flt Permitted	0.54	1.00	1.00		0.92		0.53	1.00	1.00	0.48	1.00	1.00
Satd. Flow (perm)	911	1638	1489		1593		964	1868	1610	851	1908	1502
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	27	3	46	57	72	15	299	20	35	313	71
RTOR Reduction (vph)	0	0	2	0	30	0	0	0	12	0	0	38
Lane Group Flow (vph)	38	27	1	0	145	0	15	299	8	35	313	33
Confl. Peds. (#/hr)	1		9	9		1	1		3	3		1
Heavy Vehicles (%)	6%	16%	0%	5%	0%	5%	0%	4%	0%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	29.2	29.2	29.2		21.2		35.5	34.3	34.3	41.6	37.2	37.2
Effective Green, g (s)	29.2	29.2	29.2		21.2		35.5	34.3	34.3	41.6	37.2	37.2
Actuated g/C Ratio	0.36	0.36	0.36		0.26		0.44	0.42	0.42	0.51	0.46	0.46
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	363	591	537		417		434	791	682	483	877	690
v/s Ratio Prot	c0.01	0.02					0.00	0.16		c0.00	c0.16	
v/s Ratio Perm	0.03		0.00		c0.09		0.01		0.01	0.03		0.02
v/c Ratio	0.10	0.05	0.00		0.35		0.03	0.38	0.01	0.07	0.36	0.05
Uniform Delay, d1	17.5	16.8	16.5		24.2		12.9	16.0	13.5	10.0	14.1	12.1
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.0		0.7		0.0	1.4	0.0	0.1	1.1	0.1
Delay (s)	17.6	16.8	16.5		24.9		12.9	17.4	13.5	10.1	15.3	12.2
Level of Service	B	B	B		C		B	B	B	B	B	B
Approach Delay (s)		17.3			24.9			16.9			14.3	
Approach LOS		B			C			B			B	

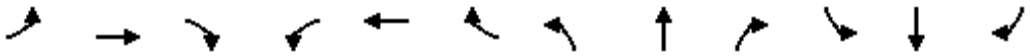
Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.9	Sum of lost time (s)	17.3
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	2	4	7	328	5	2	303	4
Future Volume (Veh/h)	0	0	0	2	2	4	7	328	5	2	303	4
Sign Control		Stop			Stop			Free			Free	
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)	0	0	0	2	2	4	7	345	5	2	319	4
Pedestrians		2			4			1			2	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.90	0.90	0.90	0.90	0.90		0.90					
vC, conflicting volume	693	695	324	690	694	354	325			354		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	603	606	193	599	605	354	194			354		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	99	99	99	99			100		
cM capacity (veh/h)	365	369	767	370	369	691	1174			1212		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	8	7	350	2	323
Volume Left	2	7	0	2	0
Volume Right	4	0	5	0	4
cSH	482	1174	1700	1212	1700
Volume to Capacity	0.02	0.01	0.21	0.00	0.19
Queue Length 95th (m)	0.4	0.1	0.0	0.0	0.0
Control Delay (s)	12.6	8.1	0.0	8.0	0.0
Lane LOS	B	A		A	
Approach Delay (s)	12.6	0.2		0.0	
Approach LOS	B				

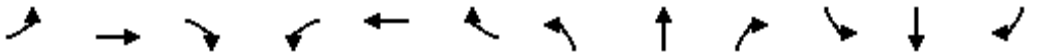
Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	28.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	8	2	0	9	0	325	6	7	284	1
Future Volume (Veh/h)	7	1	8	2	0	9	0	325	6	7	284	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	7	1	9	2	0	10	0	346	6	7	302	1
Pedestrians		2			3							
Lane Width (m)		3.7			3.5							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.96	0.96	0.93	0.96	0.96	0.93	0.93			0.93		
vC, conflicting volume	678	674	304	678	671	352	305			355		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	483	479	217	483	476	260	217			263		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	100	100	99	100			99		
cM capacity (veh/h)	444	465	770	466	466	723	1269			1212		

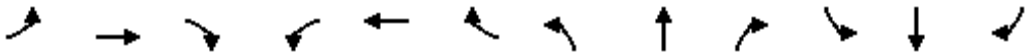
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	17	2	10	352	7	303
Volume Left	7	2	0	0	7	0
Volume Right	9	0	10	6	0	1
cSH	574	466	723	1700	1212	1700
Volume to Capacity	0.03	0.00	0.01	0.21	0.01	0.18
Queue Length 95th (m)	0.7	0.1	0.3	0.0	0.1	0.0
Control Delay (s)	11.5	12.8	10.0	0.0	8.0	0.0
Lane LOS	B	B	B		A	
Approach Delay (s)	11.5	10.5		0.0	0.2	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	34.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	1	80	14	47	0	287	66	44	236	4
Future Volume (vph)	4	5	1	80	14	47	0	287	66	44	236	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0			6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.95			0.97		1.00	1.00	
Flt Protected		0.98			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1685			1911			1809		1888	1886	
Flt Permitted		0.84			0.82			1.00		0.48	1.00	
Satd. Flow (perm)		1442			1609			1809		960	1886	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	5	1	85	15	50	0	305	70	47	251	4
RTOR Reduction (vph)	0	1	0	0	33	0	0	9	0	0	1	0
Lane Group Flow (vph)	0	9	0	0	117	0	0	366	0	47	254	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	20%	0%	5%	0%	3%	0%	3%	2%	3%	5%	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		
Actuated Green, G (s)		8.8			8.8			26.1		32.1	32.1	
Effective Green, g (s)		8.8			8.8			26.1		32.6	32.1	
Actuated g/C Ratio		0.17			0.17			0.49		0.62	0.61	
Clearance Time (s)		6.0			6.0			6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		239			267			892		644	1144	
v/s Ratio Prot								c0.20		0.00	c0.13	
v/s Ratio Perm		0.01			c0.07					0.04		
v/c Ratio		0.04			0.44			0.41		0.07	0.22	
Uniform Delay, d1		18.5			19.8			8.5		4.1	4.7	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.1			1.6			1.4		0.0	0.4	
Delay (s)		18.6			21.4			9.9		4.1	5.2	
Level of Service		B			C			A		A	A	
Approach Delay (s)		18.6			21.4			9.9			5.0	
Approach LOS		B			C			A			A	

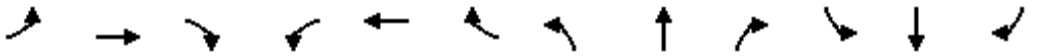
Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	3	9	1	0	3	12	353	2	0	306	8
Future Volume (Veh/h)	2	3	9	1	0	3	12	353	2	0	306	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	3	10	1	0	3	13	384	2	0	333	9
Pedestrians		4			3							
Lane Width (m)		3.9			3.9							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.98	0.98	0.96	0.98	0.98	0.97	0.96			0.97		
vC, conflicting volume	754	756	342	758	760	388	346			389		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	677	679	299	681	683	358	303			359		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	100	100	100	99			100		
cM capacity (veh/h)	353	361	716	346	359	670	1219			1175		

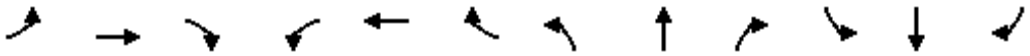
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	15	4	13	386	0	342
Volume Left	2	1	13	0	0	0
Volume Right	10	3	0	2	0	9
cSH	537	543	1219	1700	1700	1700
Volume to Capacity	0.03	0.01	0.01	0.23	0.00	0.20
Queue Length 95th (m)	0.7	0.2	0.2	0.0	0.0	0.0
Control Delay (s)	11.9	11.7	8.0	0.0	0.0	0.0
Lane LOS	B	B	A			
Approach Delay (s)	11.9	11.7	0.3		0.0	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	28.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	12	17	41	24	29	23	289	25	13	242	48
Future Volume (vph)	37	12	17	41	24	29	23	289	25	13	242	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91			0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1657	1658			1820		1618	1812		1669	1752	
Flt Permitted	0.80	1.00			0.84		0.57	1.00		0.55	1.00	
Satd. Flow (perm)	1388	1658			1570		969	1812		973	1752	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	13	18	45	26	32	25	314	27	14	263	52
RTOR Reduction (vph)	0	16	0	0	23	0	0	2	0	0	4	0
Lane Group Flow (vph)	40	15	0	0	80	0	25	339	0	14	311	0
Confl. Peds. (#/hr)	5					5	2		3	3		2
Heavy Vehicles (%)	6%	0%	12%	3%	9%	0%	9%	3%	8%	8%	5%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	8.3	8.3			8.3		40.2	38.5		40.2	38.5	
Effective Green, g (s)	8.3	8.3			8.3		42.2	38.5		42.2	38.5	
Actuated g/C Ratio	0.14	0.14			0.14		0.70	0.64		0.70	0.64	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	190	227			215		704	1153		709	1114	
v/s Ratio Prot		0.01					c0.00	c0.19		0.00	0.18	
v/s Ratio Perm	0.03				c0.05		0.02			0.01		
v/c Ratio	0.21	0.07			0.37		0.04	0.29		0.02	0.28	
Uniform Delay, d1	23.2	22.7			23.7		2.8	4.9		2.8	4.9	
Progression Factor	1.02	1.02			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.2			1.9		0.0	0.6		0.0	0.6	
Delay (s)	24.5	23.5			25.6		2.8	5.6		2.8	5.5	
Level of Service	C	C			C		A	A		A	A	
Approach Delay (s)		24.1			25.6			5.4			5.4	
Approach LOS		C			C			A			A	

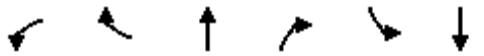
Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	0	0	0	14	161	0	0	78	4
Future Volume (Veh/h)	6	0	5	0	0	0	14	161	0	0	78	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	7	0	6	0	0	0	16	189	0	0	92	5
Pedestrians		1						1				
Lane Width (m)		4.1						3.9				
Walking Speed (m/s)		1.1						1.1				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	316	316	96	322	319	189	98			189		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	316	316	96	322	319	189	98			189		
tC, single (s)	7.3	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.7	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	100	100	100	99			100		
cM capacity (veh/h)	602	596	963	624	594	858	1506			1397		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	13	0	16	189	97
Volume Left	7	0	16	0	0
Volume Right	6	0	0	0	5
cSH	728	1700	1506	1700	1397
Volume to Capacity	0.02	0.00	0.01	0.11	0.00
Queue Length 95th (m)	0.4	0.0	0.2	0.0	0.0
Control Delay (s)	10.0	0.0	7.4	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	10.0	0.0	0.6		0.0
Approach LOS	B	A			

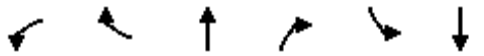
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	18.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	19	1	7	39	1	13
Future Volume (vph)	19	1	7	39	1	13
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	25	1	9	51	1	17

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	26	60	18
Volume Left (vph)	25	0	1
Volume Right (vph)	1	51	0
Hadj (s)	0.35	-0.47	0.01
Departure Headway (s)	4.4	3.5	4.0
Degree Utilization, x	0.03	0.06	0.02
Capacity (veh/h)	799	1013	882
Control Delay (s)	7.5	6.7	7.1
Approach Delay (s)	7.5	6.7	7.1
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	39	22	40	35	10	25
Future Volume (vph)	39	22	40	35	10	25
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	46	26	48	42	12	30

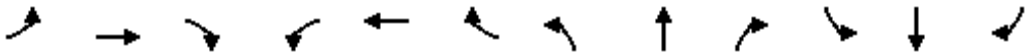
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	72	90	42
Volume Left (vph)	46	0	12
Volume Right (vph)	26	42	0
Hadj (s)	-0.03	-0.16	0.20
Departure Headway (s)	4.2	3.9	4.3
Degree Utilization, x	0.08	0.10	0.05
Capacity (veh/h)	837	884	807
Control Delay (s)	7.5	7.4	7.6
Approach Delay (s)	7.5	7.4	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	26	35	23	28	22
Future Volume (Veh/h)	22	26	35	23	28	22
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	27	32	43	28	34	27
Pedestrians	9		1			4
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	162	70			80	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162	70			80	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	97	97			98	
cM capacity (veh/h)	806	963			1515	

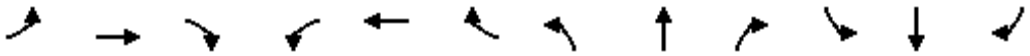
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	59	71	61
Volume Left	27	0	34
Volume Right	32	28	0
cSH	884	1700	1515
Volume to Capacity	0.07	0.04	0.02
Queue Length 95th (m)	1.6	0.0	0.5
Control Delay (s)	9.4	0.0	4.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	4.2
Approach LOS	A		

Intersection Summary			
Average Delay		4.2	
Intersection Capacity Utilization		20.6%	ICU Level of Service
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	31	20	13	52	12	26	71	11	4	54	66
Future Volume (vph)	54	31	20	13	52	12	26	71	11	4	54	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			1.00			0.98	
Flpb, ped/bikes		0.99			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1631			1640			1869			1584	
Flt Permitted		0.81			0.95			0.91			0.99	
Satd. Flow (perm)		1354			1566			1716			1574	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	67	38	25	16	64	15	32	88	14	5	67	81
RTOR Reduction (vph)	0	15	0	0	9	0	0	5	0	0	48	0
Lane Group Flow (vph)	0	115	0	0	86	0	0	129	0	0	105	0
Confl. Peds. (#/hr)	12		2	2		12	12		6	6		12
Heavy Vehicles (%)	8%	10%	5%	8%	8%	0%	8%	3%	0%	25%	10%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		25.9			25.9			27.3			27.3	
Effective Green, g (s)		25.9			25.9			27.3			27.3	
Actuated g/C Ratio		0.39			0.39			0.41			0.41	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		521			603			697			639	
v/s Ratio Prot												
v/s Ratio Perm		c0.09			0.05			c0.07			0.07	
v/c Ratio		0.22			0.14			0.18			0.16	
Uniform Delay, d1		13.9			13.4			12.8			12.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.0			0.6			0.6	
Delay (s)		14.0			13.5			13.4			13.2	
Level of Service		B			B			B			B	
Approach Delay (s)		14.0			13.5			13.4			13.2	
Approach LOS		B			B			B			B	

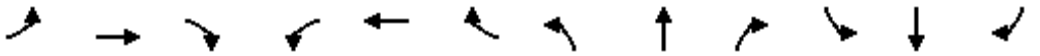
Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	65	23	22	44	23	8	19	15	12	25	7
Future Volume (Veh/h)	11	65	23	22	44	23	8	19	15	12	25	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	13	77	27	26	52	27	10	23	18	14	30	8
Pedestrians								1				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.1				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	79			105			258	248	92	264	248	66
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	79			105			258	248	92	264	248	66
tC, single (s)	4.3			4.3			7.2	6.5	6.2	7.1	6.6	6.5
tC, 2 stage (s)												
tF (s)	2.4			2.4			3.6	4.0	3.3	3.5	4.1	3.6
p0 queue free %	99			98			98	96	98	98	95	99
cM capacity (veh/h)	1418			1385			628	639	971	647	625	928

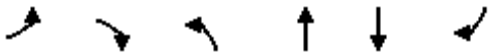
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	117	105	51	52
Volume Left	13	26	10	14
Volume Right	27	27	18	8
cSH	1418	1385	724	665
Volume to Capacity	0.01	0.02	0.07	0.08
Queue Length 95th (m)	0.2	0.4	1.7	1.9
Control Delay (s)	0.9	2.0	10.4	10.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.9	2.0	10.4	10.9
Approach LOS			B	B

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	55	0	58	0	704	89	49	277	0
Future Volume (vph)	0	0	0	55	0	58	0	704	89	49	277	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1457		1358		3579	1693	1719	3553	
Flt Permitted				0.76		1.00		1.00	1.00	0.31	1.00	
Satd. Flow (perm)				1161		1358		3579	1693	566	3553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	58	0	61	0	741	94	52	292	0
RTOR Reduction (vph)	0	0	0	0	0	37	0	0	57	0	0	0
Lane Group Flow (vph)	0	0	0	58	0	24	0	741	37	52	292	0
Heavy Vehicles (%)	0%	0%	0%	17%	0%	7%	0%	2%	6%	5%	5%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				456		533		1406	665	222	1395	
v/s Ratio Prot								c0.21			0.08	
v/s Ratio Perm				c0.05		0.02			0.02	0.09		
v/c Ratio				0.13		0.04		0.53	0.06	0.23	0.21	
Uniform Delay, d1				10.9		10.5		13.0	10.6	11.4	11.2	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				0.6		0.2		1.4	0.2	2.5	0.3	
Delay (s)				11.4		10.7		14.4	10.7	13.8	11.6	
Level of Service				B		B		B	B	B	B	
Approach Delay (s)		0.0			11.0			14.0			11.9	
Approach LOS		A			B			B			B	

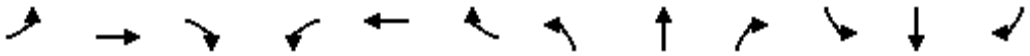
Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	17	11	106	57	25
Future Volume (Veh/h)	34	17	11	106	57	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	39	20	13	122	66	29
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	228	80	95			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228	80	95			
tC, single (s)	6.5	6.3	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.5			
p0 queue free %	95	98	99			
cM capacity (veh/h)	744	969	1351			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	59	135	95
Volume Left	39	13	0
Volume Right	20	0	29
cSH	807	1351	1700
Volume to Capacity	0.07	0.01	0.06
Queue Length 95th (m)	1.8	0.2	0.0
Control Delay (s)	9.8	0.8	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	0.8	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	22.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	53	3	4	52	23	10	170	5	18	56	17
Future Volume (vph)	35	53	3	4	52	23	10	170	5	18	56	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.96			1.00			0.98	
Flt Protected		0.98			1.00			1.00			0.99	
Satd. Flow (prot)		1738			1472			1774			1500	
Flt Permitted		0.87			0.99			0.98			0.92	
Satd. Flow (perm)		1544			1456			1751			1396	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	40	60	3	5	59	26	11	193	6	20	64	19
RTOR Reduction (vph)	0	2	0	0	16	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	101	0	0	74	0	0	208	0	0	91	0
Heavy Vehicles (%)	3%	6%	34%	50%	20%	27%	0%	7%	0%	28%	20%	24%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		579			546			656			523	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.05			c0.12			0.07	
v/c Ratio		0.17			0.14			0.32			0.17	
Uniform Delay, d1		10.0			9.9			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			0.5			1.3			0.7	
Delay (s)		10.7			10.4			11.9			10.8	
Level of Service		B			B			B			B	
Approach Delay (s)		10.7			10.4			11.9			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	159	27	18	153	34	16
Future Volume (Veh/h)	159	27	18	153	34	16
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)	167	28	19	161	36	17
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			195		380	181
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			195		380	181
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			99		94	98
cM capacity (veh/h)			1354		600	849

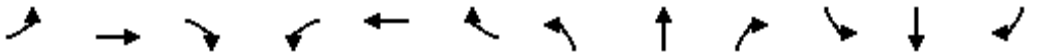
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	195	180	53
Volume Left	0	19	36
Volume Right	28	0	17
cSH	1700	1354	662
Volume to Capacity	0.11	0.01	0.08
Queue Length 95th (m)	0.0	0.3	2.0
Control Delay (s)	0.0	0.9	10.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.9	10.9
Approach LOS			B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	4	2	72	0	0	65
Future Volume (vph)	4	2	72	0	0	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	2	78	0	0	71

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	6	78	71
Volume Left (vph)	4	0	0
Volume Right (vph)	2	0	0
Hadj (s)	0.22	0.10	0.08
Departure Headway (s)	4.4	4.1	4.1
Degree Utilization, x	0.01	0.09	0.08
Capacity (veh/h)	781	866	875
Control Delay (s)	7.5	7.5	7.4
Approach Delay (s)	7.5	7.5	7.4
Approach LOS	A	A	A

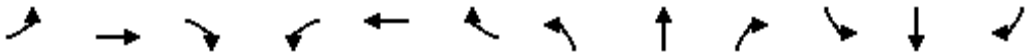
Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	9	0	4	8	9	0	55	3	4	39	1
Future Volume (Veh/h)	16	9	0	4	8	9	0	55	3	4	39	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	20	11	0	5	10	11	0	69	4	5	49	1
Pedestrians		6			3			1				
Lane Width (m)		3.1			3.5			3.6				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	152	141	56	140	139	74	55			76		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152	141	56	140	139	74	55			76		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	97	99	100	99	99	99	100			100		
cM capacity (veh/h)	776	746	1010	816	747	958	1555			1532		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	31	26	73	54	1
Volume Left	20	5	0	5	0
Volume Right	0	11	4	0	1
cSH	765	839	1555	1532	1700
Volume to Capacity	0.04	0.03	0.00	0.00	0.00
Queue Length 95th (m)	1.0	0.7	0.0	0.1	0.0
Control Delay (s)	9.9	9.4	0.0	0.7	0.0
Lane LOS	A	A		A	
Approach Delay (s)	9.9	9.4	0.0	0.7	
Approach LOS	A	A			

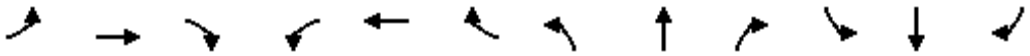
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	70	14	46	120	26	19	114	17	8	130	14
Future Volume (vph)	12	70	14	46	120	26	19	114	17	8	130	14
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	15	90	18	59	154	33	24	146	22	10	167	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	123	246	192	195
Volume Left (vph)	15	59	24	10
Volume Right (vph)	18	33	22	18
Hadj (s)	0.02	0.07	0.09	0.07
Departure Headway (s)	5.4	5.2	5.3	5.3
Degree Utilization, x	0.18	0.36	0.28	0.29
Capacity (veh/h)	605	642	628	629
Control Delay (s)	9.6	11.1	10.4	10.4
Approach Delay (s)	9.6	11.1	10.4	10.4
Approach LOS	A	B	B	B

Intersection Summary				
Delay	10.5			
Level of Service	B			
Intersection Capacity Utilization	37.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	162	40	106	228	2	52	3	90	9	3	6
Future Volume (Veh/h)	3	162	40	106	228	2	52	3	90	9	3	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	4	213	53	139	300	3	68	4	118	12	4	8
Pedestrians		13						10			1	
Lane Width (m)		3.2						3.2			4.3	
Walking Speed (m/s)		1.1						1.1			1.1	
Percent Blockage		1						1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	304			276			860	840	250	948	864	316
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	304			276			860	840	250	948	864	316
tC, single (s)	4.1			4.2			7.1	6.5	6.3	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.4	3.5	4.0	3.5
p0 queue free %	100			89			72	98	85	93	98	99
cM capacity (veh/h)	1267			1237			241	266	766	184	258	683

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	270	442	190	24
Volume Left	4	139	68	12
Volume Right	53	3	118	8
cSH	1267	1237	421	259
Volume to Capacity	0.00	0.11	0.45	0.09
Queue Length 95th (m)	0.1	2.9	17.3	2.3
Control Delay (s)	0.1	3.4	20.4	20.3
Lane LOS	A	A	C	C
Approach Delay (s)	0.1	3.4	20.4	20.3
Approach LOS			C	C

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	49.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	96	35	428	105	93	662
Future Volume (vph)	96	35	428	105	93	662
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frt	0.96		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	1628		3433	1581		3421
Flt Permitted	0.96		1.00	1.00		0.83
Satd. Flow (perm)	1628		3433	1581		2852
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	38	460	113	100	712
RTOR Reduction (vph)	30	0	0	51	0	0
Lane Group Flow (vph)	111	0	460	62	0	812
Heavy Vehicles (%)	2%	26%	4%	1%	4%	1%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	11.6		29.1	29.1		29.1
Effective Green, g (s)	11.6		29.1	29.1		29.1
Actuated g/C Ratio	0.22		0.55	0.55		0.55
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	358		1895	873		1574
v/s Ratio Prot	c0.07		0.13			
v/s Ratio Perm				0.04		c0.28
v/c Ratio	0.31		0.24	0.07		0.52
Uniform Delay, d1	17.2		6.1	5.5		7.4
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.5		0.3	0.2		1.2
Delay (s)	17.7		6.4	5.7		8.6
Level of Service	B		A	A		A
Approach Delay (s)	17.7		6.3			8.6
Approach LOS	B		A			A

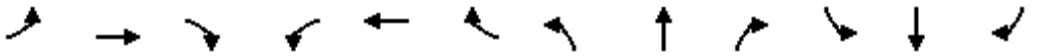
Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	87	22	443	125	34	585
Future Volume (vph)	87	22	443	125	34	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	0.97			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1750	1452	3373			3371
Flt Permitted	0.95	1.00	1.00			0.90
Satd. Flow (perm)	1750	1452	3373			3056
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	90	23	457	129	35	603
RTOR Reduction (vph)	0	19	30	0	0	0
Lane Group Flow (vph)	90	4	556	0	0	638
Heavy Vehicles (%)	2%	10%	3%	0%	3%	2%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.4	8.4	30.8			30.8
Effective Green, g (s)	8.4	8.4	30.8			30.8
Actuated g/C Ratio	0.16	0.16	0.60			0.60
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	287	238	2029			1838
v/s Ratio Prot	c0.05		0.16			
v/s Ratio Perm		0.00				c0.21
v/c Ratio	0.31	0.02	0.27			0.35
Uniform Delay, d1	18.9	17.9	4.9			5.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.2	0.0	0.3			0.5
Delay (s)	19.1	17.9	5.2			5.7
Level of Service	B	B	A			A
Approach Delay (s)	18.9		5.2			5.7
Approach LOS	B		A			A

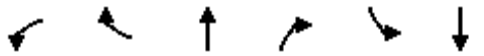
Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	14	4	122	26	80	6	452	139	111	555	22
Future Volume (vph)	33	14	4	122	26	80	6	452	139	111	555	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1812			1801	1547	1684	1798	1458	1603	1759	
Flt Permitted		0.75			0.73	1.00	0.44	1.00	1.00	0.37	1.00	
Satd. Flow (perm)		1409			1365	1547	779	1798	1458	620	1759	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	34	14	4	126	27	82	6	466	143	114	572	23
RTOR Reduction (vph)	0	3	0	0	0	66	0	0	68	0	2	0
Lane Group Flow (vph)	0	49	0	0	153	16	6	466	75	114	593	0
Confl. Peds. (#/hr)	4		4	4		4	1		4	4		1
Heavy Vehicles (%)	7%	8%	0%	1%	0%	5%	0%	1%	2%	5%	1%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		13.1			13.1	13.1	35.6	35.6	35.6	44.7	44.7	
Effective Green, g (s)		13.1			13.1	13.1	35.6	35.6	35.6	44.7	44.7	
Actuated g/C Ratio		0.19			0.19	0.19	0.53	0.53	0.53	0.66	0.66	
Clearance Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0			5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		272			263	298	409	944	765	482	1159	
v/s Ratio Prot								0.26		0.02	c0.34	
v/s Ratio Perm		0.03			c0.11	0.01	0.01		0.05	0.14		
v/c Ratio		0.18			0.58	0.05	0.01	0.49	0.10	0.24	0.51	
Uniform Delay, d1		22.9			24.9	22.3	7.7	10.3	8.1	5.1	5.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.7			5.0	0.2	0.1	1.8	0.3	0.3	1.6	
Delay (s)		23.5			29.9	22.5	7.8	12.2	8.3	5.4	7.6	
Level of Service		C			C	C	A	B	A	A	A	
Approach Delay (s)		23.5			27.3			11.2			7.2	
Approach LOS		C			C			B			A	

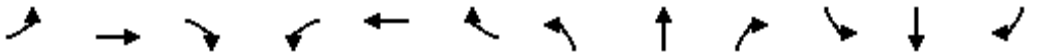
Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	38	36	525	82	19	623
Future Volume (Veh/h)	38	36	525	82	19	623
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	40	38	559	87	20	663
Pedestrians	9					3
Lane Width (m)	2.8					3.7
Walking Speed (m/s)	1.1					1.1
Percent Blockage	1					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1314	614			655	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1314	614			655	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	77	92			98	
cM capacity (veh/h)	171	490			935	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	40	38	646	20	663
Volume Left	40	0	0	20	0
Volume Right	0	38	87	0	0
cSH	171	490	1700	935	1700
Volume to Capacity	0.23	0.08	0.38	0.02	0.39
Queue Length 95th (m)	6.6	1.9	0.0	0.5	0.0
Control Delay (s)	32.3	13.0	0.0	8.9	0.0
Lane LOS	D	B		A	
Approach Delay (s)	22.9		0.0	0.3	
Approach LOS	C				

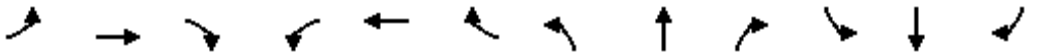
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	0	17	3	0	8	9	570	2	1	630	18
Future Volume (Veh/h)	14	0	17	3	0	8	9	570	2	1	630	18
Sign Control		Stop			Stop			Free			Free	
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)	15	0	18	3	0	8	9	600	2	1	663	19
Pedestrians					2							
Lane Width (m)					3.0							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								237				
pX, platoon unblocked	0.80	0.80		0.80	0.80	0.80				0.80		
vC, conflicting volume	1300	1296	672	1304	1305	603	682			604		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1250	1245	672	1255	1256	377	682			378		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	100	96	97	100	99	99			100		
cM capacity (veh/h)	118	138	459	114	136	538	920			950		

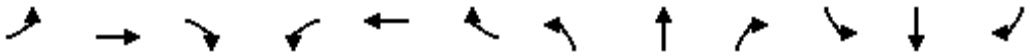
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	33	11	9	602	1	682
Volume Left	15	3	9	0	1	0
Volume Right	18	8	0	2	0	19
cSH	198	267	920	1700	950	1700
Volume to Capacity	0.17	0.04	0.01	0.35	0.00	0.40
Queue Length 95th (m)	4.4	1.0	0.2	0.0	0.0	0.0
Control Delay (s)	26.8	19.1	9.0	0.0	8.8	0.0
Lane LOS	D	C	A		A	
Approach Delay (s)	26.8	19.1	0.1		0.0	
Approach LOS	D	C				

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	44.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	52	27	60	62	66	13	433	55	65	460	80
Future Volume (vph)	91	52	27	60	62	66	13	433	55	65	460	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.99		1.00	1.00	0.95	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1694	1900	1500		1758		1615	1923	1574	1761	1965	1557
Flt Permitted	0.52	1.00	1.00		0.88		0.34	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	931	1900	1500		1580		586	1923	1574	499	1965	1557
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	57	29	65	67	72	14	471	60	71	500	87
RTOR Reduction (vph)	0	0	18	0	24	0	0	0	37	0	0	48
Lane Group Flow (vph)	99	57	11	0	180	0	14	471	23	71	500	39
Confl. Peds. (#/hr)	13		5	5		13	3		16	16		3
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	8%	1%	0%	0%	1%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	30.6	30.6	30.6		21.3		32.2	31.0	31.0	41.2	36.0	36.0
Effective Green, g (s)	30.6	30.6	30.6		21.3		32.2	31.0	31.0	41.2	36.0	36.0
Actuated g/C Ratio	0.38	0.38	0.38		0.26		0.40	0.38	0.38	0.51	0.44	0.44
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	401	716	565		414		247	735	601	354	872	691
v/s Ratio Prot	c0.02	0.03					0.00	c0.24		c0.02	c0.25	
v/s Ratio Perm	0.08		0.01		c0.11		0.02		0.01	0.09		0.02
v/c Ratio	0.25	0.08	0.02		0.44		0.06	0.64	0.04	0.20	0.57	0.06
Uniform Delay, d1	17.4	16.2	15.8		24.9		15.4	20.5	15.7	11.9	16.8	12.9
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.0		1.0		0.1	4.3	0.1	0.4	2.7	0.2
Delay (s)	17.9	16.3	15.9		25.9		15.5	24.8	15.8	12.3	19.6	13.0
Level of Service	B	B	B		C		B	C	B	B	B	B
Approach Delay (s)		17.1			25.9			23.5			17.9	
Approach LOS		B			C			C			B	

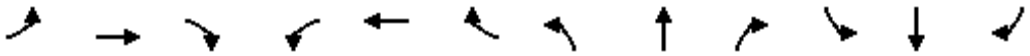
Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	17.3
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	3	7	16	486	10	10	523	5
Future Volume (Veh/h)	0	0	0	2	3	7	16	486	10	10	523	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	2	3	8	17	528	11	11	568	5
Pedestrians		4			9			2			6	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.88	0.88	0.80	0.88	0.88	0.85	0.80			0.85		
vC, conflicting volume	1174	1178	576	1168	1176	548	577			548		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	746	751	351	740	748	382	351			381		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	99	99	98			99		
cM capacity (veh/h)	276	290	559	284	291	562	979			1004		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	13	17	539	11	573
Volume Left	2	17	0	11	0
Volume Right	8	0	11	0	5
cSH	412	979	1700	1004	1700
Volume to Capacity	0.03	0.02	0.32	0.01	0.34
Queue Length 95th (m)	0.7	0.4	0.0	0.3	0.0
Control Delay (s)	14.0	8.7	0.0	8.6	0.0
Lane LOS	B	A		A	
Approach Delay (s)	14.0	0.3		0.2	
Approach LOS	B				

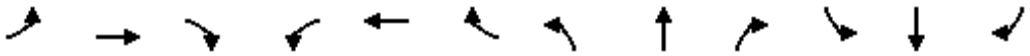
Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	39.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2	12	4	0	10	0	498	5	8	513	0
Future Volume (Veh/h)	7	2	12	4	0	10	0	498	5	8	513	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	8	2	13	4	0	11	0	535	5	9	552	0
Pedestrians		5			10						2	
Lane Width (m)		3.7			3.5						4.2	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.89	0.89	0.81	0.89	0.89	0.80	0.81			0.80		
vC, conflicting volume	1126	1125	557	1132	1122	550	557			550		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	593	593	330	600	590	308	330			309		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	99	98	99	100	98	100			99		
cM capacity (veh/h)	360	368	574	352	370	581	995			998		

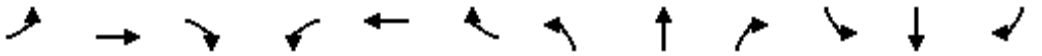
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	23	4	11	540	9	552
Volume Left	8	4	0	0	9	0
Volume Right	13	0	11	5	0	0
cSH	457	352	581	1700	998	1700
Volume to Capacity	0.05	0.01	0.02	0.32	0.01	0.32
Queue Length 95th (m)	1.2	0.3	0.4	0.0	0.2	0.0
Control Delay (s)	13.3	15.3	11.3	0.0	8.6	0.0
Lane LOS	B	C	B		A	
Approach Delay (s)	13.3	12.4		0.0	0.1	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	43.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	6	107	8	38	4	437	78	56	471	8
Future Volume (vph)	19	34	6	107	8	38	4	437	78	56	471	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0		6.5	6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1833			2000		1898	1844		1942	1959	
Flt Permitted		0.87			0.75		0.48	1.00		0.32	1.00	
Satd. Flow (perm)		1623			1559		950	1844		660	1959	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	36	6	114	9	40	4	465	83	60	501	9
RTOR Reduction (vph)	0	5	0	0	21	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	57	0	0	142	0	4	541	0	60	509	0
Confl. Peds. (#/hr)	2					2	6		11	11		6
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%	0%	1%	3%	0%	1%	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		
Actuated Green, G (s)		9.5			9.5		25.6	25.6		33.0	33.0	
Effective Green, g (s)		9.5			9.5		25.6	25.6		33.5	33.0	
Actuated g/C Ratio		0.17			0.17		0.47	0.47		0.61	0.61	
Clearance Time (s)		6.0			6.0		6.5	6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Grp Cap (vph)		282			271		446	866		509	1186	
v/s Ratio Prot								c0.29		0.01	c0.26	
v/s Ratio Perm		0.04			c0.09		0.00			0.06		
v/c Ratio		0.20			0.52		0.01	0.62		0.12	0.43	
Uniform Delay, d1		19.3			20.4		7.7	10.8		4.9	5.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			2.4		0.0	3.4		0.1	1.1	
Delay (s)		19.7			22.8		7.7	14.2		5.0	6.9	
Level of Service		B			C		A	B		A	A	
Approach Delay (s)		19.7			22.8			14.2			6.7	
Approach LOS		B			C			B			A	

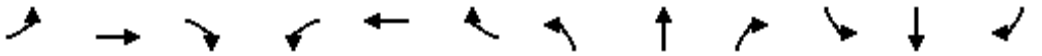
Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1	17	6	1	2	13	508	5	6	558	25
Future Volume (Veh/h)	9	1	17	6	1	2	13	508	5	6	558	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	1	18	7	1	2	14	552	5	7	607	27
Pedestrians		6			11			1				
Lane Width (m)		3.9			3.9			4.0				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.90	0.90	0.85	0.90	0.90	0.90	0.85			0.90		
vC, conflicting volume	1223	1236	628	1234	1248	566	640			568		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	933	948	476	946	961	456	490			459		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	96	97	100	100	98			99		
cM capacity (veh/h)	204	228	502	203	224	539	917			985		

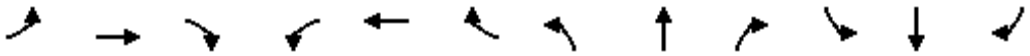
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	29	10	14	557	7	634
Volume Left	10	7	14	0	7	0
Volume Right	18	2	0	5	0	27
cSH	325	234	917	1700	985	1700
Volume to Capacity	0.09	0.04	0.02	0.33	0.01	0.37
Queue Length 95th (m)	2.2	1.0	0.4	0.0	0.2	0.0
Control Delay (s)	17.2	21.1	9.0	0.0	8.7	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	17.2	21.1	0.2		0.1	
Approach LOS	C	C				

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	67	46	46	41	31	33	366	49	34	392	126
Future Volume (vph)	123	67	46	46	41	31	33	366	49	34	392	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94			0.96		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1724	1806			1896		1649	1841		1745	1787	
Flt Permitted	0.73	1.00			0.84		0.38	1.00		0.46	1.00	
Satd. Flow (perm)	1319	1806			1620		651	1841		841	1787	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	127	69	47	47	42	32	34	377	51	35	404	130
RTOR Reduction (vph)	0	32	0	0	17	0	0	4	0	0	9	0
Lane Group Flow (vph)	127	84	0	0	104	0	34	424	0	35	525	0
Confl. Peds. (#/hr)	14		4	4		14	2		15	15		2
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	7%	1%	0%	3%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.4	13.4			13.4		39.6	36.1		39.6	36.1	
Effective Green, g (s)	13.4	13.4			13.4		41.6	36.1		41.6	36.1	
Actuated g/C Ratio	0.21	0.21			0.21		0.64	0.56		0.64	0.56	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	271	372			333		485	1022		600	992	
v/s Ratio Prot		0.05					c0.00	0.23		0.00	c0.29	
v/s Ratio Perm	c0.10				0.06		0.04			0.03		
v/c Ratio	0.47	0.23			0.31		0.07	0.42		0.06	0.53	
Uniform Delay, d1	22.7	21.5			21.9		4.7	8.4		4.4	9.1	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	0.5			0.9		0.1	1.2		0.0	2.0	
Delay (s)	24.9	22.0			22.8		4.8	9.6		4.5	11.1	
Level of Service	C	C			C		A	A		A	B	
Approach Delay (s)		23.5			22.8			9.2			10.7	
Approach LOS		C			C			A			B	

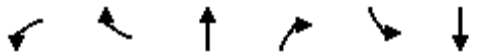
Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	40	0	0	0	17	129	0	0	201	3
Future Volume (Veh/h)	9	0	40	0	0	0	17	129	0	0	201	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	0	43	0	0	0	18	139	0	0	216	3
Pedestrians					2							
Lane Width (m)					4.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	392	394	218	438	396	141	219			141		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	392	394	218	438	396	141	219			141		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	95	100	100	100	99			100		
cM capacity (veh/h)	564	537	827	498	536	910	1362			1451		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	53	0	18	139	219
Volume Left	10	0	18	0	0
Volume Right	43	0	0	0	3
cSH	760	1700	1362	1700	1451
Volume to Capacity	0.07	0.00	0.01	0.08	0.00
Queue Length 95th (m)	1.7	0.0	0.3	0.0	0.0
Control Delay (s)	10.1	0.0	7.7	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	10.1	0.0	0.9		0.0
Approach LOS	B	A			

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	24.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	41	1	15	43	1	23
Future Volume (vph)	41	1	15	43	1	23
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	52	1	19	54	1	29

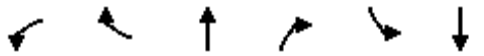
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	53	73	30
Volume Left (vph)	52	0	1
Volume Right (vph)	1	54	0
Hadj (s)	0.18	-0.44	0.01
Departure Headway (s)	4.3	3.6	4.1
Degree Utilization, x	0.06	0.07	0.03
Capacity (veh/h)	816	970	861
Control Delay (s)	7.6	6.9	7.2
Approach Delay (s)	7.6	6.9	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.2		
Level of Service	A		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	65	35	50	52	35	57
Future Volume (vph)	65	35	50	52	35	57
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	77	42	60	62	42	68

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	119	122	110
Volume Left (vph)	77	0	42
Volume Right (vph)	42	62	0
Hadj (s)	-0.06	-0.30	0.08
Departure Headway (s)	4.3	4.0	4.4
Degree Utilization, x	0.14	0.14	0.13
Capacity (veh/h)	788	866	796
Control Delay (s)	8.1	7.6	8.1
Approach Delay (s)	8.1	7.6	8.1
Approach LOS	A	A	A

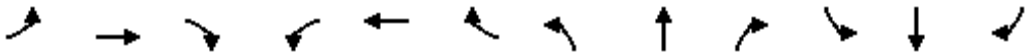
Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	42	50	26	29	58	52
Future Volume (Veh/h)	42	50	26	29	58	52
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	45	54	28	31	62	56
Pedestrians	13		2			1
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	238	58			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	238	58			72	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	94	95			96	
cM capacity (veh/h)	712	982			1519	

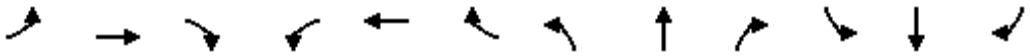
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	99	59	118
Volume Left	45	0	62
Volume Right	54	31	0
cSH	837	1700	1519
Volume to Capacity	0.12	0.03	0.04
Queue Length 95th (m)	3.0	0.0	1.0
Control Delay (s)	9.9	0.0	4.1
Lane LOS	A		A
Approach Delay (s)	9.9	0.0	4.1
Approach LOS	A		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	41	42	16	43	7	12	87	28	8	85	42
Future Volume (vph)	49	41	42	16	43	7	12	87	28	8	85	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.97			0.96	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1704			1764			1926			1769	
Flt Permitted		0.87			0.92			0.97			0.98	
Satd. Flow (perm)		1517			1647			1877			1746	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	43	44	17	45	7	12	91	29	8	89	44
RTOR Reduction (vph)	0	27	0	0	4	0	0	12	0	0	20	0
Lane Group Flow (vph)	0	111	0	0	65	0	0	121	0	0	121	0
Confl. Peds. (#/hr)	2		1	1		2	1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		25.9			25.9			27.5			27.5	
Effective Green, g (s)		25.9			25.9			27.5			27.5	
Actuated g/C Ratio		0.38			0.38			0.41			0.41	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		582			632			765			712	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.04			0.06			c0.07	
v/c Ratio		0.19			0.10			0.16			0.17	
Uniform Delay, d1		13.8			13.3			12.6			12.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.0			0.4			0.5	
Delay (s)		13.8			13.3			13.1			13.2	
Level of Service		B			B			B			B	
Approach Delay (s)		13.8			13.3			13.1			13.2	
Approach LOS		B			B			B			B	

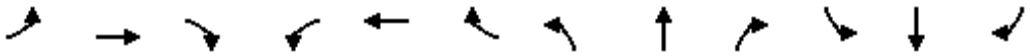
Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	53	20	51	64	26	16	38	22	12	41	19
Future Volume (Veh/h)	11	53	20	51	64	26	16	38	22	12	41	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	12	58	22	56	70	29	18	42	24	13	45	21
Pedestrians		2			1			2			1	
Lane Width (m)		3.5			3.6			3.5			3.4	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	100			82			337	307	72	336	304	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	100			82			337	307	72	336	304	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.3	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.7	4.0	3.3
p0 queue free %	99			96			97	93	98	98	92	98
cM capacity (veh/h)	1504			1525			549	577	993	523	584	974

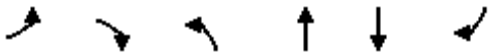
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	92	155	84	79
Volume Left	12	56	18	13
Volume Right	22	29	24	21
cSH	1504	1525	647	640
Volume to Capacity	0.01	0.04	0.13	0.12
Queue Length 95th (m)	0.2	0.9	3.4	3.2
Control Delay (s)	1.0	2.9	11.4	11.4
Lane LOS	A	A	B	B
Approach Delay (s)	1.0	2.9	11.4	11.4
Approach LOS			B	B

Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	27.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	73	0	63	0	402	86	70	696	0
Future Volume (vph)	0	0	0	73	0	63	0	402	86	70	696	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1671		1425		3544	1725	1752	3693	
Flt Permitted				0.76		1.00		1.00	1.00	0.50	1.00	
Satd. Flow (perm)				1332		1425		3544	1725	915	3693	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	80	0	69	0	442	95	77	765	0
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	58	0	0	0
Lane Group Flow (vph)	0	0	0	80	0	27	0	442	37	77	765	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	2%	0%	3%	4%	3%	1%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				523		559		1392	677	359	1450	
v/s Ratio Prot								0.12			c0.21	
v/s Ratio Perm				c0.06		0.02			0.02	0.08		
v/c Ratio				0.15		0.05		0.32	0.06	0.21	0.53	
Uniform Delay, d1				11.0		10.5		11.8	10.5	11.3	13.0	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				0.6		0.2		0.6	0.2	1.4	1.4	
Delay (s)				11.6		10.7		12.4	10.7	12.6	14.4	
Level of Service				B		B		B	B	B	B	
Approach Delay (s)		0.0			11.2			12.1			14.2	
Approach LOS		A			B			B			B	

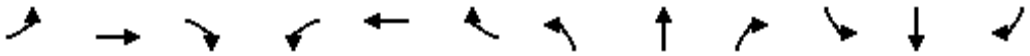
Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	14	18	98	149	68
Future Volume (Veh/h)	32	14	18	98	149	68
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	34	15	19	105	160	73
Pedestrians	1					
Lane Width (m)	3.8					
Walking Speed (m/s)	1.1					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	340	198	234			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	340	198	234			
tC, single (s)	6.4	6.2	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	95	98	99			
cM capacity (veh/h)	649	848	1309			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	49	124	233
Volume Left	34	19	0
Volume Right	15	0	73
cSH	699	1309	1700
Volume to Capacity	0.07	0.01	0.14
Queue Length 95th (m)	1.7	0.3	0.0
Control Delay (s)	10.5	1.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.5	1.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	39	16	10	101	24	6	76	8	26	148	40
Future Volume (vph)	17	39	16	10	101	24	6	76	8	26	148	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.97	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1724			1767			1681			1763	
Flt Permitted		0.91			0.98			0.98			0.95	
Satd. Flow (perm)		1594			1737			1644			1693	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	21	48	20	12	125	30	7	94	10	32	183	49
RTOR Reduction (vph)	0	13	0	0	16	0	0	6	0	0	17	0
Lane Group Flow (vph)	0	77	0	0	151	0	0	105	0	0	247	0
Heavy Vehicles (%)	12%	3%	0%	0%	2%	17%	0%	12%	13%	12%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		597			651			616			634	
v/s Ratio Prot												
v/s Ratio Perm		0.05			c0.09			0.06			c0.15	
v/c Ratio		0.13			0.23			0.17			0.39	
Uniform Delay, d1		9.8			10.3			10.0			11.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.4			0.8			0.6			1.8	
Delay (s)		10.3			11.1			10.6			12.8	
Level of Service		B			B			B			B	
Approach Delay (s)		10.3			11.1			10.6			12.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	212	40	45	299	56	18
Future Volume (Veh/h)	212	40	45	299	56	18
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)	223	42	47	315	59	19
Pedestrians					1	
Lane Width (m)					3.3	
Walking Speed (m/s)					1.1	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			266		654	245
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			266		654	245
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			96		86	98
cM capacity (veh/h)			1308		410	798

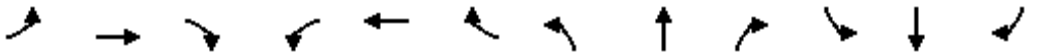
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	265	362	78
Volume Left	0	47	59
Volume Right	42	0	19
cSH	1700	1308	465
Volume to Capacity	0.16	0.04	0.17
Queue Length 95th (m)	0.0	0.8	4.5
Control Delay (s)	0.0	1.3	14.3
Lane LOS		A	B
Approach Delay (s)	0.0	1.3	14.3
Approach LOS			B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	13	23	79	0	0	120
Future Volume (vph)	13	23	79	0	0	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	14	24	82	0	0	125

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	38	82	125
Volume Left (vph)	14	0	0
Volume Right (vph)	24	0	0
Hadj (s)	-0.31	0.00	0.02
Departure Headway (s)	4.0	4.1	4.1
Degree Utilization, x	0.04	0.09	0.14
Capacity (veh/h)	845	855	868
Control Delay (s)	7.2	7.5	7.7
Approach Delay (s)	7.2	7.5	7.7
Approach LOS	A	A	A

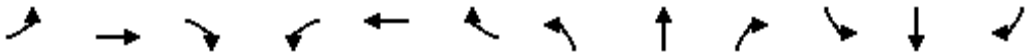
Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	1	19	14	7	0	67	5	14	91	1
Future Volume (Veh/h)	10	10	1	19	14	7	0	67	5	14	91	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	11	11	1	21	16	8	0	75	6	16	102	1
Pedestrians		6			9						1	
Lane Width (m)		3.1			3.5						4.0	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	235	230	108	228	227	88	108			90		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	235	230	108	228	227	88	108			90		
tC, single (s)	7.1	6.6	6.2	7.1	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	98	98	100	97	98	99	100			99		
cM capacity (veh/h)	687	641	947	703	646	967	1488			1505		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	23	45	81	118	1
Volume Left	11	21	0	16	0
Volume Right	1	8	6	0	1
cSH	672	715	1488	1505	1700
Volume to Capacity	0.03	0.06	0.00	0.01	0.00
Queue Length 95th (m)	0.8	1.5	0.0	0.2	0.0
Control Delay (s)	10.5	10.4	0.0	1.1	0.0
Lane LOS	B	B		A	
Approach Delay (s)	10.5	10.4	0.0	1.1	
Approach LOS	B	B			

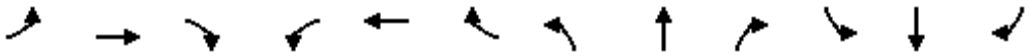
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	25.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	24	107	13	31	90	7	5	86	35	34	93	16
Future Volume (vph)	24	107	13	31	90	7	5	86	35	34	93	16
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	28	123	15	36	103	8	6	99	40	39	107	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	166	147	145	164
Volume Left (vph)	28	36	6	39
Volume Right (vph)	15	8	40	18
Hadj (s)	-0.02	0.02	-0.12	0.02
Departure Headway (s)	4.9	4.9	4.8	4.9
Degree Utilization, x	0.22	0.20	0.19	0.22
Capacity (veh/h)	687	677	697	681
Control Delay (s)	9.3	9.2	8.9	9.3
Approach Delay (s)	9.3	9.2	8.9	9.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.2			
Level of Service	A			
Intersection Capacity Utilization	36.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	208	53	57	276	8	29	8	47	4	6	5
Future Volume (Veh/h)	6	208	53	57	276	8	29	8	47	4	6	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	224	57	61	297	9	31	9	51	4	6	5
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	306			281			696	692	252	744	716	302
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	306			281			696	692	252	744	716	302
tC, single (s)	4.1			4.1			7.1	6.6	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.1	3.3	3.5	4.0	3.3
p0 queue free %	100			95			91	97	94	99	98	99
cM capacity (veh/h)	1266			1282			333	335	791	293	339	743

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	287	367	91	15
Volume Left	6	61	31	4
Volume Right	57	9	51	5
cSH	1266	1282	493	394
Volume to Capacity	0.00	0.05	0.18	0.04
Queue Length 95th (m)	0.1	1.1	5.1	0.9
Control Delay (s)	0.2	1.7	13.9	14.5
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.7	13.9	14.5
Approach LOS			B	B

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A	
Analysis Period (min)	15			

APPENDIX B

Collision Data

OccurrenceDate	OccurrenceTime	Occ. Num.	AccidentLocation	PlaceName
1/2/2019	1147	19-367	3100 BLOCK COUNTY 10 RD	ANDERDON PUBLIC SCHOOL
1/6/2019	1618	19-1588	PICKERING DR AT SANDWICH ST S	
2/5/2019	951	19-10624	400 BLOCK SANDWICH ST S	WALMART
2/6/2019	1857	19-11092	3RD CONCESSION RD N AT ALMA ST	
2/12/2019	954	19-12743	COUNTY 11 RD AT COUNTY 8 RD	
2/23/2019	1133	19-16057	100 BLOCK SANDWICH ST S	NO FRILLS
3/1/2019	2130	19-17995	700 BLOCK 2ND CONCESSION RD N	
3/3/2019	1925	19-18514	KENTUCKY AV AT RICHMOND ST	
3/4/2019	845	19-18628	60 BLOCK INDIANA PL	
3/13/2019	1608	19-21392	COUNTY 10 RD AT COUNTY 9 RD	
3/15/2019	1513	19-22015	1400 BLOCK COUNTY 20 RD	
3/19/2019	1503	19-23245	7700 BLOCK COUNTY 9 RD	WOLFHEAD DISTILLERY
3/20/2019	1434	19-23732	80 BLOCK NORTH ST	
3/29/2019	1609	19-26559	FORT ST AT SANDWICH ST S	
4/7/2019	953	19-29426	MELOCHE RD AT SIMCOE ST	
4/18/2019	728	19-32803	5300 BLOCK COUNTY 10 RD	
4/24/2019	2237	19-35037	5600 BLOCK 5TH CONCESSION RD S	
4/27/2019	1540	19-35991	7500 BLOCK COUNTY 9 RD	FOX GLEN GOLF COURSE
4/30/2019	1142	19-36856	3RD CONCESSION RD N AT TEXAS RD	
5/9/2019	1252	19-40236	300 BLOCK SANDWICH ST S	CANADIAN TIRE STORE
5/14/2019	1155	19-41885	100 BLOCK PICKERING DR	LAFERTE TOWERS
6/6/2019	1626	19-50377	200 BLOCK SANDWICH ST S	TIM HORTONS
6/21/2019	930	19-55771	COUNTY 20 RD AT COUNTY 41 RD	
6/30/2019	2025	19-59064	6500 BLOCK 6TH CONCESSION RD N	
7/2/2019	2105	19-60098	CHERRYLAWN CR AT VICTORIA ST S	
7/4/2019	1408	19-60806	100 BLOCK SIMCOE ST	
7/5/2019	1204	19-61172	500 BLOCK SANDWICH ST S	CAPRI PIZZERIA
7/5/2019	1430	19-62275	PICKERING DR AT SANDWICH ST S	
7/15/2019	832	19-64660	2ND CONCESSION RD N AT COUNTY 10 RD	
7/26/2019	1426	19-68996	100 BLOCK SANDWICH ST S	SHOPPERS DRUG MART
7/30/2019	2237	19-70594	700 BLOCK 2ND CONCESSION RD N	
7/30/2019	1051	19-70356	SIMCOE ST AT VICTORIA ST S	
8/3/2019	1233	19-72044	100 BLOCK SANDWICH ST S	MCDONALDS

8/4/2019	1531	19-72454	3400 BLOCK CREEK RD	
8/7/2019	2049	19-73698	60 BLOCK MURRAY ST	
8/14/2019	2300	19-76502	COUNTY 20 RD AT COUNTY 9 RD	
8/20/2019	934	19-78430	3000 BLOCK COUNTY 10 RD	
8/21/2019	1032	19-78858	1200 BLOCK FRONT RD N	
8/24/2019	1314	19-80117	BALACLAVA ST S AT RICHMOND ST	
8/28/2019	1354	19-81538	FRYER ST AT SIMCOE ST	
8/29/2019	2045	19-82008	3RD CONCESSION RD N AT COUNTY 10 RD	
8/30/2019	615	19-83517	3600 3RD CONCESSION RD N AT COUNTY RD 10	
9/2/2019	1104	19-83406	RICHMOND ST AT SANDWICH ST S	
9/3/2019	913	19-83716	9300 BLOCK COUNTY 8 RD	ST JOSEPH CATHLIC ELEMENTARY
9/12/2019	1555	19-87420	2ND CONCESSION RD N AT NORTH SIDEROAD	
9/16/2019	1123	19-88763	DALHOUSIE ST AT RICHMOND ST	
9/17/2019	1519	19-89288	ALMA ST AT BALACLAVA ST N	
9/22/2019	1611	19-91380	400 BLOCK SANDWICH ST S	ARMANDOS
9/23/2019	1645	19-91843	6TH CONCESSION RD N AT COUNTY 8 RD	
9/23/2019	1500	19-92031	ALMA ST AT SANDWICH ST S	
9/30/2019	1746	19-94453	5TH CONCESSION RD N AT TEXAS RD	
10/2/2019	1741	19-95265	SIMCOE ST AT VICTORIA ST S	
10/9/2019	1646	19-97875	9700 BLOCK COUNTY 11 RD	
10/14/2019	1126	19-99484	7100 BLOCK COUNTY 9 RD	
11/6/2019	632	19-107205	COUNTY 20 RD AT KNAPPS ISLAND RD	
11/9/2019	1758	19-108500	2ND CONCESSION RD N AT COUNTY 10 RD	
11/18/2019	300	19-110952	FRONT RD N AT MALDEN RD	
11/20/2019	1548	19-111850	COUNTY 18 RD AT MELOCHE RD	
11/22/2019	2245	19-112689	5TH CONCESSION RD N AT COUNTY 10 RD	
11/23/2019	2100	19-112992	FRONT RD N AT THRASHER DR	
11/30/2019	945	19-115184	3RD CONCESSION RD N AT COUNTY 10 RD	
12/1/2019	534	19-115438	3RD CONCESSION RD N AT ALMA ST	
12/13/2019	809	19-119405	8500 BLOCK COUNTY 9 RD	
12/14/2019	1321	19-119861	10 ATLANTIC CT	
12/14/2019	2000	19-119945	ALMA ST AT FRYER ST	
1/11/2020	1622	20-3558	FRONT RD N AT WATER FOAM DR	
1/12/2020	1209	20-3789	741 FRONT RD N AT KINGSBRIDGE DR	

1/20/2020	700	20-6193	COUNTY 18 RD AT COUNTY 9 RD	
2/6/2020	1007	20-12102	3RD CONCESSION RD S AT COUNTY 20 RD	
2/23/2020	1855	20-17766	8TH CONCESSION RD AT ALMA ST	
2/26/2020	111	20-18542	4TH CONCESSION RD N AT COUNTY 8 RD	
2/28/2020	1239	20-19323	6TH CONCESSION RD N AT COUNTY 10 RD	
2/28/2020	724	20-19225	COUNTY 9 RD AT SMITH INDUSTRIAL DR	
3/11/2020	1944	20-23696	COUNTY 8 RD AT COUNTY 9 RD	
4/27/2020	1551	20-37281	ALMA ST AT SANDWICH ST S	
5/10/2020	721	20-41163	500 BLOCK SANDWICH ST S	HQ AMHERSTBURG
5/17/2020	1645	20-43376	2ND CONCESSION RD N AT TEXAS RD	
5/25/2020	1154	20-45801	LOWES SDRD AT SANDWICH ST S	
6/6/2020	1604	20-50179	RICHMOND ST AT SANDWICH ST S	
6/10/2020	2700	20-51428	100 BLOCK FRYER ST	
6/17/2020	1626	20-53808	COUNTY 18 RD AT COUNTY 9 RD	
7/3/2020	1008	20-60215	COUNTY 9 RD AT NORTH SDRD	
7/10/2020	1110	20-61686	100 BLOCK SANDWICH ST S	SHOPPERS DRUG MART
7/15/2020	1317	20-63423	7TH CONCESSION RD AT COUNTY 50 RD	
8/20/2020	1319	20-75462	8TH CONCESSION RD AT NORTH SDRD	
8/22/2020	1821	20-76234	PICKERING DR AT SANDWICH ST S	
8/26/2020	1221	20-77465	COUNTY 10 RD AT FRONT RD N	
8/29/2020	1932	20-78547	4TH CONCESSION RD N AT NORTH SDRD	
9/4/2020	746	20-80329	LOWES SDRD AT SANDWICH ST S	
9/5/2020	1137	20-80768	5TH CONCESSION RD S AT COUNTY 18 RD	
9/19/2020	1327	20-85436	3RD CONCESSION RD N AT COUNTY 10 RD	
9/19/2020	1844	20-85518	7000 BLOCK COUNTY 50 RD	
9/23/2020	1352	20-86768	9500 BLOCK COUNTY 11 RD	
10/1/2020	1626	20-89509	COUNTY 10 RD AT FRONT RD N	
10/7/2020	2249	20-91512	3RD CONCESSION RD S AT MCLEOD AV	
10/13/2020	2112	20-93386	ALMA ST AT COUNTY 9 RD	
10/14/2020	1255	20-93564	FRONT RD N AT KINGSBRIDGE DR	
10/16/2020	1334	20-94146	400 BLOCK SANDWICH ST S	WALMART
10/19/2020	2107	20-95105	SANDWICH ST S AT SIMCOE ST	
10/22/2020	1725	20-95997	PICKERING DR AT SANDWICH ST S	
11/3/2020	1638	20-99463	ALMA ST AT SANDWICH ST N	

11/4/2020	1725	20-99764	FRONT RD N AT KINGSBRIDGE DR	
11/9/2020	1912	20-101419	ALMA ST AT SANDWICH ST N	
11/19/2020	248	20-104253	1900 BLOCK FRONT RD N / NORTH SIDE ROAD	
11/19/2020	122	20-104246	7500 BLOCK COUNTY RD 9	
11/29/2020	1013	20-107358	3RD CONCESSION RD N AT COUNTY RD 10	
12/10/2020	925	20-110461	7TH CONCESSION RD AT ALMA ST	
12/25/2020	1845	20-114715	6500 BLOCK 6TH CONCESSION RD S	
12/29/2020	1524	20-115636	ALMA ST AT MELOCHE RD	
1/29/2021	1316	21-7904	300 BLOCK MCLELLAN AV	
2/23/2021	1510	21-14961	COUNTY RD 8 AT COUNTY RD 9	
3/12/2021	2159	21-20612	9500 BLOCK COUNTY RD 11	
3/13/2021	1006	21-20727	4400 BLOCK 4TH CONCESSION RD N	
4/8/2021	943	21-29088	400 BLOCK SIMCOE ST	
4/9/2021	1415	21-29633	COUNTY RD 20 AT CREEK RD	
4/10/2021	2149	21-30175	COLLISON SDRD AT COUNTY RD 50	
4/17/2021	1745	21-32476	COUNTY RD 18 AT COUNTY RD 9	
4/29/2021	1606	21-36255	5TH CONCESSION RD N AT NORTH SDRD	
5/8/2021	1250	21-39234	COUNTY RD 10 AT COUNTY RD 9	
5/9/2021	600	21-39470	FRONT RD N AT NORTH SDRD	
5/10/2021	1634	21-39845	400 BLOCK SANDWICH ST S	MARKS WORK WAREHOUSE
5/17/2021	1659	21-42224	300 BLOCK TEXAS RD	
5/17/2021	705	21-41433	80 BLOCK SANDWICH ST S	SOBEYS
5/21/2021	2045	21-43966	FOREST HILL CR AT GOLFVIEW DR	
5/29/2021	2356	21-46613	3500 BLOCK 3RD CONCESSION RD N	
6/3/2021	1916	21-48398	2ND CONCESSION RD N AT TEXAS RD	
6/19/2021	1228	21-54516	400 BLOCK SANDWICH ST S	DOLLARAMA
6/21/2021	1809	21-55391	SANDWICH ST S AT SIMCOE ST	
7/11/2021	1617	21-63219	ALMA ST AT BALACLAVA ST N	
7/16/2021	1657	21-65177	DALHOUSIE ST AT PICKERING DR	
7/28/2021	1613	21-70026	MARTIN CR AT SIMCOE ST	
7/28/2021	1509	21-69979	PACIFIC AV AT SIMCOE ST	
8/5/2021	1125	21-73145	COUNTY RD 18 AT COUNTY RD 9	
8/10/2021	343	21-74945	ALMA ST AT COUNTY RD 9	
8/15/2021	1031	21-76995	100 BLOCK SANDWICH ST S	MCDONALDS

8/22/2021	1400	21-80026	400 BLOCK MCLELLAN AV	
8/27/2021	1536	21-81612	CANAL ST AT FRONT RD N	
8/29/2021	1301	21-82277	400 BLOCK SANDWICH ST S	WALMART
8/30/2021	1014	21-82608	40 BLOCK ALMA ST	
8/30/2021	1039	21-82543	BALACLAVA ST S AT RICHMOND ST	
9/10/2021	1011	21-86700	ALMA ST AT COUNTY RD 9	
9/16/2021	1833	21-88995	100 BLOCK SANDWICH ST S	MARIA'S RESTAURANT
9/17/2021	1804	21-89391	9400 BLOCK COUNTY RD 18	
9/26/2021	1258	21-92376	ALMA ST AT VICTORIA ST N	
9/30/2021	957	21-93793	400 BLOCK SANDWICH ST S	WALMART
10/8/2021	1108	21-96708	400 BLOCK SANDWICH ST S	WALMART
10/22/2021	653	21-101369	4TH CONCESSION RD N AT COUNTY RD 10	
10/22/2021	1916	21-101615	6TH CONCESSION RD N AT COUNTY RD 8	
10/30/2021	2212	21-104395	100 BLOCK SANDWICH ST S	MCDONALDS
11/17/2021	726	21-109998	5TH CONCESSION RD N AT COUNTY RD 10	
11/19/2021	2120	21-111576	400 BLOCK SANDWICH ST S	WALMART
11/19/2021	153	21-110619	5500 BLOCK ALMA ST	
11/27/2021	1944	21-113371	3RD CONCESSION RD N AT NORTH SDRD	
11/27/2021	1104	21-113235	DALHOUSIE ST AT MURRAY ST	
11/29/2021	1226	21-113831	6TH CONCESSION RD N AT MIDDLE SDRD	
11/30/2021	1145	21-114181	100 BLOCK SANDWICH ST S	MARIA'S RESTAURANT
12/7/2021	1307	21-116813	70 BLOCK ELM AV	
12/14/2021	2123	21-119265	FRYER ST AT RICHMOND ST	
12/14/2021	1248	21-119089	LOWES SDRD AT SANDWICH ST S	
12/16/2021	1649	21-119853	FRYER ST AT SIMCOE ST	
12/27/2021	625	21-122903	7300 BLOCK COUNTY RD 9	
12/28/2021	339	21-123185	4TH CONCESSION RD N AT ALMA ST	
1/7/2022	728	22-1707	COUNTY RD 11 AT MIDDLE SDRD	
1/9/2022	1539	22-2301	400 BLOCK SANDWICH ST S	WALMART
1/14/2022	1333	22-3632	DALHOUSIE ST AT RICHMOND ST	
1/23/2022	1600	22-6242	100 BLOCK FORT ST	
1/23/2022	1724	22-6265	ALMA ST AT SANDWICH ST N	
1/26/2022	1650	22-7155	4TH CONCESSION RD S AT COUNTY RD 18	
1/31/2022	738	22-8343	7TH CONCESSION RD AT COUNTY RD 18	

2/10/2022	1538	22-11503	5TH CONCESSION RD N AT TEXAS RD	
2/20/2022	1445	22-14444	COUNTY RD 20 AT CREEK RD	
2/23/2022	646	22-15085	ALMA ST AT COUNTY RD 9	
2/26/2022	2259	22-16173	3400 BLOCK CREEK RD	
2/27/2022	26	22-16187	5TH CONCESSION RD N AT NORTH SDRD	
3/19/2022	2111	22-22582	20 BLOCK WHELAN DR	
3/31/2022	1248	22-26099	300 BLOCK SANDWICH ST S	CANADIAN TIRE
4/7/2022	956	22-28226	HOWARD AV AT MIDDLE SDRD	
4/19/2022	1500	22-32241	4900 BLOCK 4TH CONCESSION RD N	
4/21/2022	800	22-32786	HOWARD AV AT NORTH SDRD	
4/24/2022	1830	22-33999	100 BLOCK SANDWICH ST S	NO FRILLS
4/24/2022	1639	22-33962	5500 BLOCK 5TH CONCESSION RD N	
4/25/2022	1125	22-34201	SANDWICH ST S AT SIMCOE ST	
5/4/2022	1158	22-37210	100 BLOCK SANDWICH ST S	MARIA'S RESTAURANT
5/6/2022	1211	22-37881	400 BLOCK SANDWICH ST S	SUBWAY
5/12/2022	1204	22-39938	100 BLOCK SANDWICH ST S	NO FRILLS
5/14/2022	206	22-40556	4500 BLOCK 4TH CONCESSION RD N	
5/16/2022	1658	22-41421	ALMA ST AT SANDWICH ST S	
5/24/2022	1733	22-44234	3800 BLOCK 3RD CONCESSION RD N	
5/29/2022	138	22-45781	300 BLOCK FRYER ST	
5/31/2022	826	22-46528	6TH CONCESSION RD S AT COUNTY RD 18	
6/1/2022	913	22-46956	ALMA ST AT VICTORIA ST S	
6/9/2022	1414	22-49918	ALMA ST AT COUNTY RD 9	
6/12/2022	1422	22-50905	500 BLOCK SANDWICH ST S	TIM HORTONS
6/13/2022	2018	22-51344	ALMA ST AT FRYER ST	
6/13/2022	803	22-51082	FRONT RD N AT KINGSBRIDGE DR	
6/20/2022	1059	22-53692	BENETEAU DR AT RYAN ST	
6/22/2022	1329	22-54503	6TH CONCESSION RD S AT SOUTH SDRD	
6/24/2022	1547	22-55271	8300 BLOCK COUNTY RD 9	
6/25/2022	1954	22-55714	4600 BLOCK TEXAS RD	
6/25/2022	2254	22-55765	4TH CONCESSION RD N AT MIDDLE SDRD	
6/26/2022	1940	22-56018	4TH CONCESSION RD S AT COUNTY RD 18	
7/1/2022	1612	22-57790	90 BLOCK MURRAY ST	
7/2/2022	1548	22-58122	2ND CONCESSION RD N AT MIDDLE SDRD	

7/3/2022	2040	22-58612	1500 BLOCK FRONT RD N	RANTA MARINA
7/4/2022	1710	22-58831	MURRAY ST AT SANDWICH ST S	
7/13/2022	435	22-61742	3700 BLOCK COUNTY RD 10	
7/20/2022	1149	22-64324	500 BLOCK SANDWICH ST S	HQ ABURG
7/21/2022	1514	22-64770	5TH CONCESSION RD S AT COUNTY RD 18	
8/15/2022	1512	22-73630	COUNTY RD 8 AT COUNTY RD 9	
8/18/2022	2103	22-74968	300 BLOCK SANDWICH ST S	
8/20/2022	1712	22-75615	3RD CONCESSION RD S AT MCLEOD AV	
8/21/2022	1159	22-75867	70 BLOCK SANDWICH ST S	REXALL
8/21/2022	2338	22-76017	ALMA ST AT SANDWICH ST S	
8/24/2022	1621	22-77077	400 BLOCK SANDWICH ST S	WALMART
8/25/2022	1009	22-77338	200 BLOCK GOLFVIEW DR	
8/27/2022	1002	22-78164	50 BLOCK NORTH ST	TODDY JONES PARK
8/28/2022	1157	22-78520	100 BLOCK SANDWICH ST S	SHOPPERS DRUG MART
8/28/2022	1428	22-78558	2100 BLOCK COUNTY RD 20	
8/31/2022	825	22-79552	COUNTY RD 9 AT NORTH SDRD	
9/1/2022	1919	22-80271	FRYER ST AT SIMCOE ST	
9/10/2022	1200	22-84481	400 BLOCK SANDWICH ST S	WALMART
9/17/2022	1647	22-86500	COUNTY RD 20 AT MALDENCOLCHESTER SOUTH TOWNLINE RD	
9/30/2022	1216	22-91176	6TH CONCESSION RD S AT COUNTY RD 18	
10/4/2022	2157	22-92649	FRONT RD N AT NORTH SDRD	
10/7/2022	736	22-93545	6TH CONCESSION RD N AT COUNTY RD 8	
10/13/2022	1743	22-95714	RICHMOND ST AT SEYMOUR ST	
10/17/2022	1528	22-97005	RANKIN AV AT SANDWICH ST S	
10/22/2022	1755	22-99816	300 BLOCK WHITE CR	
11/3/2022	1115	22-102915	100 BLOCK MCLEOD AV	
11/11/2022	1650	22-105813	3600 BLOCK CREEK RD	
11/12/2022	148	22-105975	ALMA ST AT MELOCHE RD	
11/17/2022	1730	22-107768	30 BLOCK MALDEN HILL DR	
11/21/2022	700	22-108732	5TH CONCESSION RD N AT ALMA ST	
11/23/2022	1208	22-109485	100 BLOCK SANDWICH ST S	NO FRILLS
12/20/2022	1302	22-118175	200 BLOCK RAMSAY ST	
12/26/2022	1923	22-120125	6TH CONCESSION RD S AT COUNTY RD 18	
12/29/2022	1500	22-121177	400 BLOCK SANDWICH ST S	WALMART

12/30/2022	1538	22-121262	2000 BLOCK FRONT RD N	
12/31/2022	1255	22-121524	400 BLOCK SANDWICH ST S	WALMART
1/11/2023	636	23-3605	ALMA ST AT COUNTY RD 9	
1/16/2023	958	23-5328	5TH CONCESSION RD N AT ALMA ST	
1/22/2023	1017	23-7496	9800 BLOCK COUNTY RD 11	
1/24/2023	1417	23-8312	RANKIN AV AT SANDWICH ST S	
1/26/2023	1358	23-9030	50 BLOCK SANDWICH ST N	JOE MELOCHE FORD
1/28/2023	1331	23-9746	500 BLOCK 2ND CONCESSION RD N	
2/2/2023	1540	23-11519	3RD CONCESSION RD N AT NORTH SDRD	
2/6/2023	1817	23-12892	FRONT RD N AT KINGSBRIDGE DR	
2/9/2023	1458	23-13969	3100 BLOCK COUNTY RD 10	ANDERDON PUBLIC SCHOOL
2/19/2023	1924	23-17721	FRYER ST AT RICHMOND ST	
2/24/2023	1409	23-19469	2100 BLOCK FRONT RD N	
3/5/2023	2137	23-22827	2ND CONCESSION RD N AT TEXAS RD	
3/21/2023	1530	23-28399	100 BLOCK SANDWICH ST S	SHOPPERS DRUG MART

IsParkingLot	Charges	MvcClassification	XCoordinate	YCoordinate
N	N	Non-Reportable	329249	4667766
N	N	Injury	325673	4662738
Y	N	Non-Reportable	325514	4662651
N	Y	Injury	328705	4664027
N	N	Injury	337531	4671944
Y	N	Injury	325660	4663547
N	N	Injury	327589	4666939
N	N	Non-Reportable	327199	4663718
N	N	Non-Reportable	327176	4663446
N	Y	Injury	334449	4667325
N	N	Non-Reportable	325254	4658791
N	N	Non-Reportable	335059	4670024
N	N	Non-Reportable	325455	4663560
N	Y	Injury	325526	4663800
N	Y	Injury	327793	4662891
N	Y	Injury	332398	4667470
N	N	Non-Reportable	330305	4659980
N	N	Injury	334540	4668545
N	Y	Non-Reportable	328835	4665865
N	N	Non-Reportable	325604	4662793
Y	N	Injury	325455	4662797
Y	N	Non-Reportable	325562	4663271
N	N	Non-Reportable	334563	4656455
N	Y	Injury	333158	4668012
N	N	Injury	326243	4662792
N	N	Injury	325623	4663043
N	N	Injury	325745	4662301
N	N	Injury	325673	4662738
N	N	Injury	327597	4667784
N	Y	Injury	325613	4663456
N	N	Injury	327857	4666891
N	N	Non-Reportable	326258	4662997
Y	N	Non-Reportable	325626	4663676

N	Y	Injury	327886	4661480
Y	N	Injury	325362	4663230
N	N	Non-Reportable	334120	4658277
N	N	Injury	329651	4667656
N	Y	Injury	325672	4668682
N	N	Non-Reportable	325897	4663469
N	Y	Injury	326485	4662983
N	Y	Fatal	328970	4667696
N	N	Non-Reportable	328692	4668785
N	Y	Injury	325569	4663382
Y	N	Non-Reportable	329191	4672398
N	N	Injury	327767	4670218
N	Y	Non-Reportable	325292	4663310
N	N	Non-Reportable	325872	4664219
Y	N	Non-Reportable	325751	4662613
N	N	Non-Reportable	333424	4672227
N	N	Injury	325485	4664244
N	N	Injury	331585	4665677
N	N	Injury	326258	4662997
N	Y	Injury	336638	4669168
N	N	Injury	334956	4664675
N	N	Injury	327862	4658831
N	Y	Injury	327597	4667784
N	N	Injury	327233	4672645
N	Y	Injury	327793	4662891
N	Y	Injury	331714	4667512
N	N	Injury	325798	4668902
N	Y	Injury	328970	4667696
N	N	Injury	328705	4664027
N	N	Injury	334550	4659637
N	N	Non-Reportable	326833	4663056
N	N	Injury	326565	4664172
Y	N	Non-Reportable	325532	4668352
N	N	Injury	325293	4667100

N	N	Injury	334396	4662389
N	N	Non-Reportable	327469	4658646
N	N	Injury	335571	4663565
N	N	Fatal	330580	4672422
N	N	Injury	333081	4667418
N	N	Injury	334694	4670793
N	N	Injury	334792	4672131
N	N	Injury	325485	4664244
Y	N	Non-Reportable	325618	4662151
N	Y	Injury	327468	4665953
N	Y	Injury	325601	4661750
N	N	Injury	325569	4663382
N	N	Non-Reportable	653130	9327326
N	N	Non-Reportable	334396	4662389
N	N	Non-Reportable	334621	4669765
Y	N	Non-Reportable	325613	4663456
N	N	Non-Reportable	332599	4655523
N	Y	Injury	335996	4669679
Y	N	Injury	325673	4662738
N	N	Injury	325341	4667948
N	N	Injury	330507	4670039
N	N	Injury	325601	4661750
N	N	Injury	330447	4662712
N	N	Non-Reportable	328970	4667696
N	N	Injury	332321	4656079
N	N	Injury	337209	4667797
N	Y	Injury	325341	4667948
N	N	Injury	327251	4656922
N	N	Non-Reportable	334334	4663646
N	N	Non-Reportable	325172	4667316
Y	N	Injury	325514	4662651
N	N	Injury	325676	4663036
N	N	Injury	325673	4662738
N	Y	Injury	325485	4664244

N	N	Fatal	325172	4667316
N	N	Injury	325485	4664244
N	N	Injury	326641	4671196
N	N	Non-Reportable	334432	4667901
N	Y	Injury	328970	4667696
N	N	Injury	333164	4663726
N	N	Injury	331548	4659555
N	N	Injury	327869	4664080
N	N	Non-Reportable	326381	4666486
N	Y	Injury	334793	4672131
N	Y	Injury	337159	4667352
N	Y	Injury	330597	4667374
Y	N	Non-Reportable	326719	4662972
N	Y	Injury	328352	4658971
N	N	Non-Reportable	331602	4656485
N	N	Injury	334397	4662390
N	Y	Injury	331881	4669951
N	Y	Injury	334450	4667326
N	N	Injury	326786	4670291
Y	N	Non-Reportable	325514	4662651
N	Y	Injury	326627	4666179
Y	N	Non-Reportable	325621	4663906
N	N	Injury	326084	4668108
N	N	Injury	328316	4668060
N	N	Injury	327469	4665954
Y	N	Injury	325751	4662613
N	Y	Injury	325677	4663036
N	N	Injury	325873	4664219
N	Y	Injury	325296	4662764
N	N	Non-Reportable	327221	4662931
N	Y	Injury	326952	4662950
N	Y	Injury	334397	4662390
N	N	Injury	334334	4663647
Y	N	Non-Reportable	325627	4663677

N	N	Non-Reportable	326854	4666516
N	Y	Injury	325613	4668540
Y	N	Non-Reportable	325515	4662651
N	N	Non-Reportable	325309	4664284
N	N	Injury	325898	4663469
N	N	Injury	334334	4663647
N	N	Injury	325569	4663746
N	N	Injury	336287	4662257
N	N	Injury	326339	4664188
Y	N	Injury	325515	4662651
Y	N	Non-Reportable	325515	4662651
N	Y	Injury	330332	4667606
N	N	Non-Reportable	333424	4672227
N	Y	Injury	325627	4663677
N	N	Injury	331714	4667513
Y	N	Injury	325515	4662651
N	N	Injury	331366	4663770
N	N	Non-Reportable	329146	4670134
N	Y	Injury	325315	4663224
N	N	Injury	333082	4667419
N	Y	Injury	325569	4663746
N	Y	Injury	325436	4663969
N	Y	Injury	326524	4663563
N	N	Injury	325602	4661751
N	N	Injury	326485	4662984
N	N	Fatal	334396	4666574
N	N	Injury	330080	4663936
N	N	Non-Reportable	337193	4667141
Y	N	Non-Reportable	325515	4662651
N	N	Non-Reportable	325293	4663311
N	N	Injury	325605	4663796
N	N	Injury	325486	4664244
N	N	Non-Reportable	329112	4662803
N	N	Injury	333080	4662482

N	Y	Injury	331585	4665678
N	Y	Injury	328352	4658971
N	Y	Injury	334334	4663647
N	N	Injury	327760	4661519
N	N	Injury	331881	4669951
N	N	Injury	325576	4667188
N	Y	Injury	325604	4662794
N	Y	Injury	334450	4667326
N	N	Injury	330642	4672005
N	N	Injury	334622	4669766
Y	N	Non-Reportable	325660	4663548
N	Y	Injury	331694	4668342
N	N	Non-Reportable	325677	4663036
Y	N	Non-Reportable	325569	4663746
N	Y	Injury	325755	4662409
Y	N	Non-Reportable	325660	4663548
N	N	Injury	330304	4667783
N	N	Injury	325486	4664244
N	N	Injury	329238	4670968
Y	N	Non-Reportable	326471	4662836
N	Y	Injury	331772	4662600
N	Y	Injury	326339	4664188
N	Y	Injury	334334	4663647
Y	N	Injury	325753	4662146
N	N	Non-Reportable	326566	4664172
N	N	Injury	325172	4667317
N	N	Non-Reportable	329205	4672234
N	Y	Injury	331628	4660646
N	N	Injury	334269	4661596
N	N	Injury	331222	4665648
N	Y	Injury	330332	4667606
N	Y	Injury	329112	4662803
N	N	Non-Reportable	325449	4663285
N	Y	Injury	327597	4667784

Y	N	Non-Reportable	326069	4669794
N	Y	Injury	325600	4663300
N	N	Injury	329754	4667574
N	N	Injury	325647	4662175
N	Y	Injury	330448	4662712
N	Y	Injury	334792	4672130
N	N	Injury	325632	4663086
N	N	Injury	327251	4656922
Y	N	Non-Reportable	325578	4663993
N	N	Non-Reportable	325486	4664244
Y	N	Fail to Remain	325515	4662651
N	N	Non-Reportable	326405	4668114
N	N	Non-Reportable	325308	4663643
N	Y	Injury	325614	4663457
N	N	Non-Reportable	326180	4658697
N	Y	Injury	334625	4669763
N	Y	Injury	326485	4662984
Y	N	Fail to Remain	325515	4662651
N	N	Injury	334628	4658075
N	Y	Injury	331772	4662600
N	N	Injury	326786	4670291
N	Y	Injury	333424	4672225
N	N	Injury	325675	4663409
N	Y	Injury	325555	4663513
N	N	Non-Reportable	326857	4666338
Y	N	Injury	325444	4657789
N	N	Injury	327799	4660070
N	N	Injury	327869	4664081
N	N	Injury	325870	4662099
N	N	Non-Reportable	331450	4663843
Y	N	Injury	325660	4663548
N	N	Non-Reportable	325394	4663192
N	Y	Injury	331772	4662600
Y	N	Fail to Remain	325515	4662651

N	N	Injury	326794	4671539
Y	N	Non-Reportable	325515	4662651
N	Y	Injury	334334	4663647
N	Y	Injury	331450	4663843
N	N	Injury	337357	4670182
N	Y	Injury	325555	4663513
N	Y	Non-Reportable	325520	4664397
N	N	Injury	327418	4666366
N	Y	Injury	329146	4670134
N	Y	Injury	325172	4667317
Y	N	Non-Reportable	328744	4667698
N	N	Injury	326524	4663563
N	Y	Injury	326494	4671814
N	Y	Injury	327469	4665954
Y	N	Non-Reportable	325614	4663457

APPENDIX C

Notice of Commencement, Notice of Public Open House and List of Stakeholders

NOTICE OF STUDY COMMENCEMENT

CLASS ENVIRONMENTAL ASSESSMENT
TOWN OF AMHERSTBURG TRANSPORTATION MASTER PLAN STUDY

The Town of Amherstburg has initiated a Municipal Class Environmental Assessment (Class EA) to complete a Transportation Master Plan, which will be the Town's blueprint for strategic transportation planning and direction for the future. The Transportation Master Plan will address existing challenges and develop a plan that will navigate today's challenges, adapt to tomorrow's, and inspire the future. It will provide the Town with creative and realistic solutions based on input from the public, private sector, and government agencies. The Transportation Master Plan will establish a transportation system to better serve residents, employers, employees, and visitors while accommodating all modes of transportation (e.g., public transit, commuter travel, commercial vehicles, and active transportation).

THE PROCESS:

The study is being undertaken in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment process, which is an approved process under the Environmental Assessment Act. Phases 1 and 2 of the Municipal Class Environmental Assessment process are as such:

- Phase 1: assess existing conditions, context, challenges, and opportunities; and
- Phase 2: develop network plans and identify triggers for different infrastructure needs, phasing of projects, and an action plan.

WE WANT TO HEAR FROM YOU:

A key component of the study will be consultation with stakeholders, regulatory agencies, and the general public. Anyone with an interest in this study can get involved and provide input. Two (2) Public Open Houses and two (2) Online Surveys will be held during the study to inform the process, present findings, and receive public input. A notice providing the time and location of the Public Open Houses will be published in local newspapers and posted on the study website at www.talktheburg.ca/transportation.

Currently, the study team is requesting comments regarding the existing conditions and related infrastructure in the study area through an online survey at www.talktheburg.ca/transportation or you may scan this QR code.

For more information, to submit a comment, question, or to be added to the project mailing list, please contact:

Todd Hewitt
Manager of Engineering
Town of Amherstburg
512 Sandwich Street
Amherstburg ON N9V3R2
Phone: 519 736-3664
Email: thewitt@amherstburg.ca

OR

Brandon Orr
Consultant Project Manager
TYLin International Canada Inc.
8800 Dufferin Street Suite 200
Vaughan, ON L4K 0C5, Canada
Phone: 647.459.6109
Email: brandon.orr@tylin.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and the Ontario Environmental Assessment Act. With the exception of personal information, all comments will become part of the public record and will be released, if requested, to any person.

Notice first issued January 18, 2023

NOTICE OF PUBLIC OPEN HOUSE #1
CLASS ENVIRONMENTAL ASSESSMENT
TOWN OF AMHERSTBURG TRANSPORTATION MASTER PLAN STUDY

The Town of Amherstburg has initiated a Municipal Class Environmental Assessment (Class EA) to complete a Transportation Master Plan (TMP), which will be the Town's blueprint for strategic transportation planning and direction for the future. The Transportation Master Plan will address existing challenges and develop a plan that will navigate today's challenges, adapt to tomorrows, and inspire the future. It will provide the Town with creative and realistic solutions based on input from the public, private sector, and government agencies. The Transportation Master Plan will establish a transportation system to better serve residents, employers, employees, and visitors while accommodating all modes of transportation (e.g., public transit, commuter travel, commercial vehicles, and active transportation).

THE PROCESS:

The study is being undertaken in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment process, which is an approved process under the Environmental Assessment Act. Phases 1 and 2 of the Municipal Class Environmental Assessment process are:

- Phase 1: assess existing conditions, context, challenges, and opportunities; and
- Phase 2: develop network plans and identify triggers for different infrastructure needs, phasing of projects, and an action plan.

PUBLIC OPEN HOUSE #1:

A Public Open house for the project is being planned to introduce the study to you, present and gather feedback on the TMP study process, share the Town's goals and objectives for the TMP, provide summary of what we have heard from you so far through the online survey, provide information on the existing transportation network and travel conditions throughout the Town, gather community input on the transportation infrastructures from you, and share the next steps of the study.

Date: **Tuesday, May 9th, 2023**
Time: **5:00-7:00 PM: Drop-in Interactive Public Open House**
Location: **Libro Community Centre, 3295 Meloche Road, Amherstburg, ON, N9V 2Y8**

CONTACTS:

If you require any additional information or would like to be added to the project contact list, Please visit the Town's website at https://www.talktheburg.ca/transportation or scan the QR code or contact one of the individuals below:

Todd Hewitt
Manager of Engineering
Town of Amherstburg
512 Sandwich Street
Amherstburg ON N9V3R2
Phone: 519 736-3664
Email: thewitt@amherstburg.ca

OR

Amar Lad
Consultant Project Manager
TYLin International Canada Inc.
8800 Dufferin Street Suite 200
Vaughan, ON L4K 0C5, Canada
Phone: 905 738 5700
Email: amar.lad@tylin.com

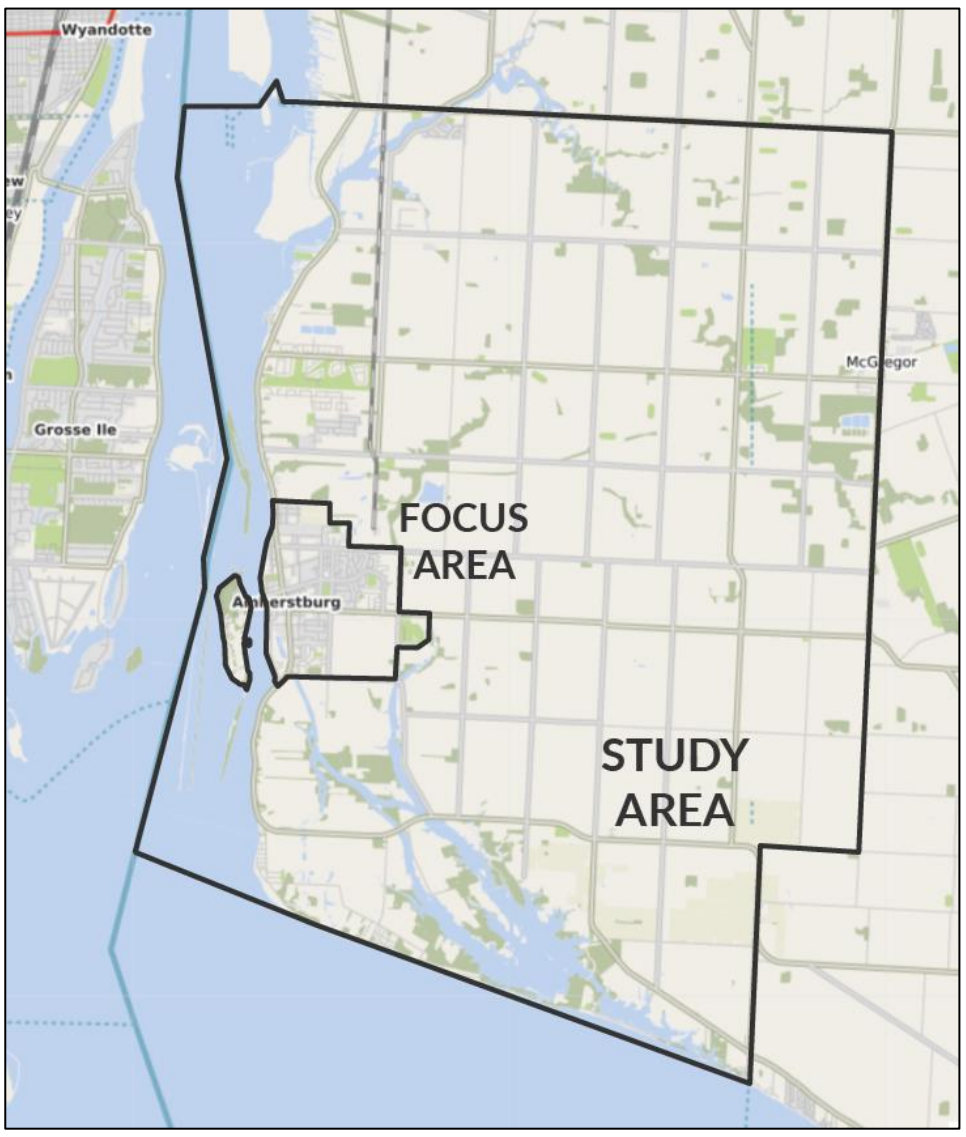
Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and the Ontario Environmental Assessment Act. With the exception of personal information, all comments will become part of the public record and will be released, if requested, to any person.

Notice first issued on April 26, 2023

NOTICE OF PUBLIC OPEN HOUSE #2

CLASS ENVIRONMENTAL ASSESSMENT
TOWN OF AMHERSTBURG TRANSPORTATION MASTER PLAN STUDY

The Town of Amherstburg has initiated a Municipal Class Environmental Assessment (Class EA) to complete a Transportation Master Plan (TMP), which will be the Town's blueprint for strategic transportation planning and direction for the future. The Transportation Master Plan will address existing challenges and develop a plan that will navigate today's challenges, adapt to tomorrows, and inspire the future. It will provide the Town with creative and realistic solutions based on input from the public, private sector, and government agencies. The Transportation Master Plan will establish a transportation system to better serve residents, employers, employees, and visitors while accommodating all modes of transportation (e.g., public transit, commuter travel, commercial vehicles, and active transportation).



THE PROCESS:

The study is being undertaken in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment process, which is an approved process under the Environmental Assessment Act. Phases 1 and 2 of the Municipal Class Environmental Assessment process are:

- Phase 1: assess existing conditions, context, challenges, and opportunities; and
- Phase 2: develop network plans and identify triggers for different infrastructure needs, phasing of projects, and an action plan.

PUBLIC OPEN HOUSE #2:

A second Public Open House (POH) has been planned to present the findings from the existing conditions, which were discussed during the first POH in April 2023. At POH #2, the Project Team will present the recommended solutions for enhancing the Town's overall mobility. The focus will be on road safety for all users, expanding the transit network, and promoting active transportation, thereby enhancing the quality of life for the residents.

Date: **Tuesday, February 13th, 2024**
Time: **5:00-7:00 PM: Drop-in Interactive Public Open House**
Location: **Libro Community Centre, 3295 Meloche Road, Amherstburg, ON, N9V 2Y8**

CONTACTS:

If you require any additional information or would like to be added to the project contact list, Please visit the Town's website at https://www.talktheburg.ca/transportation or scan the QR code or contact one of the individuals below:

Todd Hewitt
Manager of Engineering
Town of Amherstburg
512 Sandwich Street
Amherstburg ON N9V3R2
Phone: 519 736-3664
Email: thewitt@amherstburg.ca

OR

Amar Lad
Consultant Project Manager
TYLin International Canada Inc.
8800 Dufferin Street Suite 200
Vaughan, ON L4K 0C5, Canada
Phone: 905 738 5700
Email: amar.lad@tylin.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and the Ontario Environmental Assessment Act. With the exception of personal information, all comments will become part of the public record and will be released, if requested, to any person.

Notice first issued on February 6th, 2024

List of Stakeholders

Organization
Municipal
Town of Amherstburg
Town of Amherstburg
Town of Amherstburg
Town of Amherstburg
Town of Amherstburg
Town of Amherstburg
Town of Amherstburg
Conservation Authority
Essex Region Conservation Authority
Essex Region Conservation Authority
Essex Region Conservation Authority
Essex Region Conservation Authority
Essex Region Conservation Authority
Essex Region Conservation Authority
Emergency Services
Town of Amherstburg
Essex-Windsor EMS
Town of Amherstburg
Ontario Provincial Police
Ontario Provincial Police
Interest Groups
County of Essex
Windsor Essex Bike Community
County of Essex
County of Essex
Essex Windsor Solid Waste Authority
Greater Essex County District School Board
Windsor-Essex Catholic District School Board
Windsor Essex Bike Community
Windsor Essex Bike Community
Student Transportation Services
G. & L. Stevenson Transportation
First Student
Sharp Bus Lines
Ontario Clean Water Agency
Utilities
Bell Canada
Cogeco Cable Services
Essex Power
Hydro One
Hydro One
Union Gas
Canada Post
Federal Agencies
Fisheries and Oceans Canada - Central and Arctic Region
Fisheries Protection Program
Provincial Agencies
Ministry of Citizenship and Multiculturalism (MCM) Previously Ministry of Tourism, Culture and Sport (MTCS)
Ministry of Citizenship and Multiculturalism (MCM) Previously Ministry of Tourism, Culture and Sport (MTCS)
Ministry of the Environment, Conservation and Parks
Ministry of Municipal Affairs and Housing

Organization
Ministry of Natural Resources and Forestry
Ministry of Natural Resources and Forestry
Ministry of Municipal Affairs and Housing

Organization
Indigenous Communities/Métis Groups
Aamjiwnaang First Nation
Aamjiwnaang First Nation
Aamjiwnaang First Nation
Aamjiwnaang First Nation
Bkejwanong Territory / Walpole Island First Nation
Bkejwanong Territory / Walpole Island First Nation
Walpole Island
Walpole Island
Walpole Island
Caldwell First Nation
Caldwell First Nation
Caldwell First Nation
Caldwell First Nation
Caldwell First Nation
Chippewas of Kettle & Stony Point First Nation
Chippewas of the Thames First Nation
Chippewas of the Thames First Nation
Chippewas of the Thames First Nation
Chippewas of the Thames First Nation
Chippewas of the Thames First Nation
Moravian of the Thames (Delaware Nation)
Oneida of the Thames First Nation
Munsee-Delaware Nation
Munsee-Delaware Nation
Munsee-Delaware Nation
Métis Nation of Ontario
Métis Nation of Ontario
Métis Nation of Ontario
Metis Nation of Ontario
Ministry of Energy, Northern Development and Mines/ Minister of Indigenous Affairs
Tri-Tribal Monitoring Services
Developers
Dillion Consulting Ltd.
Dillion Consulting Ltd.
Walker Industries
Walker Industries
Rocksedge Development Inc.
R. Lucente Engineering Inc.
Valente Development Corporation
Coulson Design-Build Inc.
NOR-Built Construction
Valente Development Corporation
Jones Group Inc.
Rosati Construction
Amico
n
Piroli Group Developments
Re/Max Preferred Realty Ltd.
Baird Consulting
Nicolas Caragian's Architect

Organization
Lassaline Planning Consultatnt
Dunn Group of Companies
Essex Region Conservation Authority
MNRF
OMFRA

APPENDIX D

Summary of Online Surveys, Public Feedback, and Comments

Transportation Master Plan Survey

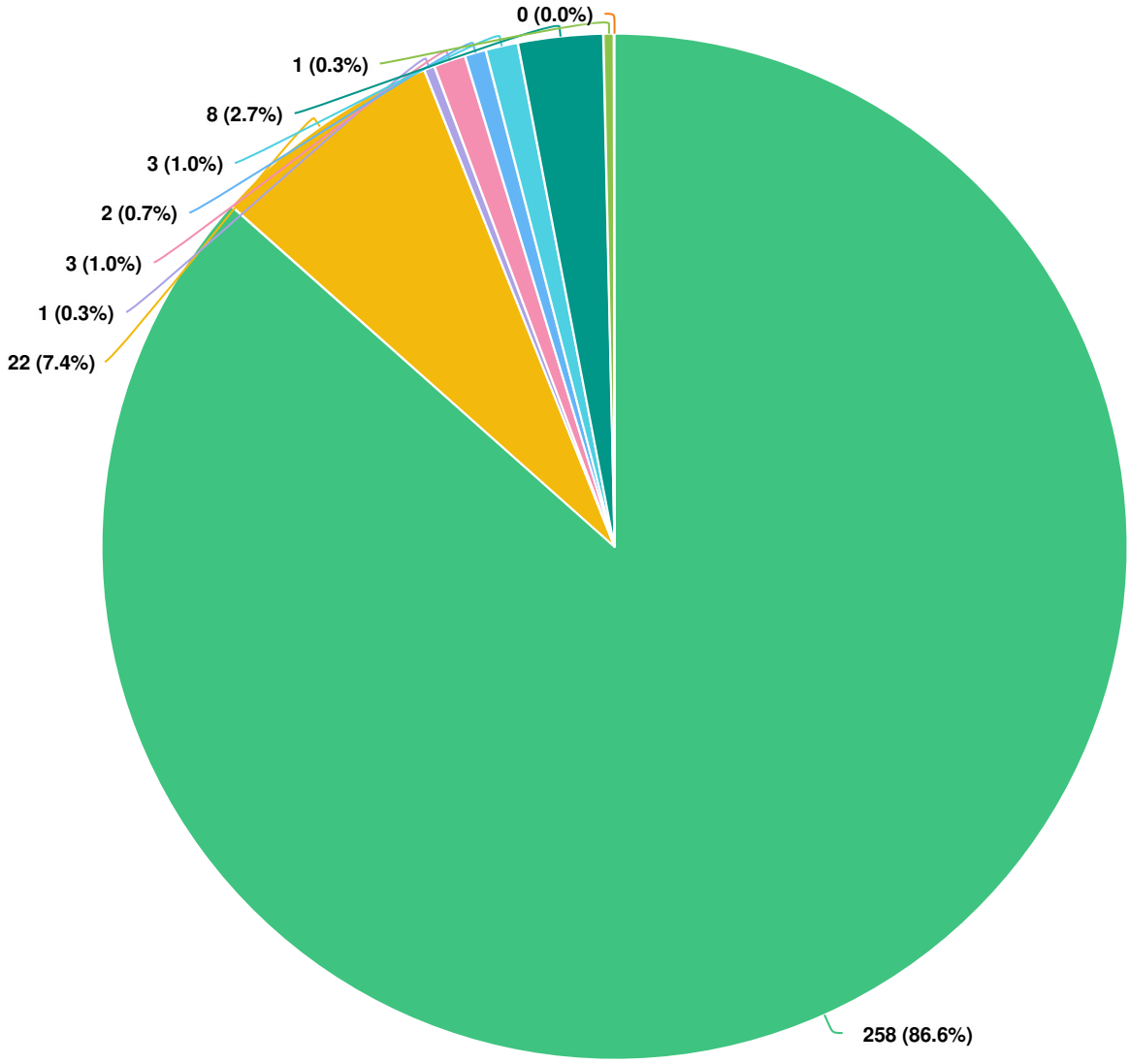
SURVEY RESPONSE REPORT
23 January 2023 - 22 February 2023

PROJECT NAME:
Transportation Master Plan

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Which community do you currently live in (primary, year-round residence)?

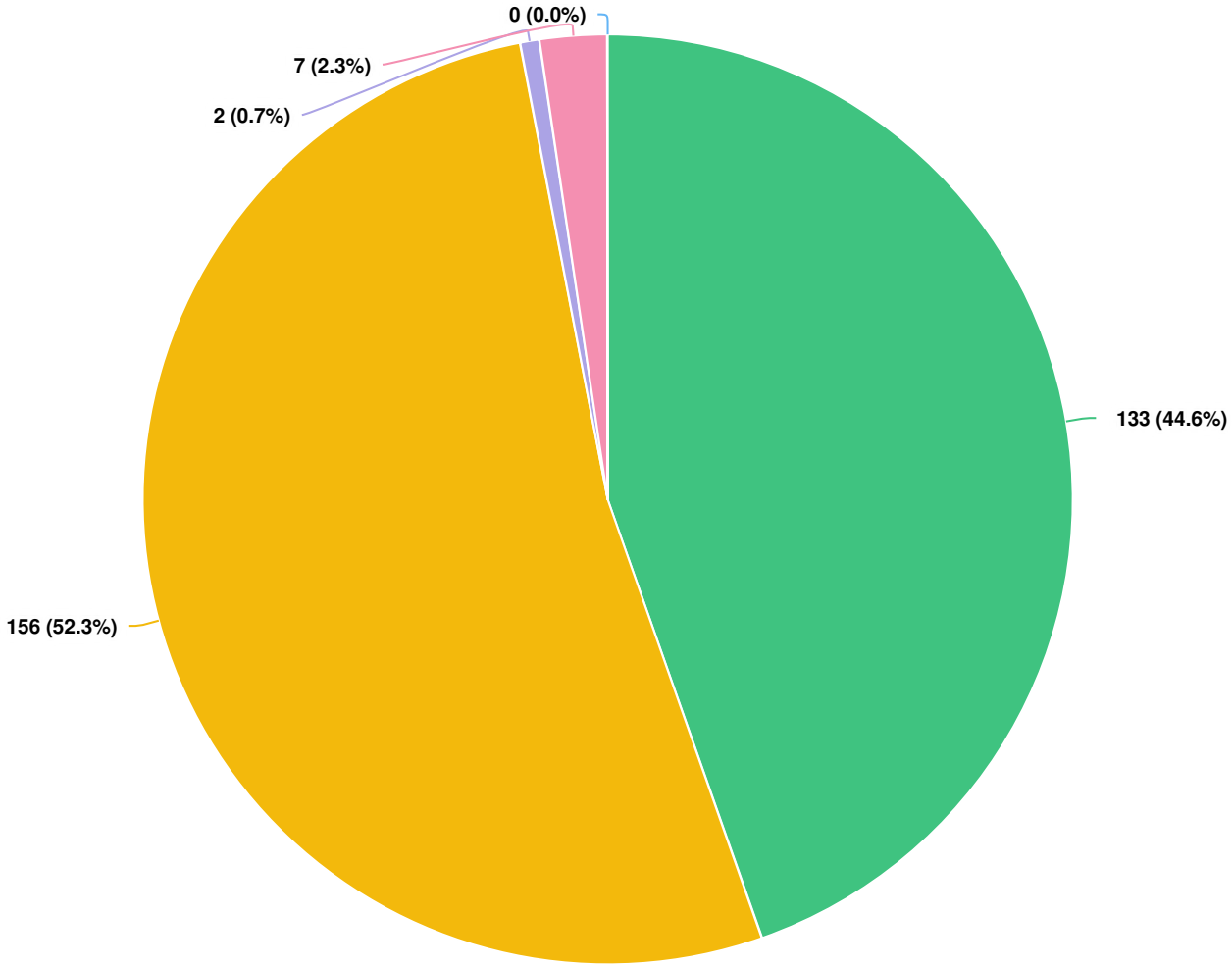


Question options

Amherstburg Windsor Essex Kingsville Lakeshore Tecumseh LaSalle
Another community Leamington

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q3 Studies have shown that gender plays a role in how transportation is experienced. What gender do you identify with?

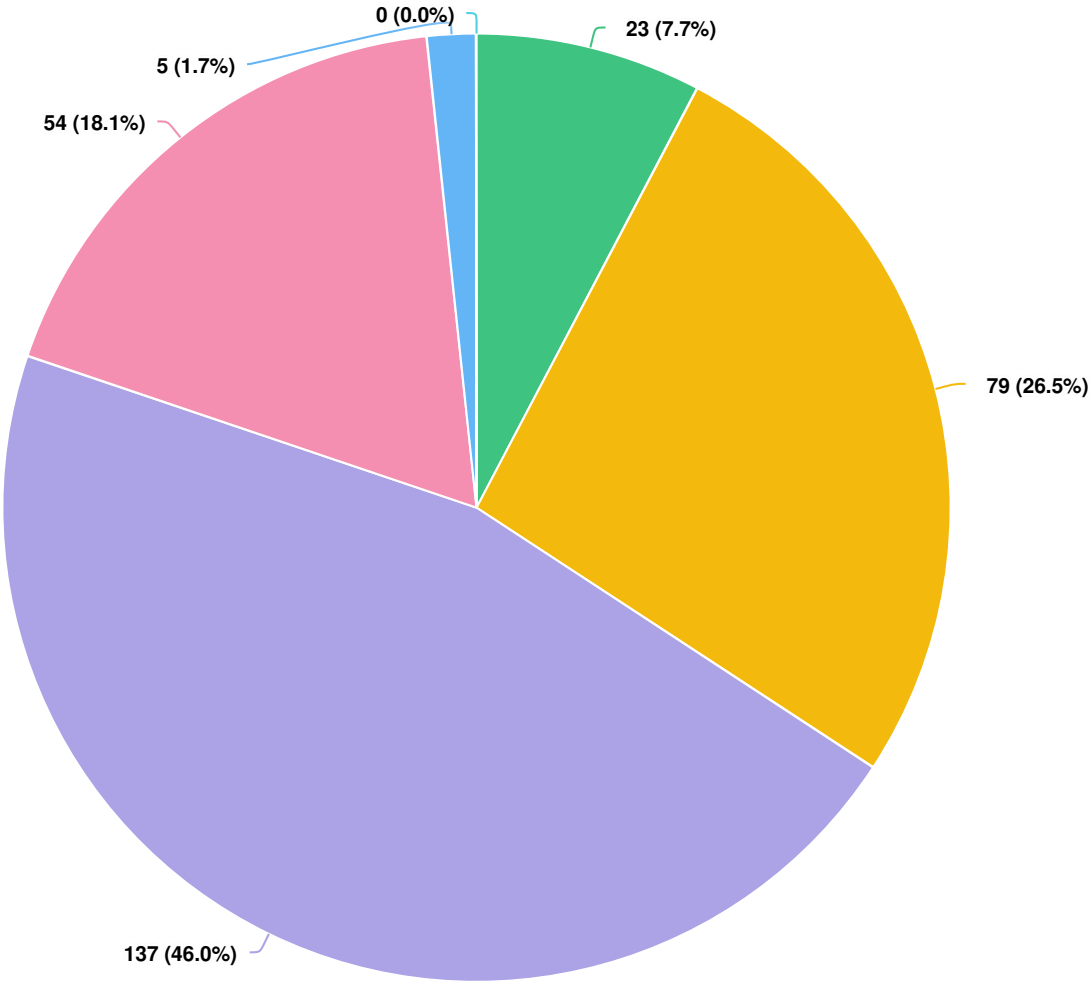


Question options

Male Female Non-binary Prefer not to say Other

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q4 What is your age?

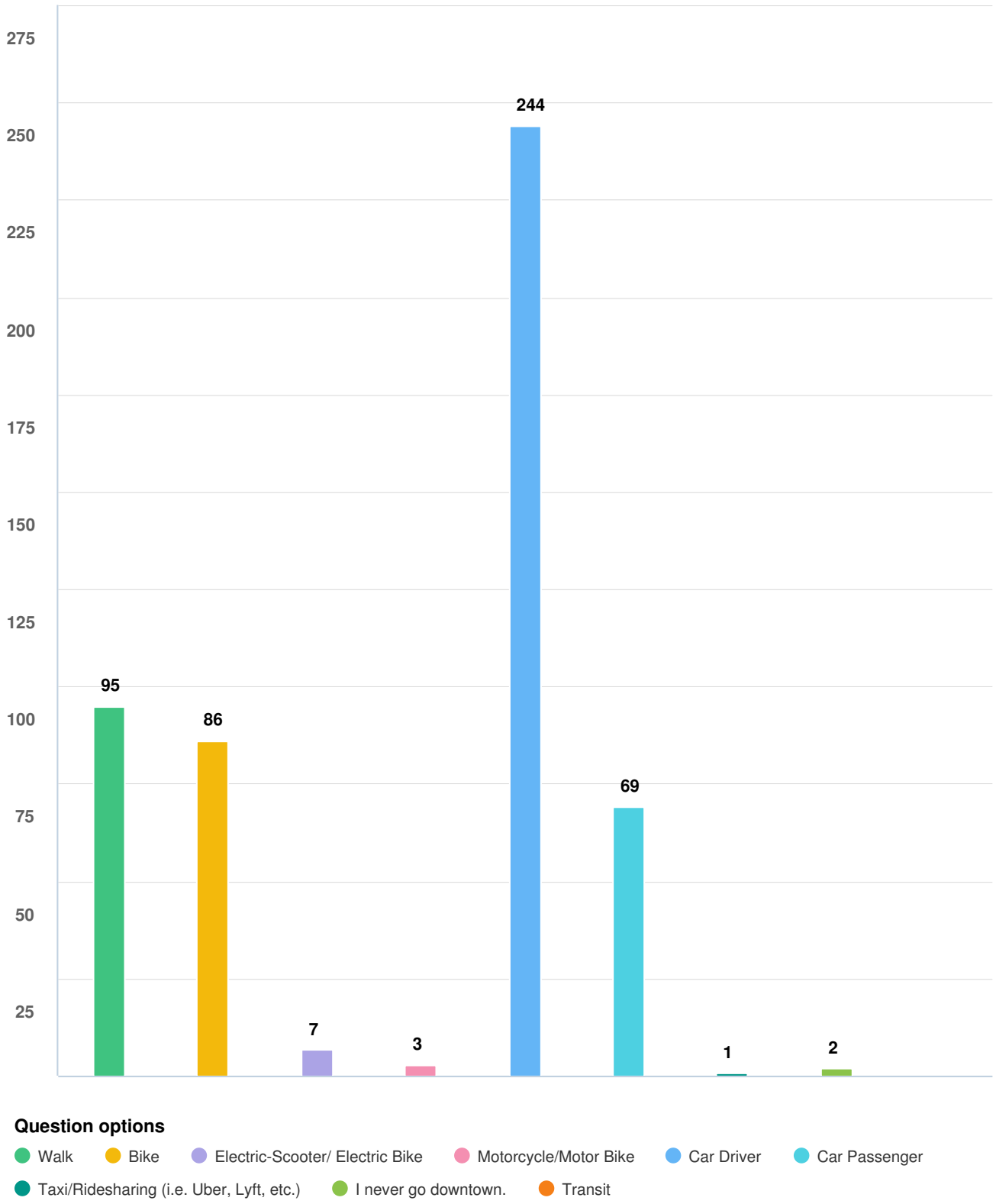


Question options

18 to 29 years
30-44 years
45 to 64 years
65+ years
Prefer not to provide this information.
Under 18 years old

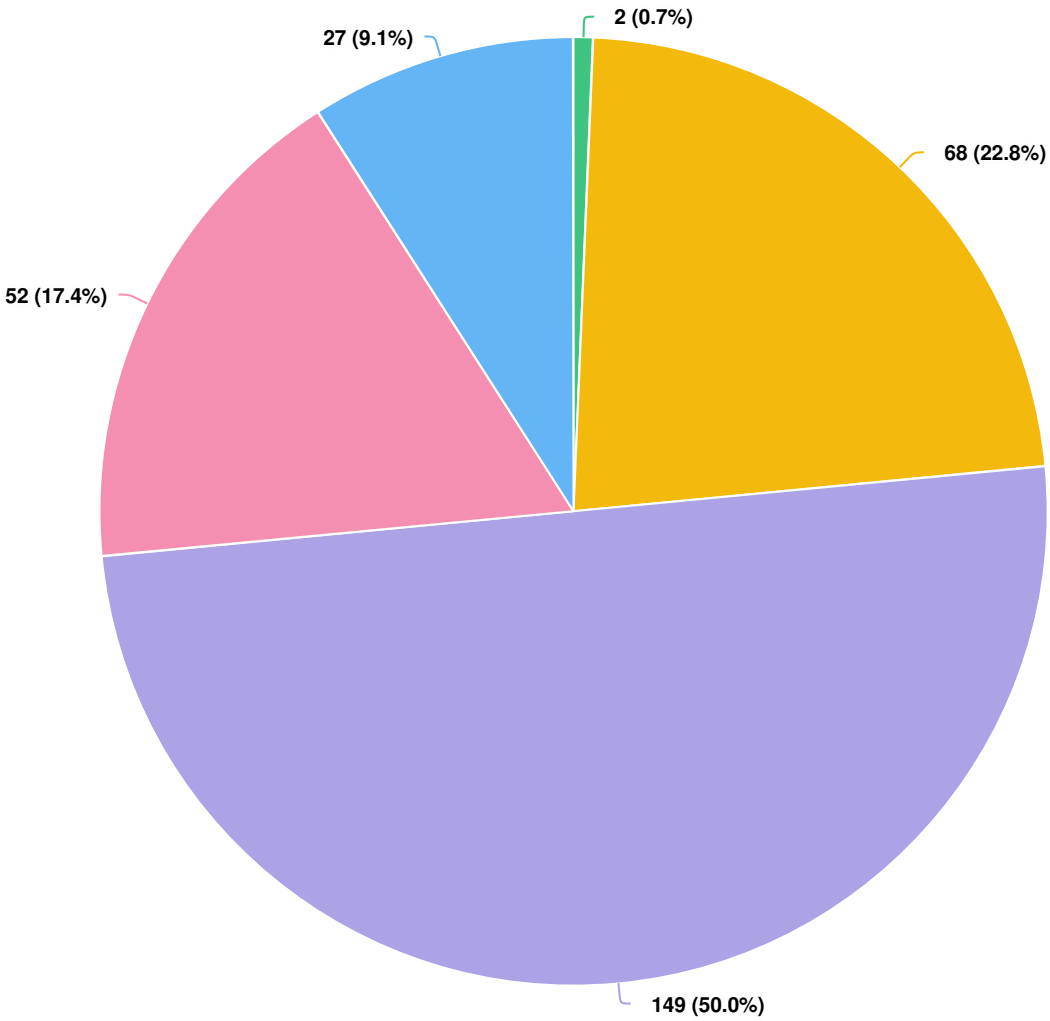
Mandatory Question (298 response(s))
Question type: Radio Button Question

Q5 What is your primary mode of transportation to access Amherstburg Downtown? Please check all that apply.



Mandatory Question (298 response(s))
Question type: Checkbox Question

Q6 How many vehicles does your household currently own or have access to?

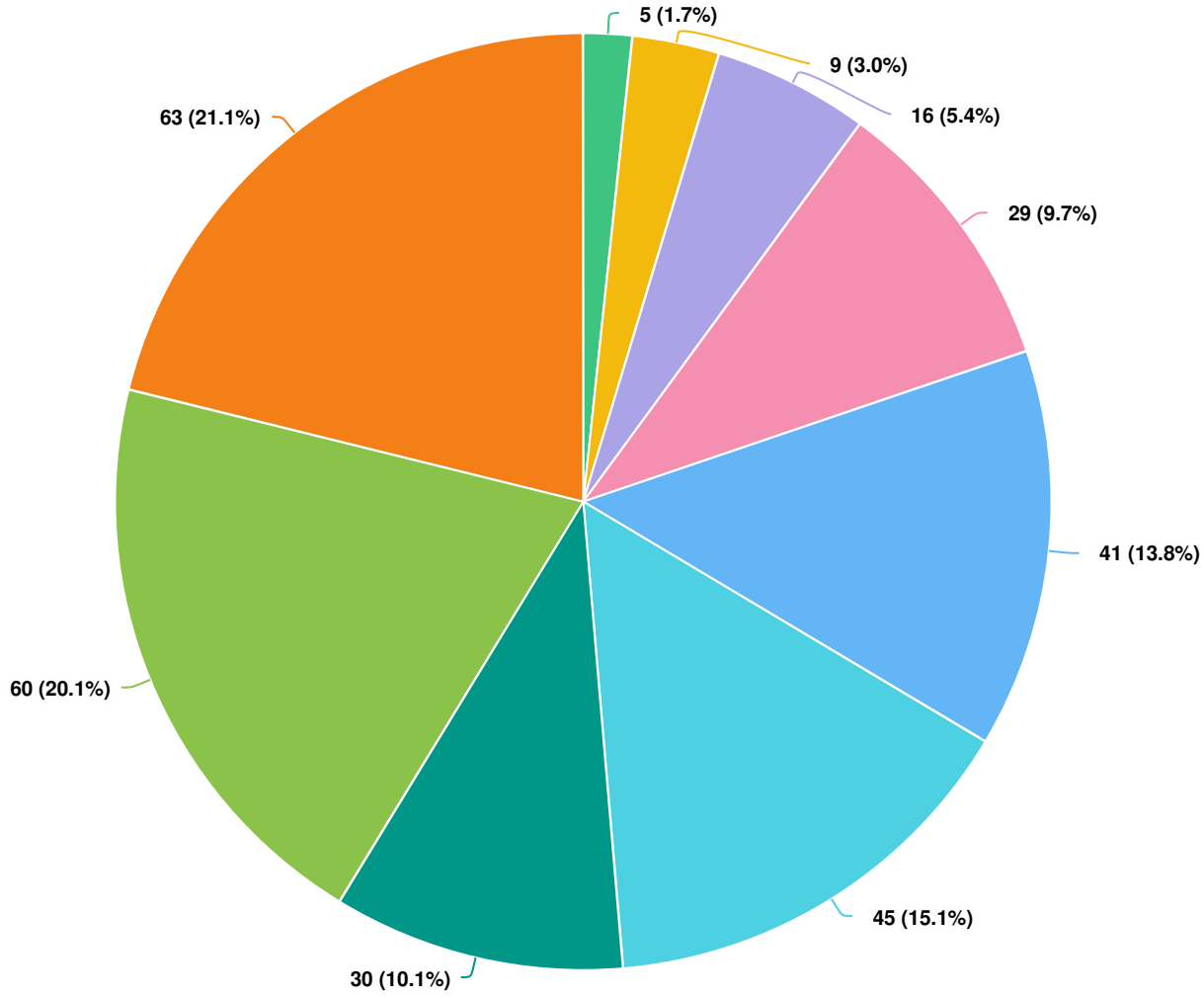


Question options

Zero One Two Three Four or more

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q7 What is your annual household income range?

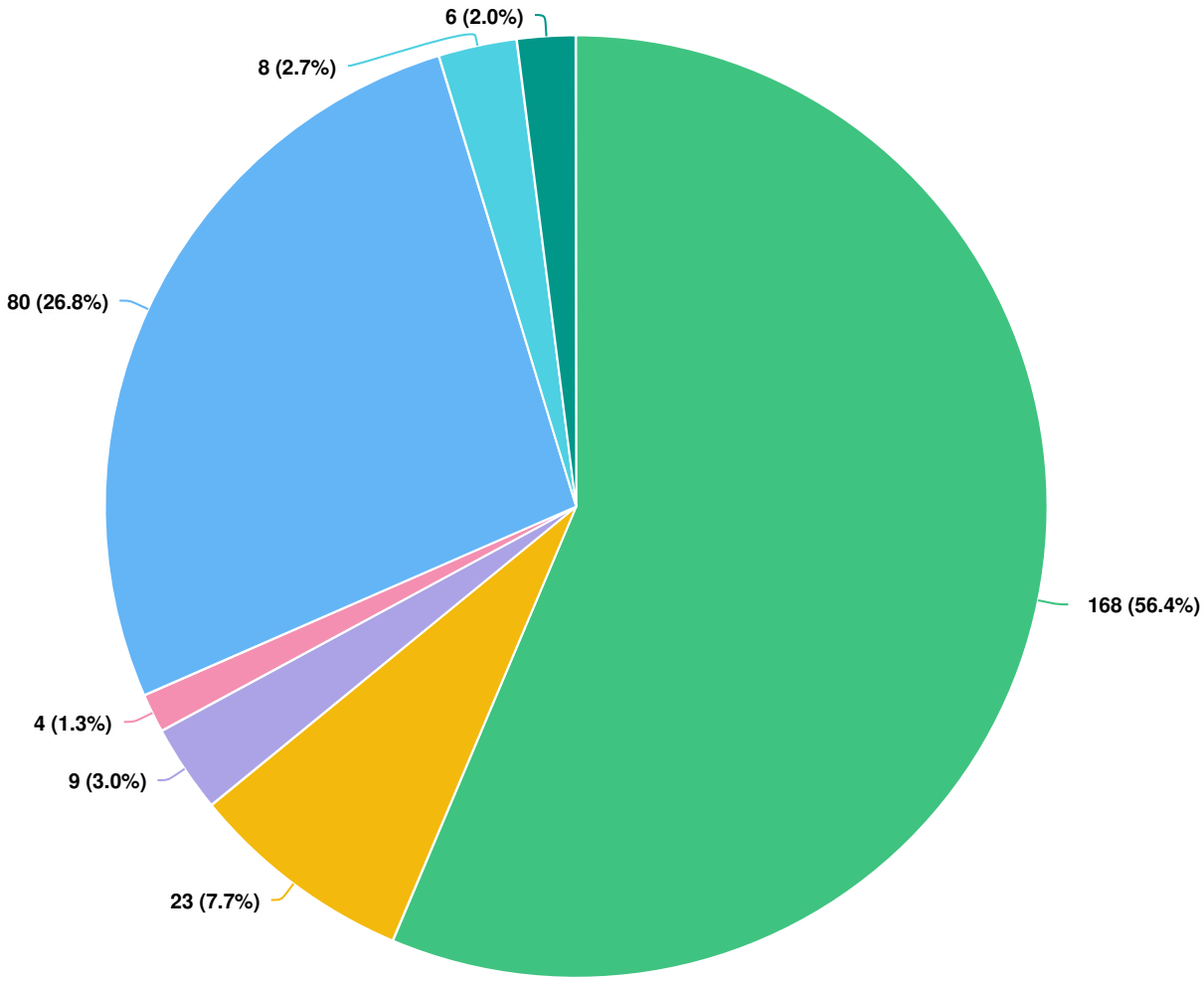


Question options

- $0 to $19,999
- $20,000 to $39,999
- $40,000 to 59,999
- $60,000 to $79,999
- $80,000 to $99,999
- $100,000 to $124,999
- $125,000 to $149,999
- $150,000 or greater
- I prefer not to provide this information.

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q8 What is your current working status?

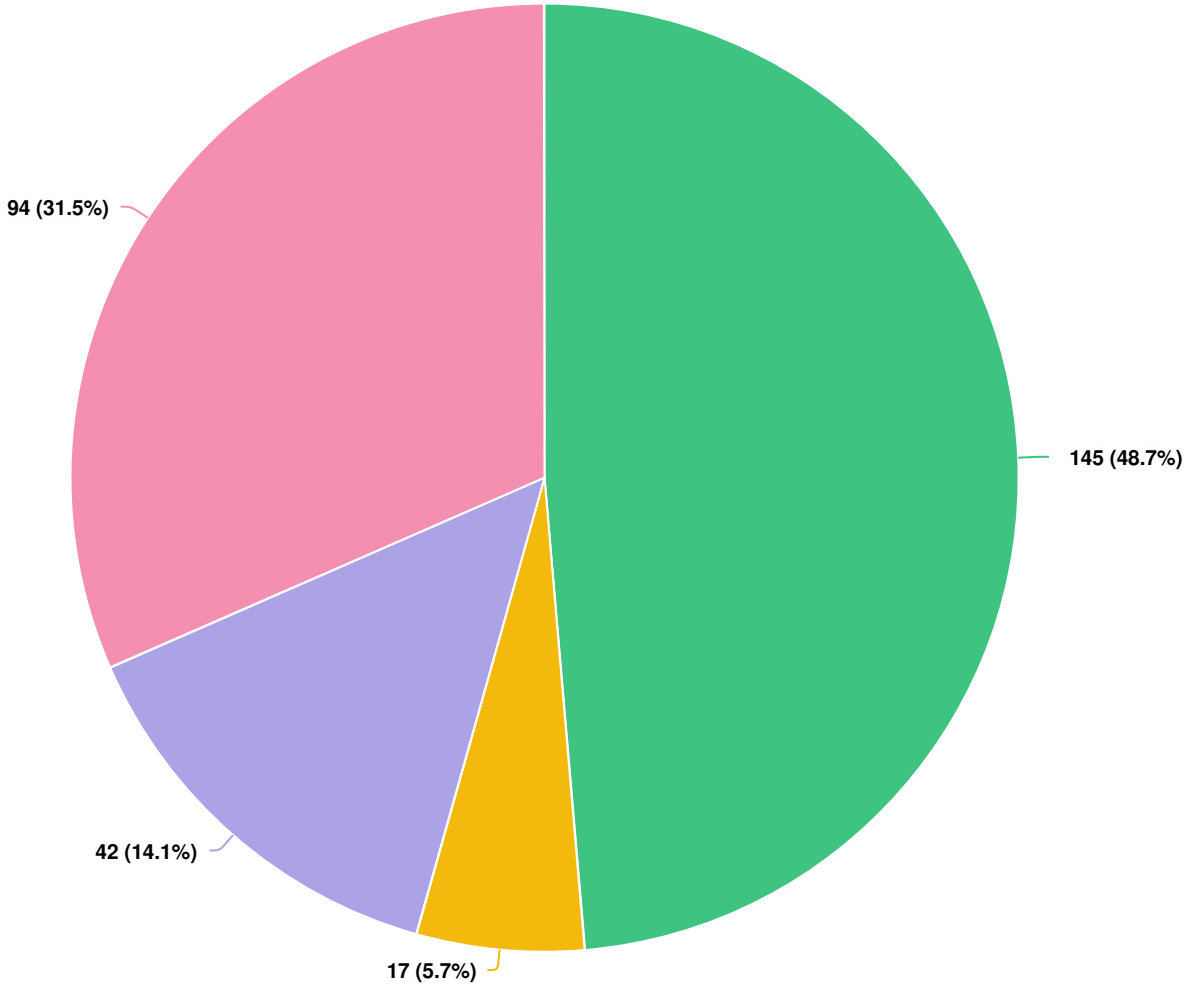


Question options

Employed full-time
Employed part-time
Not currently employed
Student
Retired
Other
I prefer not to provide this information.

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q9 If you are currently employed, do you typically work on-site or remotely?

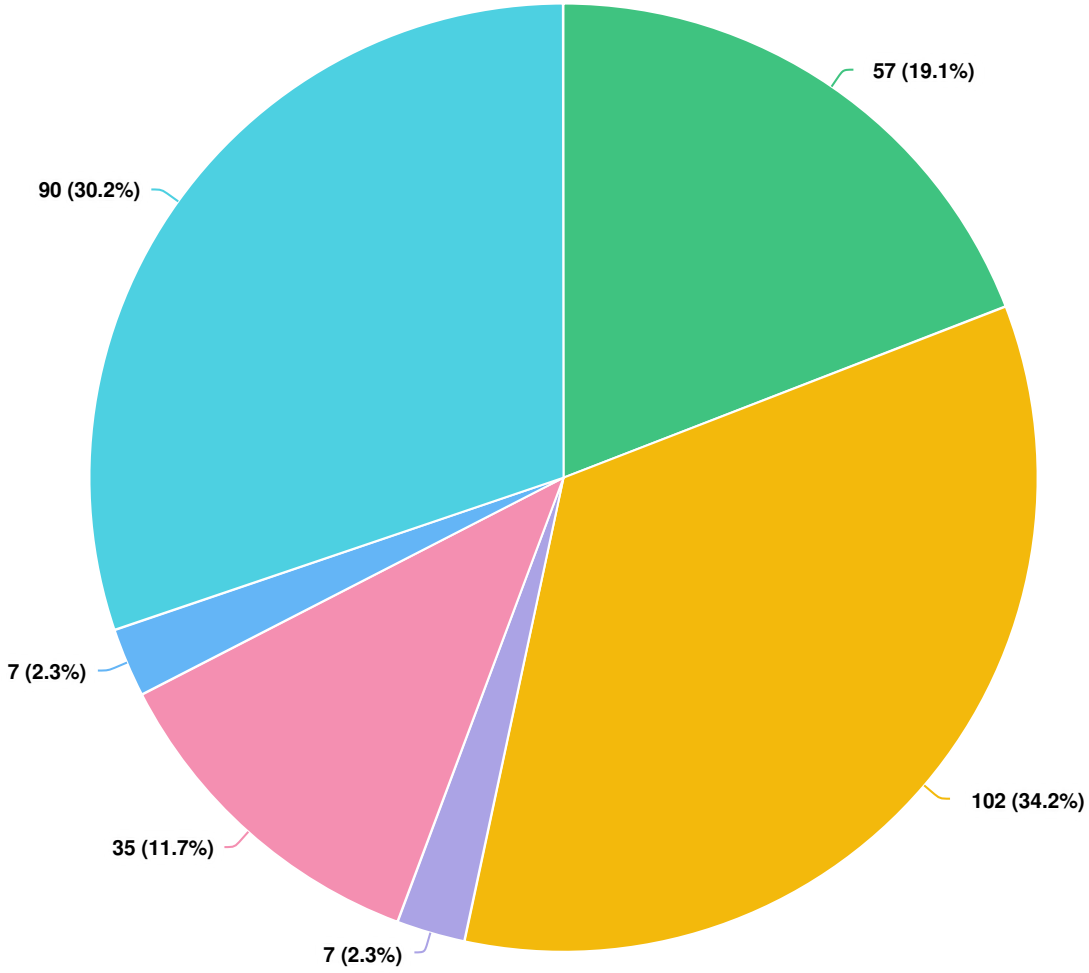


Question options

- Primarily or exclusively in-person
- Primarily or exclusively remote
- Hybrid / a mixture of both
- I am not currently employed

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q10 If you are currently employed, where is your typical place of work?

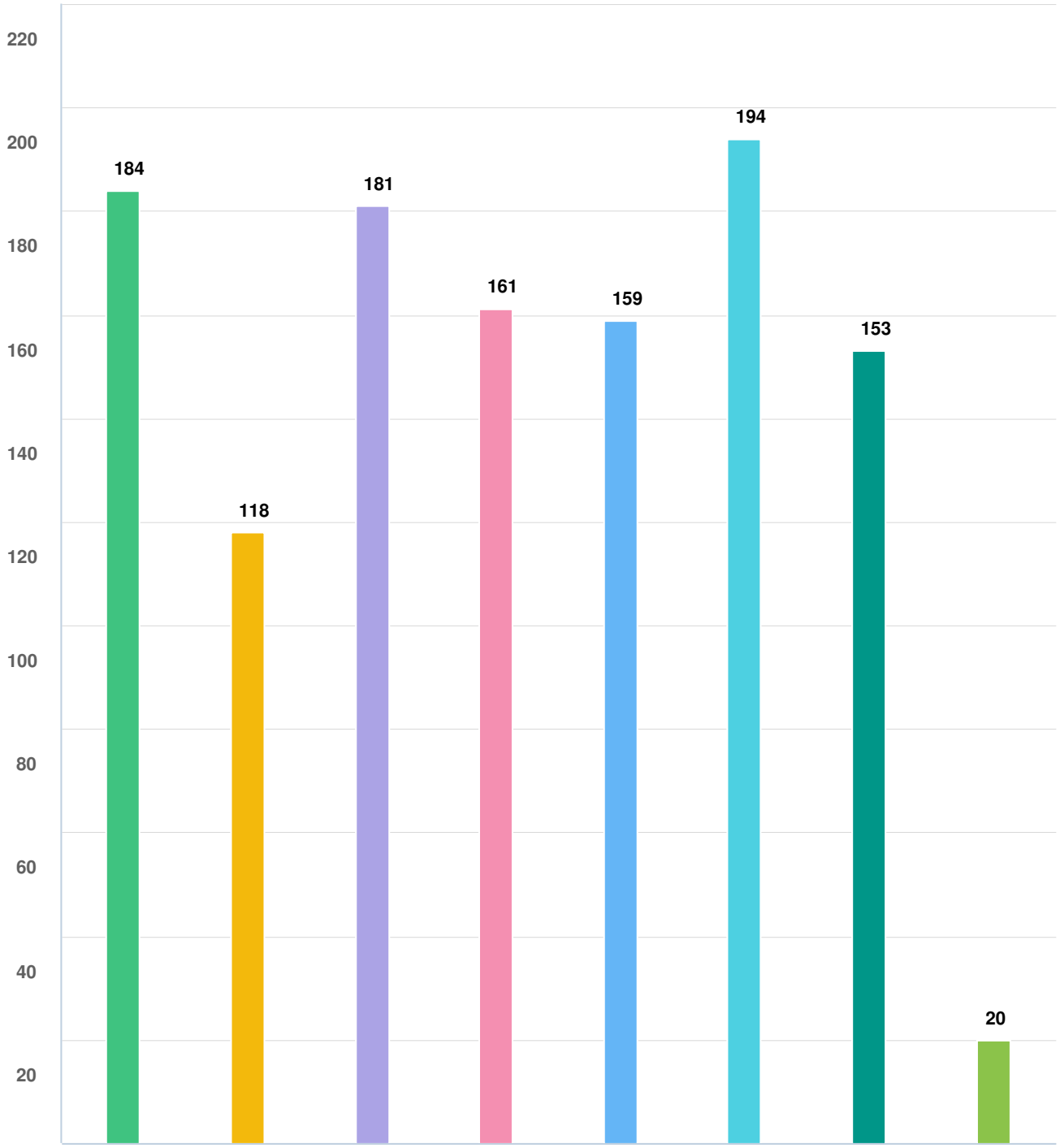


Question options

- Within Amherstburg (the Town)
- Windsor
- United States
- Another location within Essex County
- Another location within Ontario (outside of Essex County)
- I am not currently employed

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q11 Many residents of Amherstburg say they value its 'small town feel'. What do you think gives the Town this 'small town feel'?



Mandatory Question (298 response(s))
Question type: Checkbox Question

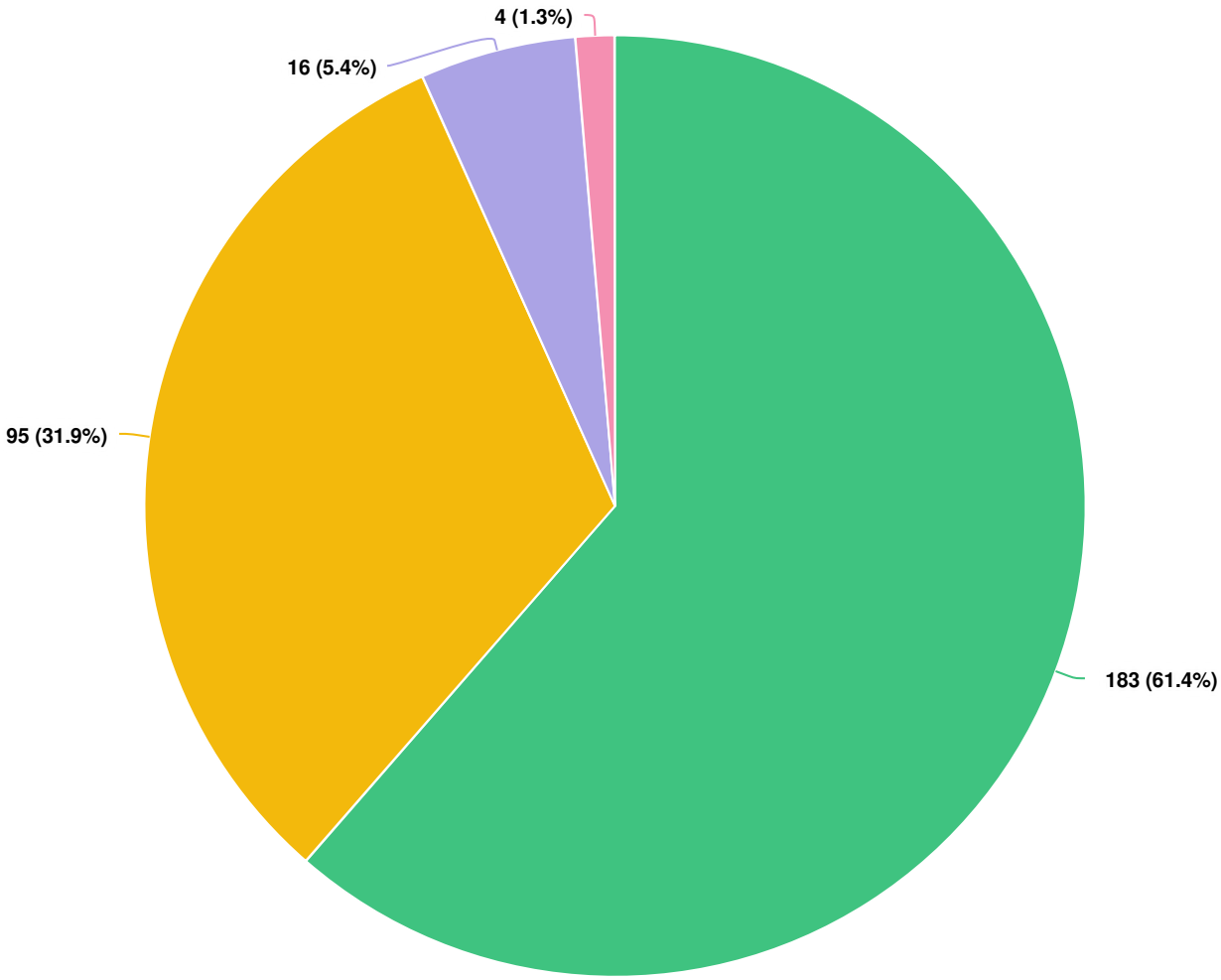
Q12 If you chose 'other in the previous question about what you think gives the Town this 'small town feel', please specify below.

1/25/2023 01:29 PM	Small local shops and great eateries
1/25/2023 01:42 PM	all the above plus
1/25/2023 01:46 PM	The fact that's its a small town. Please dont try to change that.
1/25/2023 03:13 PM	Gossip
1/25/2023 09:20 PM	Recreational
1/26/2023 08:28 AM	Everyone knows each other or knows others that others know
1/26/2023 03:07 PM	It's not a big city lol. I
1/27/2023 05:44 PM	Roads that do not have large potholes and cracks. Roads that will not cause wear and tear on vehicles. Roads that feel safe to drive on.
1/31/2023 10:05 AM	no response
2/03/2023 07:59 PM	It is no longer a small town to those who grew up here. It only has a small town feel for the people who have moved here from the cities.
2/03/2023 08:54 PM	beach-town feel in the downtown area
2/07/2023 12:41 PM	Not alot of high rise buildings, not alot of huge stores and commercial bldgs, town is a small area to drive through.

2/09/2023 06:59 PM	There is no small town feel anymore your just building more and more houses no one can afford
2/11/2023 06:22 PM	friendly people
2/14/2023 01:47 PM	It's size, or rather lack thereof
2/14/2023 02:33 PM	The availability of bike lanes and safe walking paths
2/14/2023 05:47 PM	Space that is designed at human level: smaller roadways, signage at eye level.
2/14/2023 11:24 PM	It used to be a nice small town feel. Lots of local work employers and business. Now it’s a bedroom town costing us way more tax dollars. We need more industry.
2/15/2023 09:38 PM	shops, restaurants

Optional question (19 response(s), 279 skipped)
Question type: Single Line Question

Q13 Comfort and image of the Town: Rate the Town based on its visual attraction as a place.

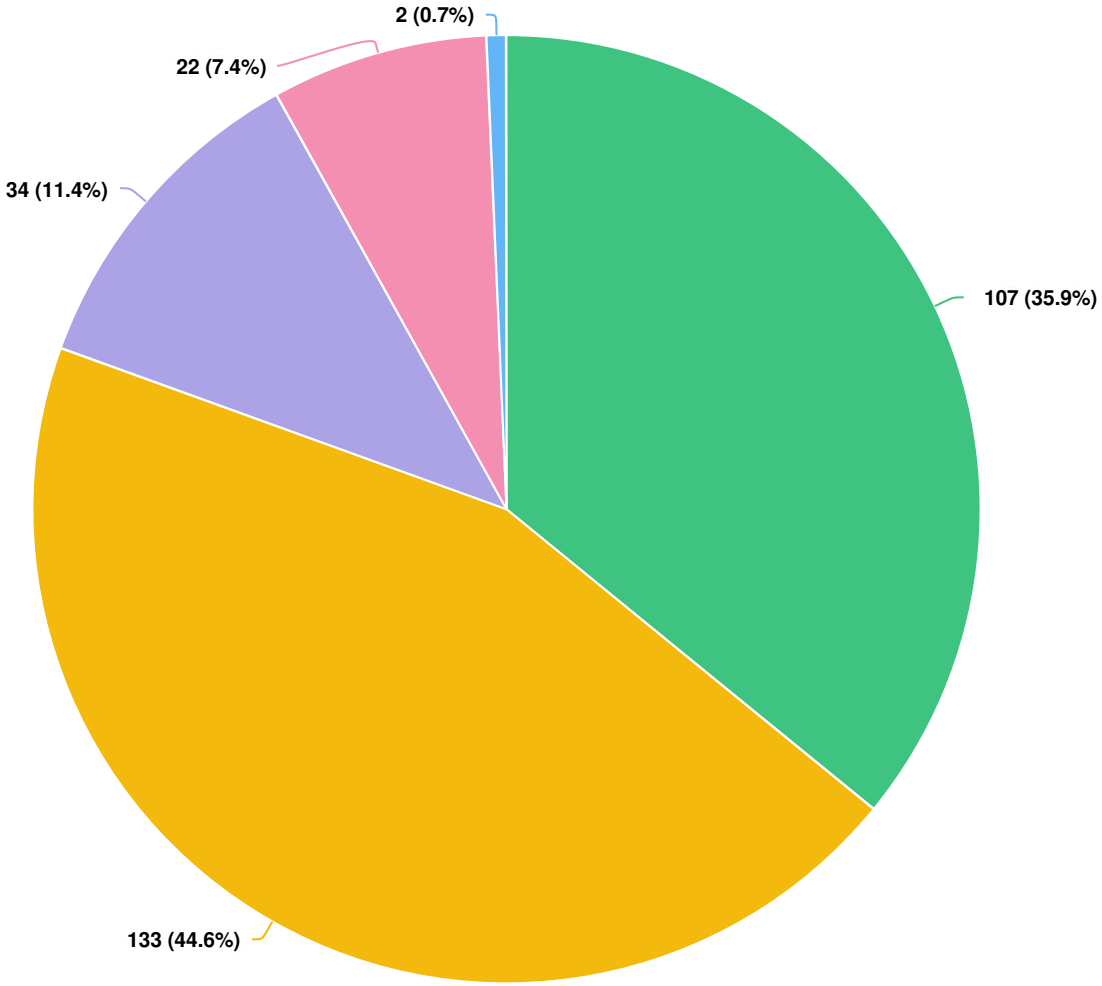


Question options

- I love Amherstburg's visual attraction as a place
- I somewhat like Amherstburg's visual attraction as a place
- I have no opinion on Amherstburg's visual attraction
- I do not like Amherstburg's visual attraction as a place

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q14 Getting around Town and Connectivity: Rate the Town based on how easy it is to find your way around.

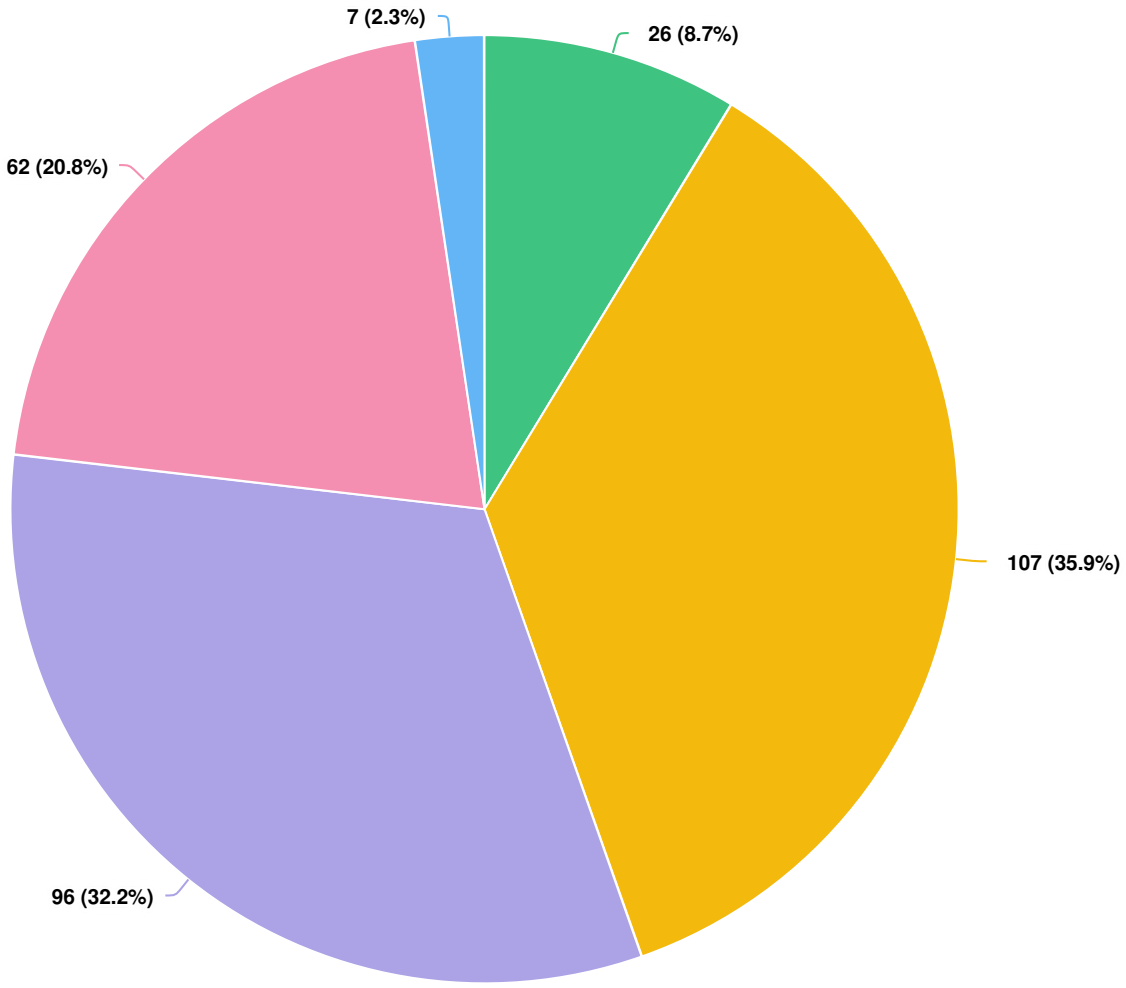


Question options

Very Easy Easy Indifferent Difficult Very Difficult

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q15 Access and Linkages: Rate the Town's accessibility for all (i.e. children, families, seniors, people with disabilities).

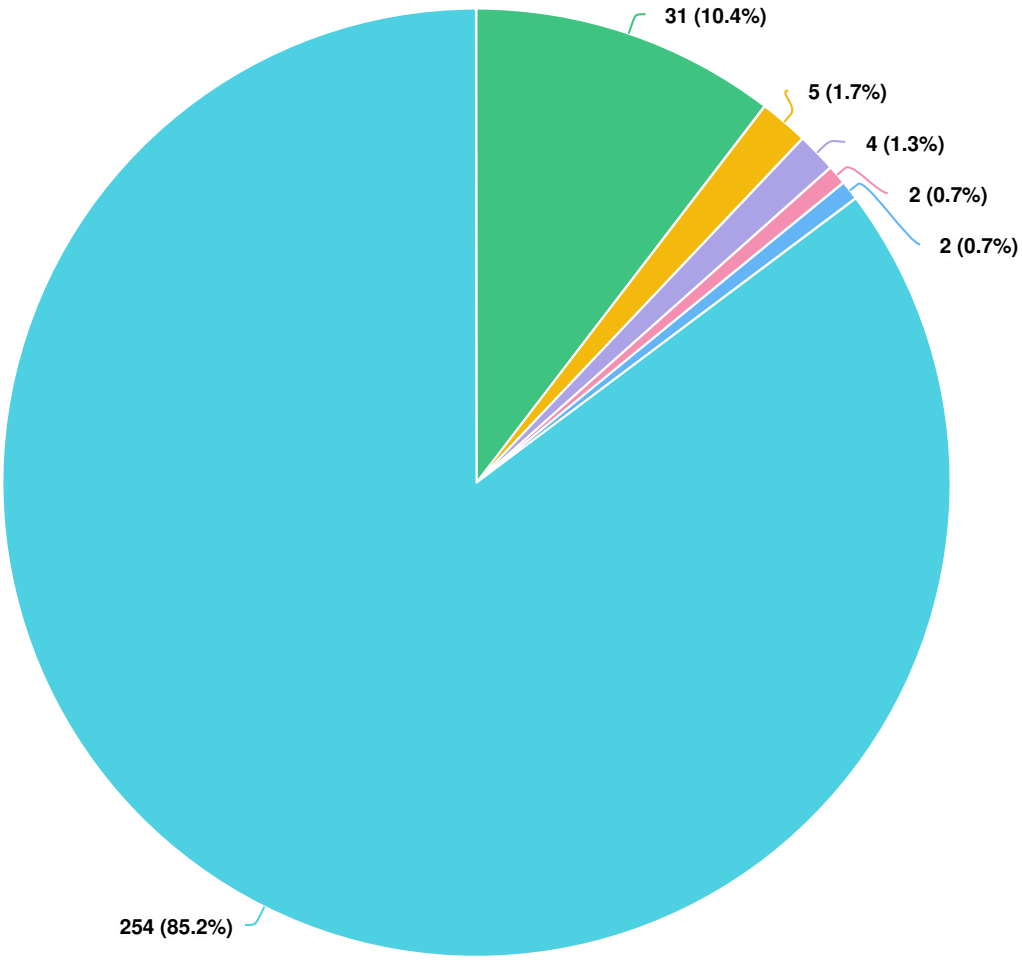


Question options

Very Easy Easy Indifferent Difficult Very Difficult

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q16 What is it like to take Public Transit around Town?



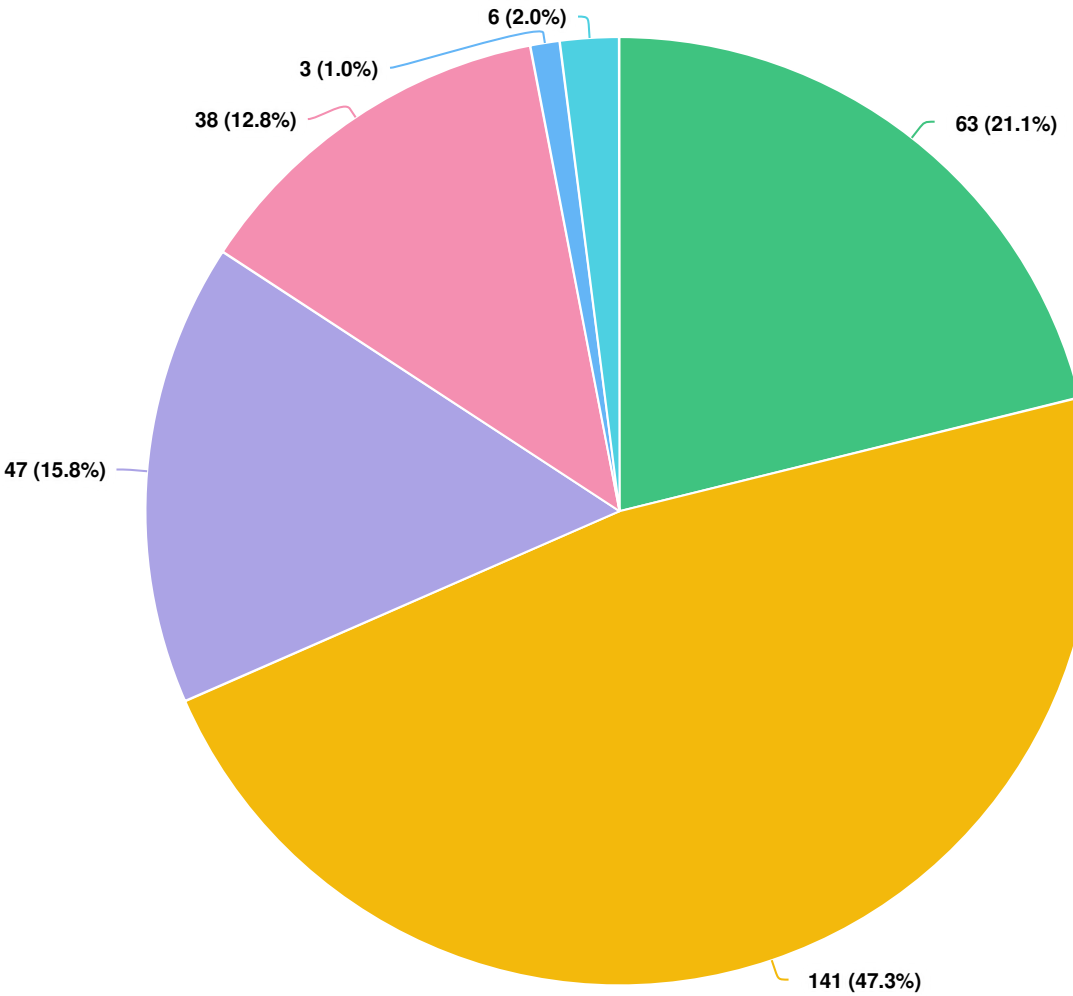
Question options

Poor Sufficient Indifferent Good Excellent

N/A - I have not used the Town's Public Transit System.

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q17 What is it like to drive around the Town?

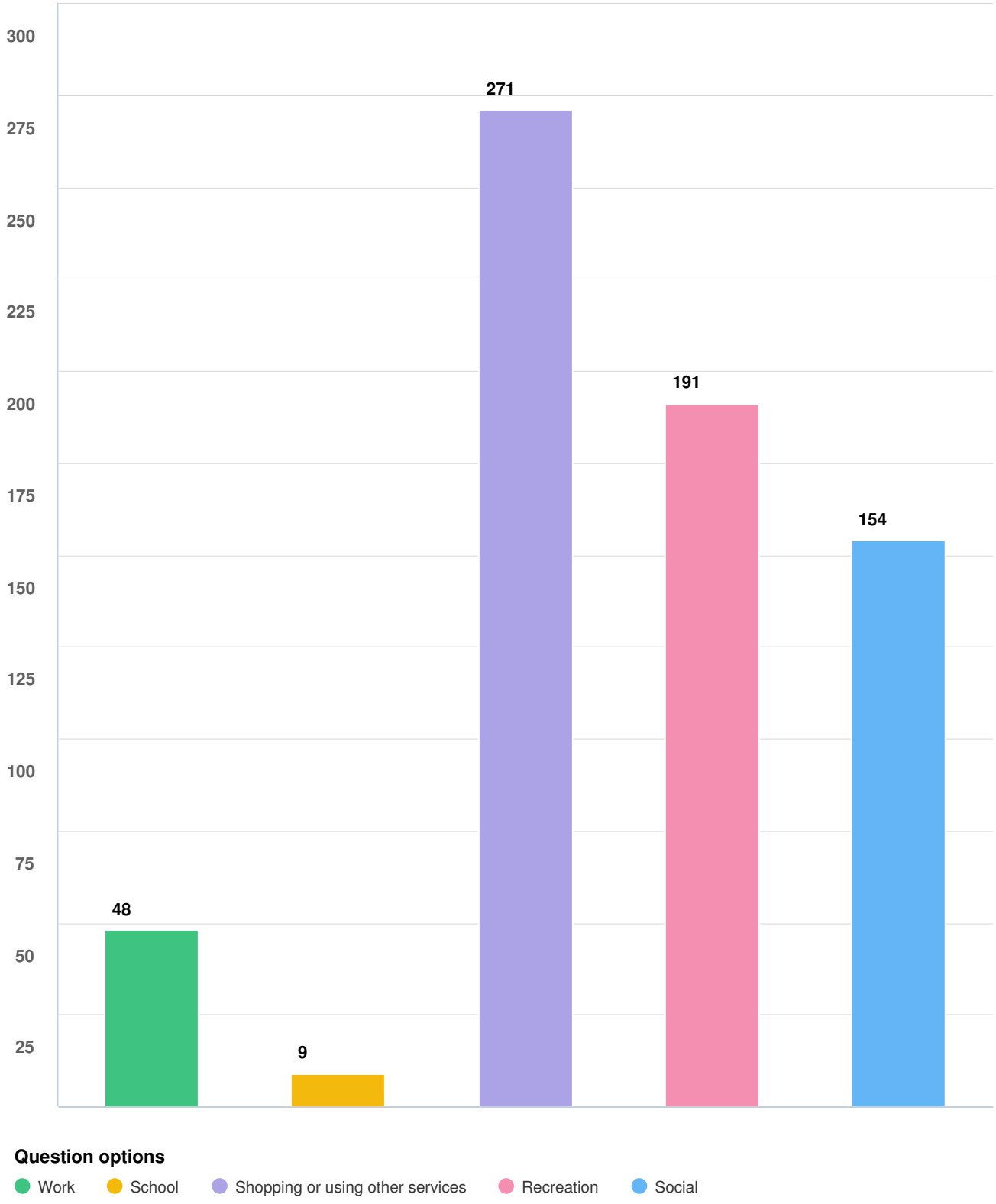


Question options

Very Easy | Easy | Indifferent | Difficult | Very Difficult | N/A - I do not drive.

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q18 What is your most common purpose for travelling in Town? Select your top 3.



Mandatory Question (298 response(s))
Question type: Checkbox Question

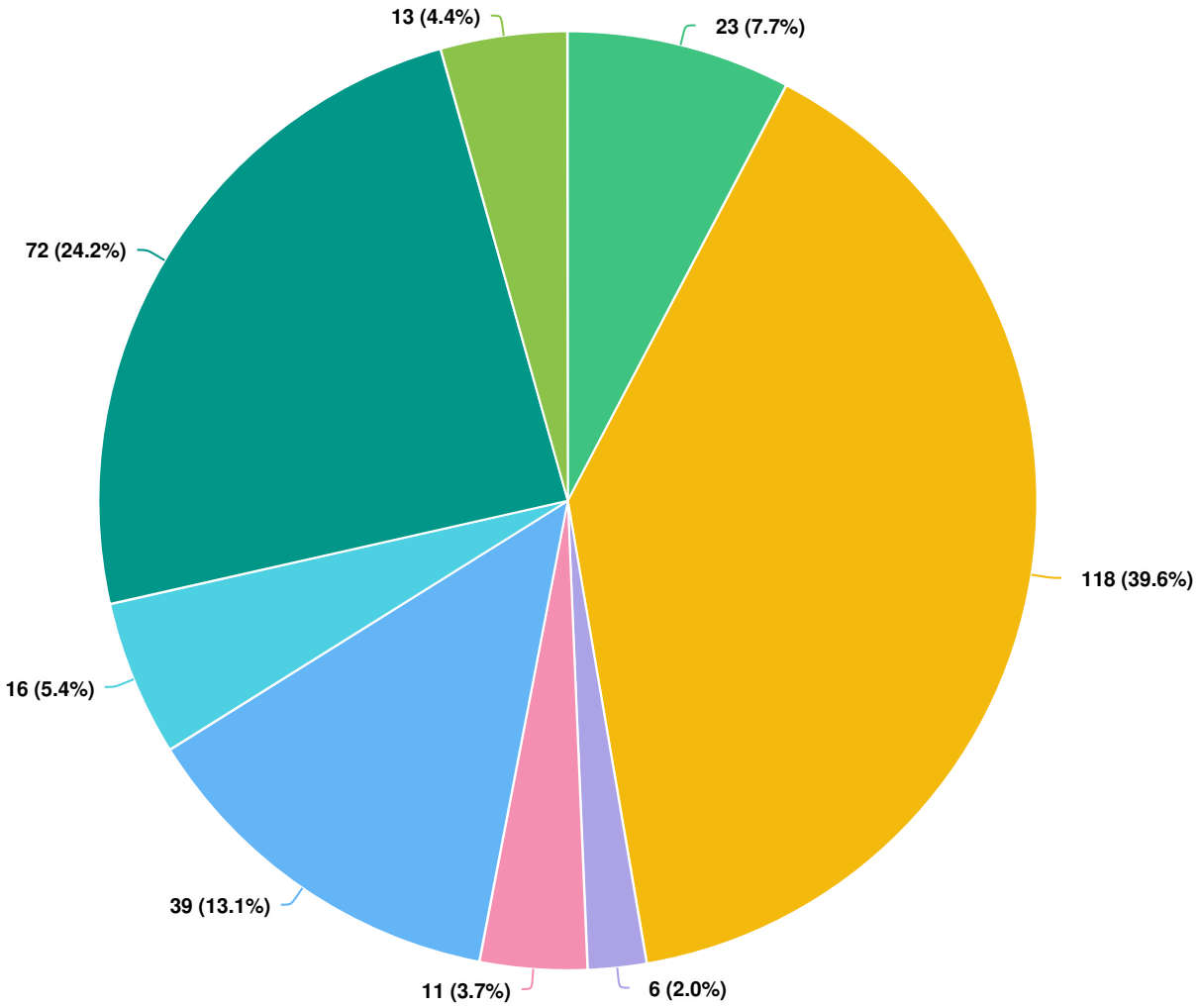
Q19 If your purpose for travelling in Town is not listed in the previous question, please specify it below.

1/25/2023 02:14 PM	Volunteering
1/25/2023 03:05 PM	Church and church activities
1/25/2023 06:10 PM	Buying drugs
1/25/2023 09:47 PM	Not sure if you have included restaurants in the choices above.
1/25/2023 10:21 PM	Supporting local businesses
1/26/2023 09:53 AM	DON'T FORGET PART OF MCGREGOR BELONGS TO AMHERSTBURG ALSO!
2/07/2023 04:36 PM	Cycling ♀
2/08/2023 02:03 AM	Just to get fresh air
2/14/2023 11:02 AM	Cycling
2/14/2023 11:30 AM	I have riden my bike to Amherstburg more often than when driving my car.
2/14/2023 12:27 PM	I wasn’t aware that we had a public transit system in Amherstburg
2/14/2023 01:17 PM	I bike throughout Amherstburg; I appreciate it's path and strongly encourage more cycling friendly roadways.

	Cycling to amherstburg
2/14/2023 01:47 PM	
	I love the shopping at Romanos Italian store, Lasalle has nothing like this or other grocery shopping
2/14/2023 04:48 PM	
	Cycling destination, having a coffee in town and ride back to Windsor
2/14/2023 02:33 PM	
	Medical
2/14/2023 03:47 PM	
	I feel safe cycling through town
2/15/2023 05:30 AM	
	Cycling to festivals and special events
2/15/2023 06:19 PM	

Optional question (18 response(s), 280 skipped)
Question type: Single Line Question

Q20 **What is the biggest challenge you face when travelling in Amherstburg, regardless of your mode of transportation choice? Please choose one.**



Question options

- Distance or time to destination
- Congestion along the route
- Cost of travel
- Convenience
- Safety
- Access to sidewalks and crosswalks
- Access to cycling infrastructure
- Access to transit stops

Mandatory Question (298 response(s))
Question type: Radio Button Question

Q21 **If there are additional challenges you face when travelling to the Town that are not listed in the previous question, please specify it here:**

1/25/2023 10:28 AM	poor driving habits of others
1/25/2023 01:13 PM	lack of sidewalks
1/25/2023 01:19 PM	More turn lanes, less bike lanes.
1/25/2023 01:24 PM	Excessive speed And aggressive driving
1/25/2023 01:29 PM	Not enough safe bike routes
1/25/2023 01:32 PM	parking
1/25/2023 02:23 PM	Lack of sidewalk or bike lane on Front Rd from Malden rd to River Canard Overpass. There is a sidewalk from ladalle to malden rd, then non existent until south the overpass on the east side of the road. Lots of foot and bicycle traffic on narrow shoulder.
1/25/2023 02:20 PM	Too slow speed limits in school zones
1/25/2023 03:05 PM	Finding parking downtown
1/25/2023 04:32 PM	No sidewalks from Malden to the bridge
1/25/2023 04:54 PM	The sidewalks downtown are terrible. The bricks aren't even and there are trees growing in the middle. They're not accessible.
	We live on front rd n. It’s currently unsafe to ride bikes and walk with

1/25/2023 04:56 PM	the current sidewalk, no barriers to the highway, etc. we often have to drive as a result. We also need to reduce the speed limit on front rd n into town. It's unsafe for families
1/25/2023 05:39 PM	City buses that create potholes on residential streets and slow traffic
1/25/2023 05:43 PM	Because I have a gravel road my children's bus stop was taken away and this has not been addressed yet. In Amherst point we need help desperately with school bussing because they are making our children travel unsafe distances to "community stops"
1/25/2023 05:47 PM	Traffic flow is too slow; too many vehicles for the roads - especially in residential areas (e.g., Kingsbridge only has 2 exits)
1/25/2023 06:07 PM	Need a crosswalk at Alma and Victoria street
1/25/2023 06:10 PM	Roads in terrible shape.
1/25/2023 06:32 PM	Parking
j 1/25/2023 07:00 PM	county roads are falling apart
1/25/2023 07:02 PM	PUBLIC TRANSIT
. 1/25/2023 07:29 PM	There needs to be a right hand turning lane at sandwich and Pickering for cars travelling to Walmart. The congestion is ridiculous at times, you sometimes have to wait multiple light cycles
1/25/2023 09:00 PM	Too many impatient drivers. Crosswalk signs are in disrepair. Points of interest are far apart with no public transit connection (libro, downtown, afht/seasons). There's no sun protection on main roads, makes summer walking miserable, impossible for dogs.
	You have missed the boblo ferry in all the previous questions. Real

1/25/2023 09:47 PM	problems when river is frozen, low water levels or ongoing breakdowns. There are no services on the island, so getting across to the mainland is critical
1/25/2023 10:21 PM	Sometimes parking
1/25/2023 10:32 PM	Lack of parking spaces. The lots that are available require walking a distance.
1/26/2023 08:15 AM	Lack of transit in the county, and horrible taxi service
1/26/2023 08:28 AM	Poor road conditions. Cry road 50 from 41 to 7th is brutal. Alma is brutal. Family on concession 6 south and north. North is the worst road ever
1/26/2023 09:12 AM	Closed streets in summer. We can't afford to shut main arteries down to traffic.
1/26/2023 09:53 AM	DON'T FORGET PART OF MCGREGOR BELONGS TO AMHERSTBURG ALSO!
1/26/2023 11:08 AM	Not enough parking close to the downtown.
1/26/2023 06:53 PM	Slow/bad drivers
1/26/2023 08:39 PM	Travelling on Sandwich street on Saturday is challenging due to a lot of traffic which makes it slow- when travelling thru town the traffic lights are not synced to flow traffic that is going to work in the AM- lack of bike lanes downtown
1/27/2023 05:44 PM	Crosswalk encroachment of cars while crossing the road
1/27/2023 05:44 PM	Many of tge roads are on need of repair- specifically the 6 concession north between Alma and Texas. The 6th concession has more residential homes than the 5th - yet, the 5rh concession has

	been repaired.
1/28/2023 09:00 AM	When I'm driving my car it is congestion. When I'm walking the biggest challenge is access to sidewalks.
1/28/2023 11:02 AM	I find Dalhousie a major accident waiting to happen. From Toddy Jones to just past the Legion. It is a walking, people filled area that is one step away from someone getting hit.
1/28/2023 11:45 AM	If streets are closed for events, I can't take my disabled parents out because it becomes too far to walk
1/28/2023 05:30 PM	Uber and ride sharing not available
1/29/2023 03:20 PM	Deteriorated and un-maintained municipal roads and streets.
1/31/2023 10:12 AM	excessive speed of most vehicles on the road
2/01/2023 08:35 AM	Parking Downtown in the summer
2/01/2023 01:12 PM	Lack of safe pedestrian or cycling space on front rd north from Malden rd to just past ranta marina even though that stretch of highway has a high level of car and truck use.
2/01/2023 07:11 PM	County roads are always clear during the winter, but local roads are never cleared quickly
2/05/2023 02:29 PM	Some corners have problems with visibility when turning onto a main road. Also when walking and crossing at lights drivers turn right on red without noticing pedestrians.
2/06/2023 11:42 PM	Trying to turn onto Sandwich Street from the businesses on the street.

2/07/2023 06:57 AM	Some of the walk signals do not give enough time to get across.
2/07/2023 08:05 AM	Lack of a sufficient walking/biking path from Middle Side Rd to downtown Amherstburg
2/07/2023 10:50 AM	Parking, open streets bs
2/07/2023 11:46 AM	Depends on time of day, or weekend, but can be quite busy and congested along Sandwich.
2/07/2023 04:36 PM	I live on Sandwich Street, NO safe cycling routes, only a portion of Texas road, which always has illegal parking on it, making it worse than cycling on roads with no lanes. I have contacted bylaw , nothing is ever done! walking in town also dangerous
2/07/2023 06:34 PM	Parking when it's busy/events
2/07/2023 06:49 PM	Please stop with all the fast food restaurants. Also the traffic on fromt rd is so congested. It is only going to get worse when the new subdivision goes in. I hope there is a plan in place.
2/07/2023 08:57 PM	When driving and cycling, the town has too many speedy impatient drivers. Drivers used to be much more patient and courteous.
2/07/2023 09:01 PM	Lack of sidewalks and properly sized sidewalks
2/07/2023 11:15 PM	Light on roads that are dark
2/08/2023 03:18 PM	Drivers not following traffic rules.
2/08/2023 03:46 PM	Walking on Front Rd N is very difficult, almost impossible to cross street due to traffic volume and speed of vehicles

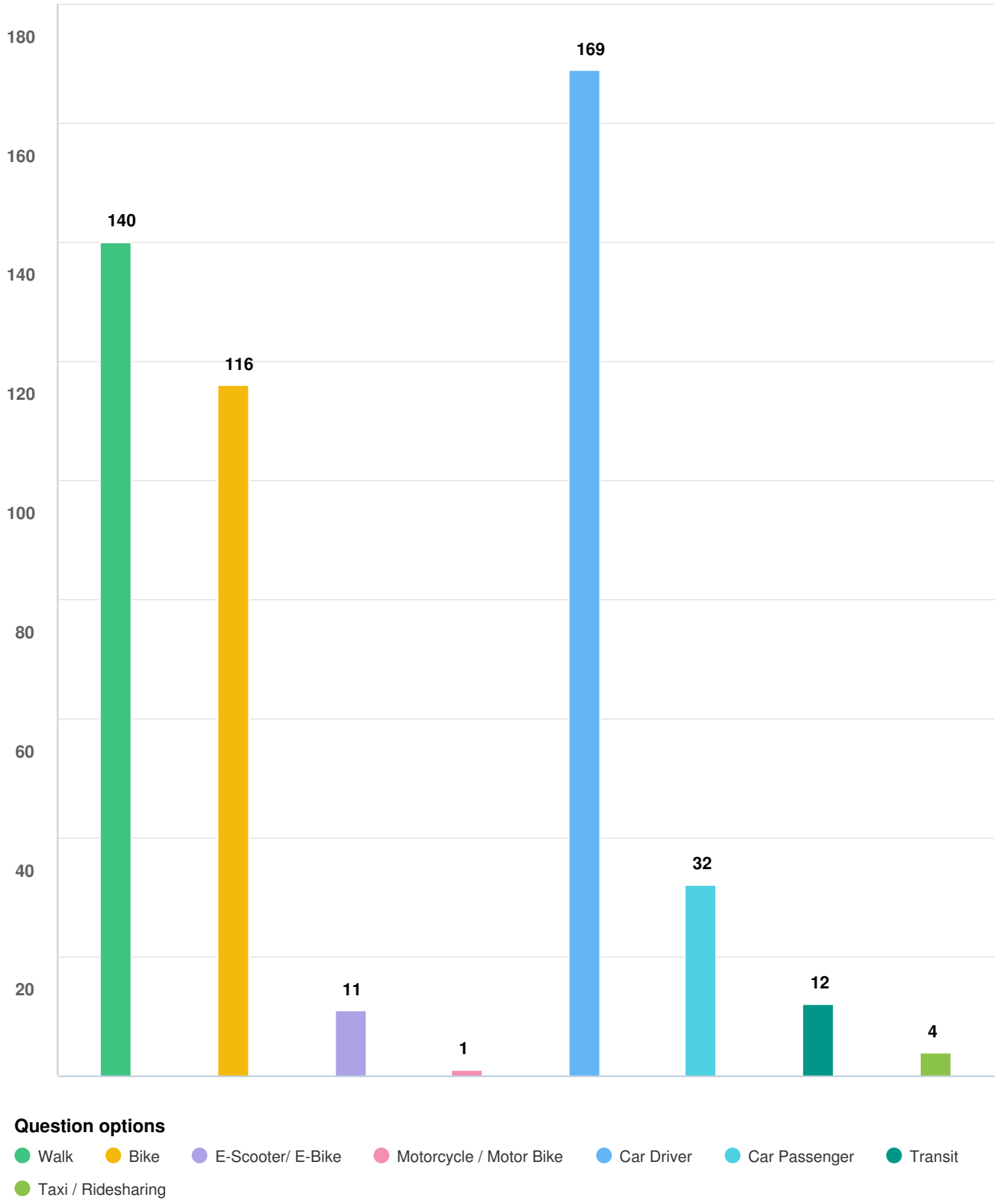
2/09/2023 06:59 PM	People driving 10 under the speed limit
2/09/2023 10:07 PM	Safety, specifically for Pedestrians. Poor lighting along Sandwich/Simcoe. The issue is not vehicle speed, it’s vehicles not fully stopping at red lights.
2/10/2023 08:59 AM	Traffic does not yield the right of way to pedestrians when Crossing at traffic lights
2/10/2023 02:17 PM	finding parking spaces
2/10/2023 07:40 PM	Parking
2/11/2023 06:43 AM	More places to lock up bikes right by the downtown restaurants
2/11/2023 03:52 PM	Lack of enforcement of traffic and lack of parking spaces in the downtown area. Leave the streets open
2/11/2023 04:08 PM	Poorly time traffic lights
2/11/2023 06:22 PM	sidewalks either dont exist, have uneven elevations and potholes, and roads are too narrow to be safe on my mobility scooter
2/13/2023 09:51 AM	Parking is insufficient downtown Amherstburg. Especially in the area of Richmond street and Dalhousie.
2/14/2023 06:53 AM	Too many people, too many cars. It's no longer a small town feel. Stop building houses and bringing more people in. The roads are already congested and backed up its getting rediculous
2/14/2023 10:51 AM	Safety is a concern with regards to bike paths. Bikes paths should not share space with roadways

2/14/2023 10:43 AM	Bike lanes are not always on the roads I travel. Bike lanes are not maintained. Full of rocks
2/14/2023 11:02 AM	Insufficient bike lanes and road ways need work to ride on with damaging my bike
2/14/2023 12:01 PM	I wrote safety because very often the cycle lanes are covered in debris gravel glass grass sticks etc that have risk of giving me flat tire on my bike. The street sweeper needs to go through more often. Especially hwy 20.
2/14/2023 01:17 PM	n/a
2/14/2023 01:47 PM	Not enough bike lanes
2/14/2023 01:54 PM	Safety while cycling. Terrible job on side walk/bike lane on Alma between Fryer/Meloche. Beautiful wide sidewalk all the way around town and finish it off with narrow shoulder for the last KM. Terrible decision, matter of time before someone is hurt.
2/14/2023 03:06 PM	Traffic lights need to be reset for the increase in vehicles the town has experienced due to the increase in development
2/14/2023 03:46 PM	Safe cycling routes.
2/14/2023 03:47 PM	Limited parking or no accessible drop off spots for people with wheelchairs/walkers
2/14/2023 04:13 PM	Turning left onto Sandwich street from Shoppers Rexall , no frills etc
2/14/2023 08:09 PM	Would like safe cycling routes from Windsor and lasalle to Amherstburg
2/14/2023 09:09 PM	The biggest issue I and many others face is we have all these trails and nothing connects to anywhere, the new arena trail is amazing but

	to use it you must drive. Or travel on a main very very busy street. The same applies to the greeneay
	Our roads in the county are in terrible shape
2/14/2023 11:24 PM	
	Lack of adequate and appropriately timed stop lights
2/15/2023 06:52 AM	
2/15/2023 10:43 AM	Streetlights are not pedestrian-friendly as drivers do not respect pedestrians' right of way when turning.
2/15/2023 06:19 PM	Getting of the greenway and having to traverse thru a neighbourhood without signage to downtown core/waterfront events
	Need more transit stops throughout town!
2/22/2023 09:09 AM	

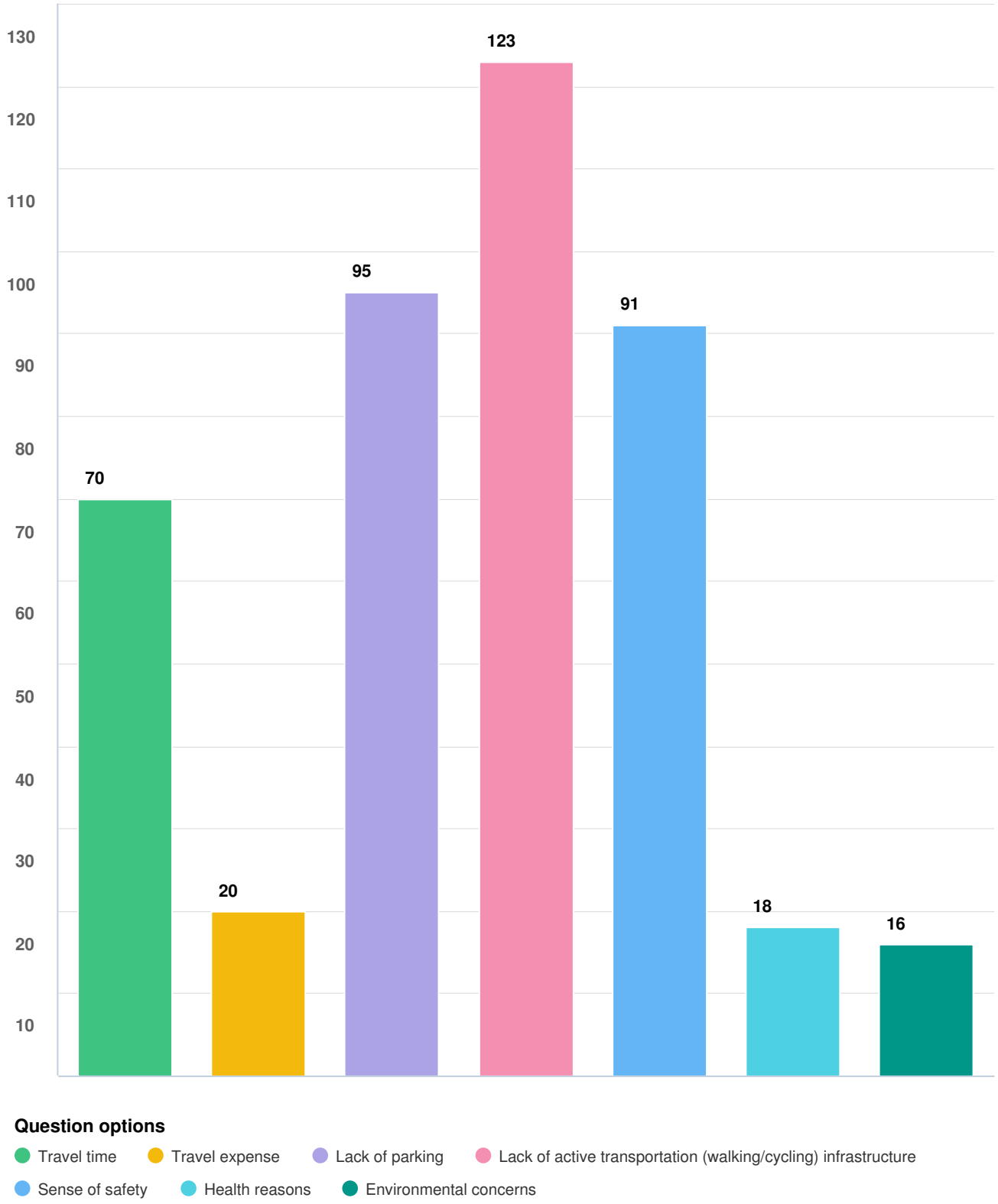
Optional question (86 response(s), 212 skipped)
Question type: Single Line Question

Q22 **Ideally, what travel mode would you prefer to use most of the time when travelling around the Town? Please select up to two options from the list below.**



Mandatory Question (298 response(s))
Question type: Checkbox Question

Q23 **Which of the following reasons prevent you from using your preferred mode of transportation? Select all that apply.**



Mandatory Question (298 response(s))
Question type: Checkbox Question

Q24 **If there are additional reasons preventing you from using your preferred mode of transportation that are not listed in the previous question, please specify here:**

1/24/2023 02:39 PM	For walking it is always weather dependent
1/25/2023 01:13 PM	traffice lights are not timed correctly Especially on Sandwich St. Pedetrian light near former general amherst no longer needed. Difficult to enter main streets from store parking lots due to traffic congestion
1/25/2023 01:24 PM	Excessive speed and aggressive driving
1/25/2023 01:32 PM	very bad back walking is difficult
1/25/2023 01:46 PM	Lack of parking downtown, especially during the weekend when we have open streets.
1/25/2023 02:23 PM	Lack of sidewalk or bike lane
1/25/2023 02:17 PM	Side walks and lack of cross walks. Going to libro is dangerous and going up Richmond to jack purdie Park no side walk on that side
1/25/2023 02:58 PM	We find it safer to Jay walk on Sandwich than use the crosswalk at Pickering and Sandwich or Richmond and Sandwich. Even though we had a lit cross sign, we've almost been hit at both crosswalks by careless drivers not paying attention.
1/25/2023 02:52 PM	I live north of four-lane river Canard Bridge and south of Malden Road we have no sidewalks or bike Lanes here we also have no street lights this is very dangerous area for bike traveling or walking. I really wish someone would look into this.
1/25/2023 04:38 PM	Limited transit service within the Town

1/25/2023 05:43 PM	Also the bus company has busses turning around at the park on McLeod now instead of driving down McLeod. They are destroying the lot and the public can no longer use this lot and park because it's constant with the busses. They yell/honk and make us move
1/25/2023 06:10 PM	Property taxes are too high so I can't afford gas now
1/25/2023 09:00 PM	Lack of police presence. I've been hassled by beggars, teenage boys, disgruntled old men, and horrible drivers. Going anywhere during summer is hot and miserable because there are no trees or shady areas on main roads. Too much litter and dog waste.
1/25/2023 09:47 PM	No sidewalks on the island so not easy to walk to ferry so that I can walk in the downtown area. Can't use golf cart to get to ferry as "illegal"
1/25/2023 10:21 PM	My own poor time management
1/26/2023 04:49 AM	There is no real active transit other than the taxi service which is sub par. The amount of traffic through the main thoroughfare is terrible from traffic lights is terrible during peak hours and on weekends.
1/26/2023 08:15 AM	The county has no road shoulder or bike lane that makes walking anywhere safe
1/26/2023 08:28 AM	Beating the hell out of my car on roads not taken care of
1/26/2023 09:53 AM	DON'T FORGET PART OF MCGREGOR BELONGS TO AMHERSTBURG ALSO!
1/26/2023 03:09 PM	I live on Front Road South and even though there are "pseudo" bike and walking lanes on the highway as a paved shoulder they are far to dangerous to do these activities. We should have a dedicated trail along front Road South. Like the ganacho trail.
1/26/2023 08:24 PM	If open air is going on we tend to bike

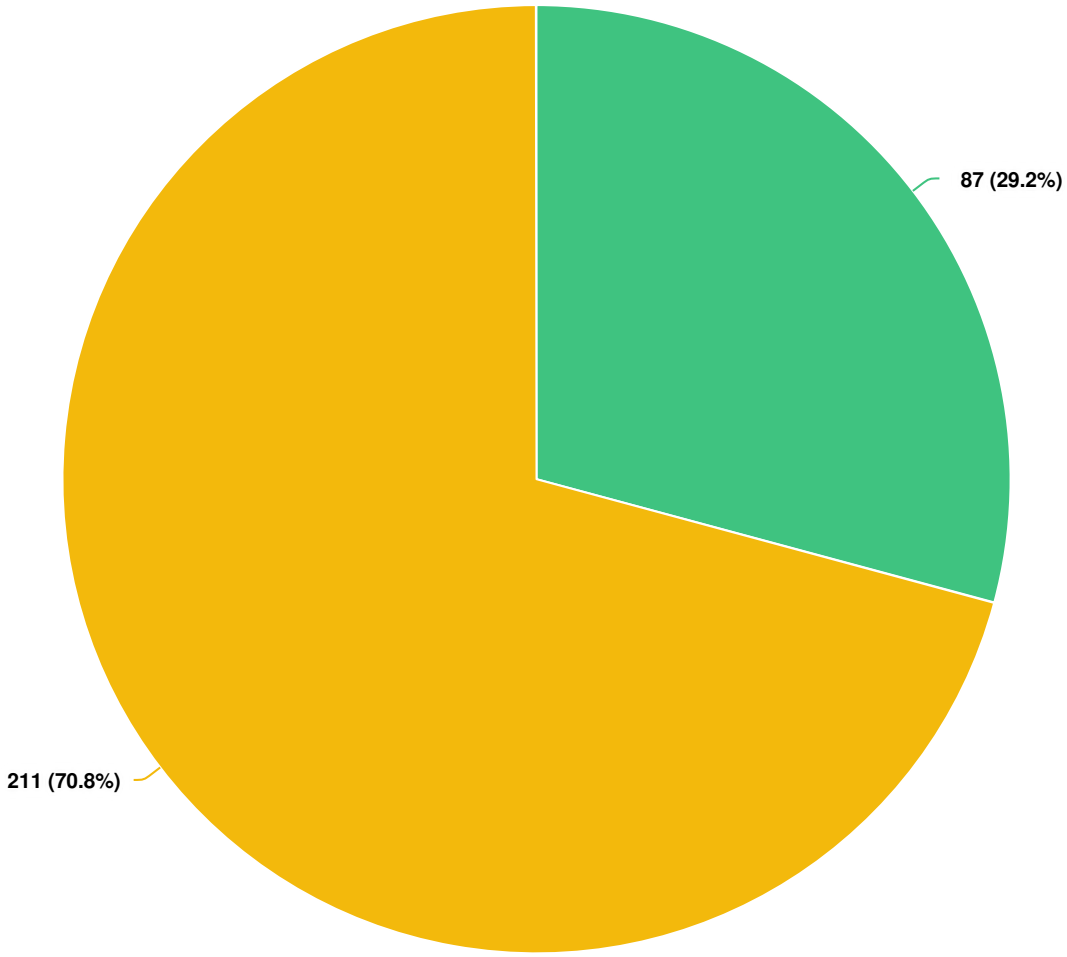
1/26/2023 08:39 PM	lack of bike racks to secure bikes downtown
1/26/2023 10:47 PM	I had a medical issues so I get tired easily.
1/27/2023 02:28 PM	There are no reasons that prevent my preferred mode of transportation
1/27/2023 05:44 PM	No
1/27/2023 05:44 PM	Roads in rough shape, no sideways or bike paths in the county roads.
1/28/2023 11:02 AM	We need bike lanes which slows cars down as well. I've watched people blow past the stop signs at the corner of Dalhousie and North St, right where the park is!!
1/28/2023 05:30 PM	Ridesharing not available
1/29/2023 03:20 PM	Road conditions. Poorly maintained roads.
1/31/2023 10:05 AM	total lack of public transit on Walker Road. Q 22 is mandatory, but is not applicable given the lack of public transit being availalble.
2/03/2023 01:51 PM	Convenience, I live in KB so it's not convenient to walk to Town
2/07/2023 06:57 AM	Not enough bike lanes or trails.
2/07/2023 12:41 PM	None
2/07/2023 04:36 PM	I took my bicycle to pointe Pelee today Amherstburg has zero safe cycling lanes, fix 2nd concession from trail to Alma street very broken

	& dangerous
2/07/2023 09:01 PM	Too much traffic congestion! Cyclists are no better! They take up 70+km main roadways by riding side by side & slow down traffic. Lack of police presence makes downtown unsafe for pedestrians due to speeding vehicles, poorly managed/danger intersections,
2/08/2023 02:03 AM	Nothing
2/08/2023 06:30 AM	Safer biking and walking lanes along sandwich, wider!
2/08/2023 07:40 AM	2 hour parking is ridiculous. I can’t go do dinner, go to the hairdressers in that amount of time. I constantly worry, which is a very unpleasant feeling when I’m out. We need to extend it to 3 hours. My hair takes at least 3 hours
2/08/2023 03:18 PM	Drivers not following traffic rules. Little enforcement.
2/08/2023 03:46 PM	I have been hit with rocks from passing vehicles and the noise levels exceed 70 Db on Front Rd N
2/09/2023 08:17 AM	Becoming too much traffic for this little town.
2/09/2023 11:15 PM	Just lifestyle, not walking enough (feeling too busy or short on time)
2/11/2023 04:08 PM	Poorly timed traffic lights
2/12/2023 02:36 PM	So much traffic on Sandwhich street
2/13/2023 09:36 AM	Ice and snow on sidewalks.
	Existing active transportation infrastructure is not separated enough

2/14/2023 09:29 AM	from roads; paved shoulders are dangerous
2/14/2023 10:03 AM	Would love more cycling trails!
2/14/2023 01:17 PM	Behaviour of fellow road users to cyclists
2/14/2023 03:47 PM	Available taxi service
2/14/2023 04:13 PM	Minimal bike racks
2/14/2023 08:07 PM	Need safe places to lock bikes.
2/14/2023 08:09 PM	Would like safe cycling routes from Windsor and lasalle to Amherstburg
2/14/2023 09:09 PM	The major concern for alot of people as well as myself is the lack of trails connecting to each other in a safe manner. Greenway ends on busy roads, arena trail you have to drive to for use. There is nothing that safely connects trails.
2/15/2023 05:16 PM	Too far
2/15/2023 06:19 PM	In survey you state e scooter an de bike but are you referring to a battery assist bike as that is not an e bike….using proper terminology is important

Optional question (55 response(s), 243 skipped)
Question type: Single Line Question

Q25 Has the pandemic changed your travel behaviour?



Question options

Yes No

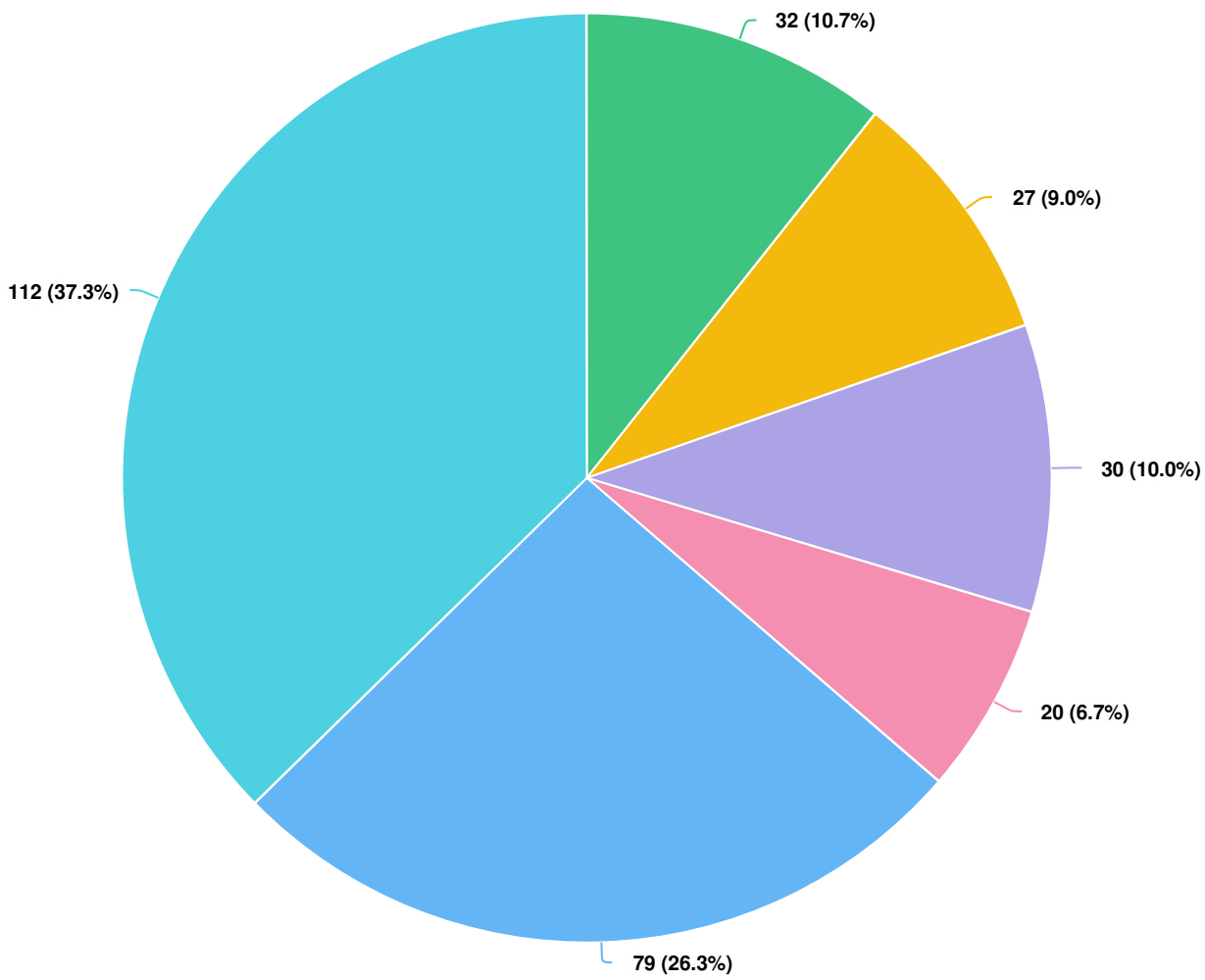
Mandatory Question (298 response(s))
Question type: Radio Button Question

Q26 **In order of importance (1 being MOST important and 8 being LEAST important), please rank the following list of transportation issues that the Transportation Master Plan should consider for the future of the Town. NOTE: You can only assign a singl...**

OPTIONS	AVG. RANK
Road Safety (speeding, crossings, road design, etc.)	3.47
Walking and Cycling Infrastructure (sidewalks, crosswalks, cycle lanes, cycle parking, etc.)	3.56
Traffic Volume & Congestion	3.98
Maintenance of existing infrastructure	4.28
Access to Parking	4.74
Accessible Infrastructure (i.e. wheelchairs, strollers, mobility scooters, rolling walkers, visually impaired, etc.)	5.07
Environmental Impact/ Climate Change Resilience	6.44
Public Transit Services and Connectivity	6.64
Future Readiness for new technologies (EV charging stations, e-scooters, sidewalk delivery robots, etc.)	6.83

Mandatory Question (298 response(s))
Question type: Ranking Question

Q27 Which of the following speed reduction (traffic calming and roadway safety) devices would you like to see on the Town roads?

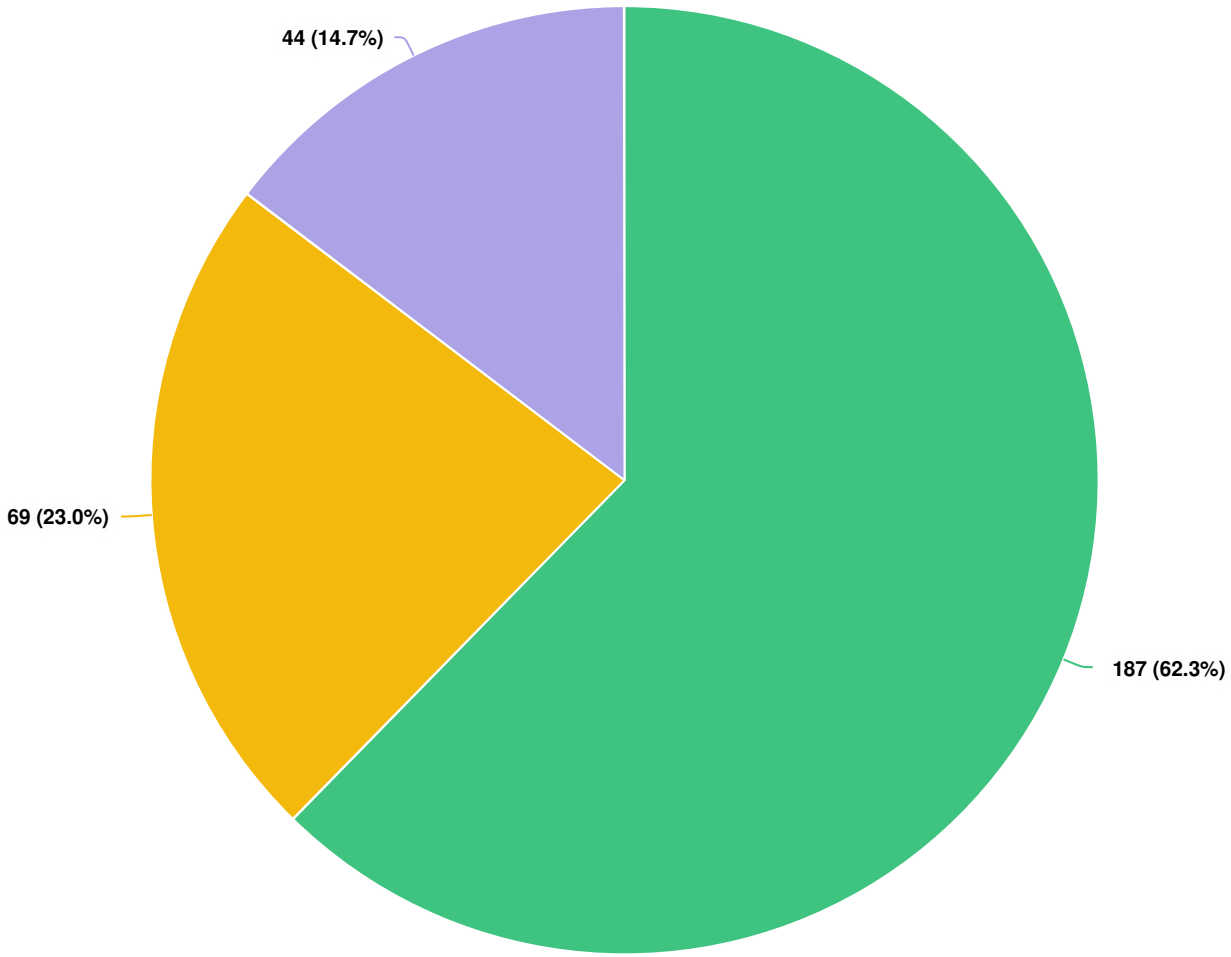


Question options

- Horizontal Deflections (e.g., mini-roundabouts, narrower lanes, curb bump-outs)
- Vertical Deflections (e.g., speed humps, rumble strips, raised intersections)
- Speed Radars / Automatic Speed Enforcement Cameras
- Reduce Speed Limits
- A combination of the above
- I do not want any speed reductions

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q28 Agree or disagree: My perception of safety impacts the routes of transportation I choose to move around the Town.

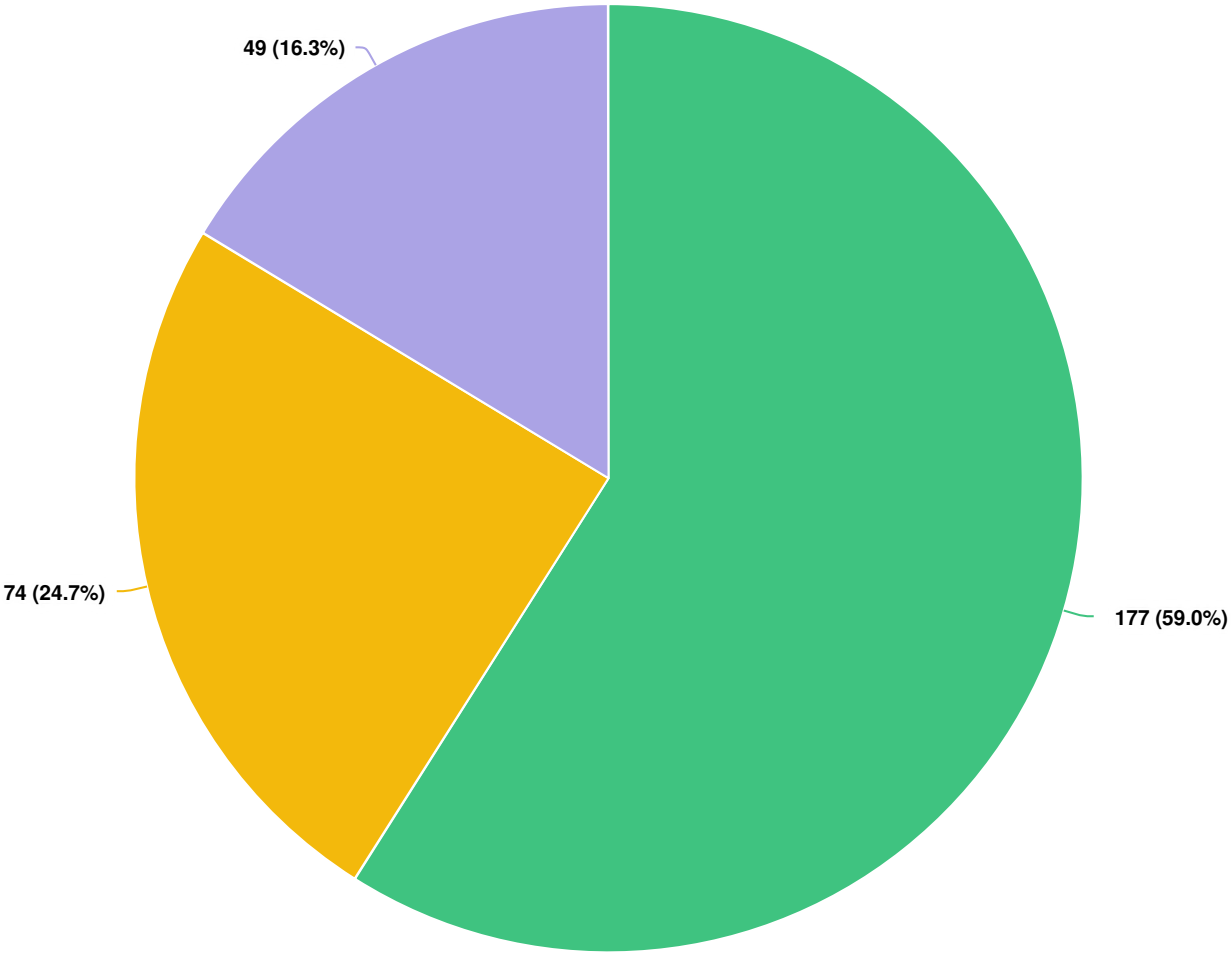


Question options

Agree Disagree No opinion

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q29 Agree or disagree: My perception of safety impacts the modes of transportation I choose to move around the Town.

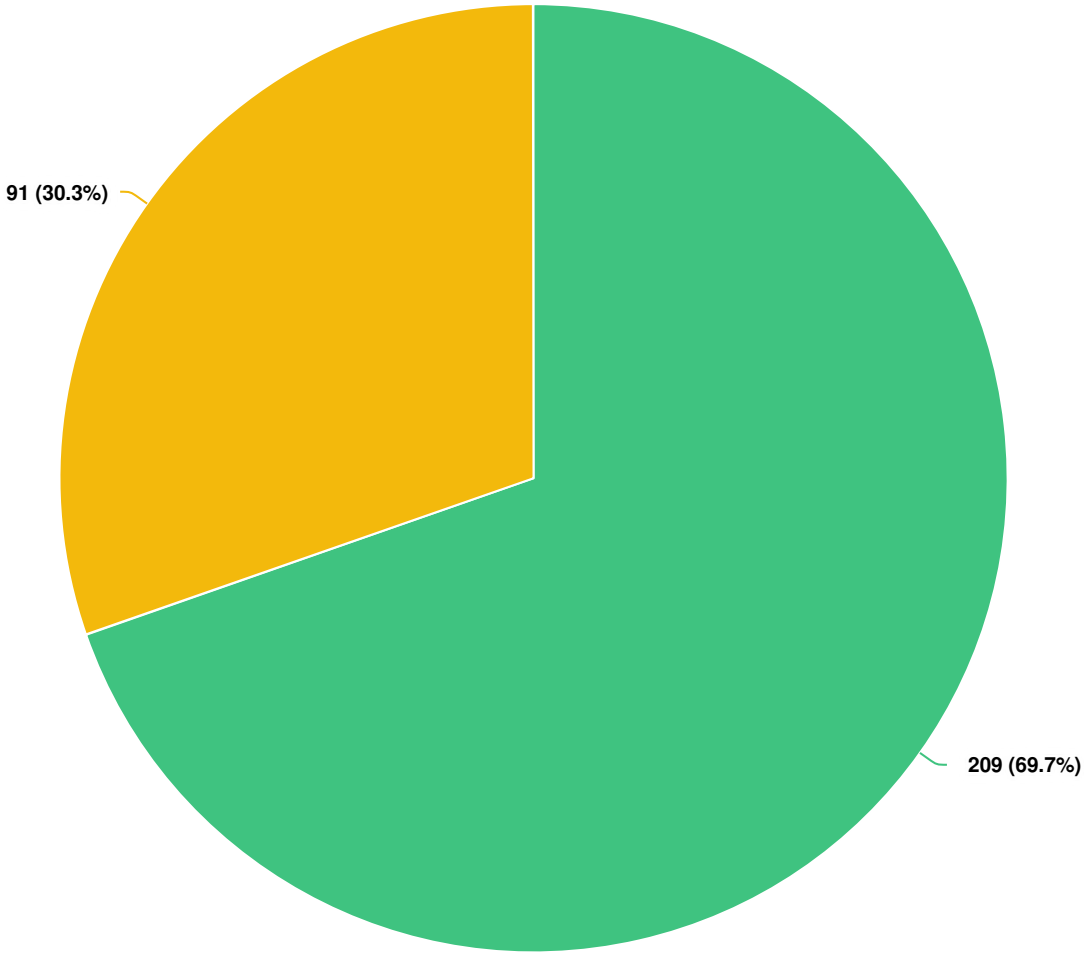


Question options

Agree Disagree No opinion

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q30 **Agree or disagree: There should be more educational resources made available for safe driving and safe cycling practices, and 'share the road' behaviour.**

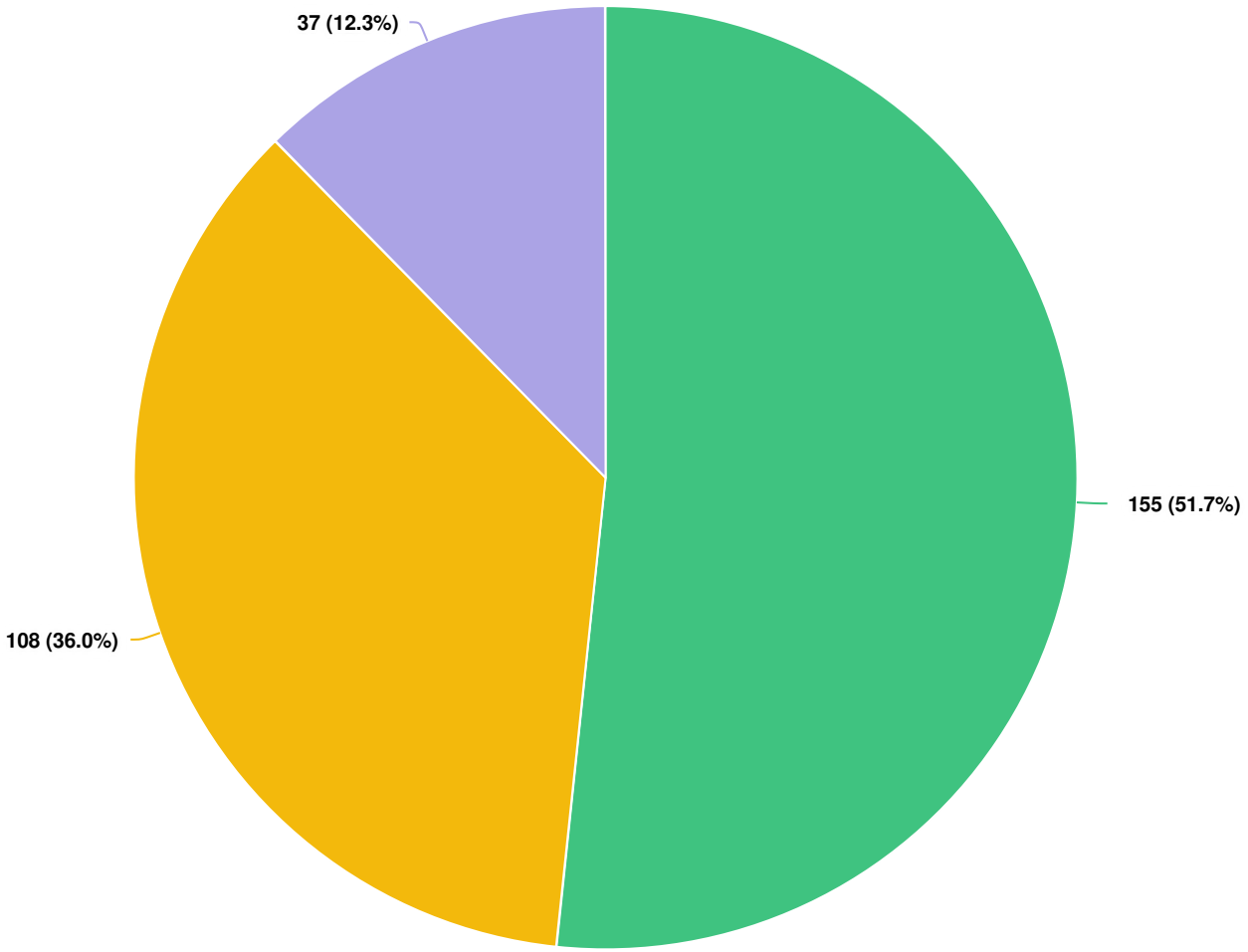


Question options

Agree Disagree

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q31 **Agree or disagree: The Town should prioritize walking, cycling and public transit even if that means travelling by car may be less convenient in built-up areas.**

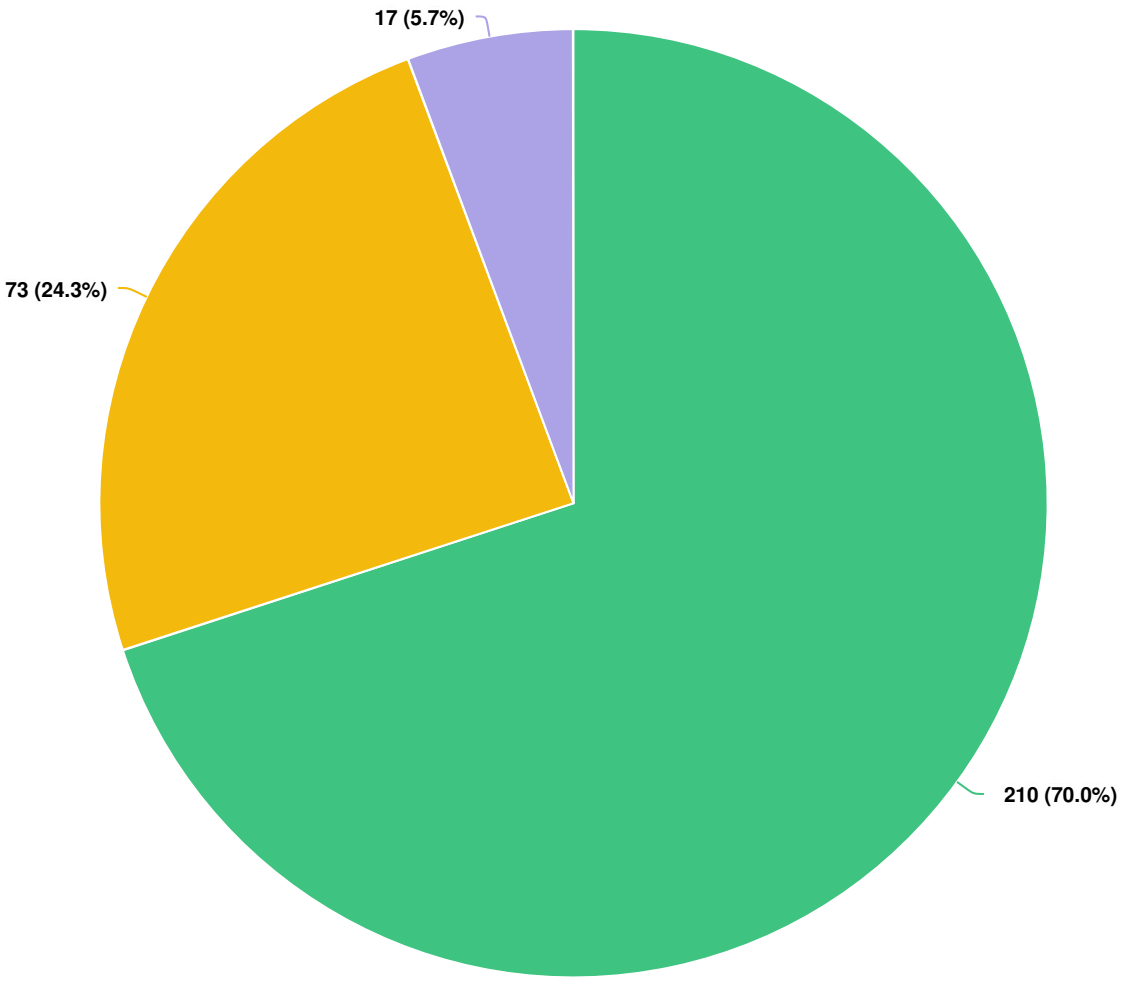


Question options

Agree Disagree No opinion

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q32 **Agree or disagree: The Town should consider temporarily making streets 'pedestrian only' in the summer months for open streets activities and events.**

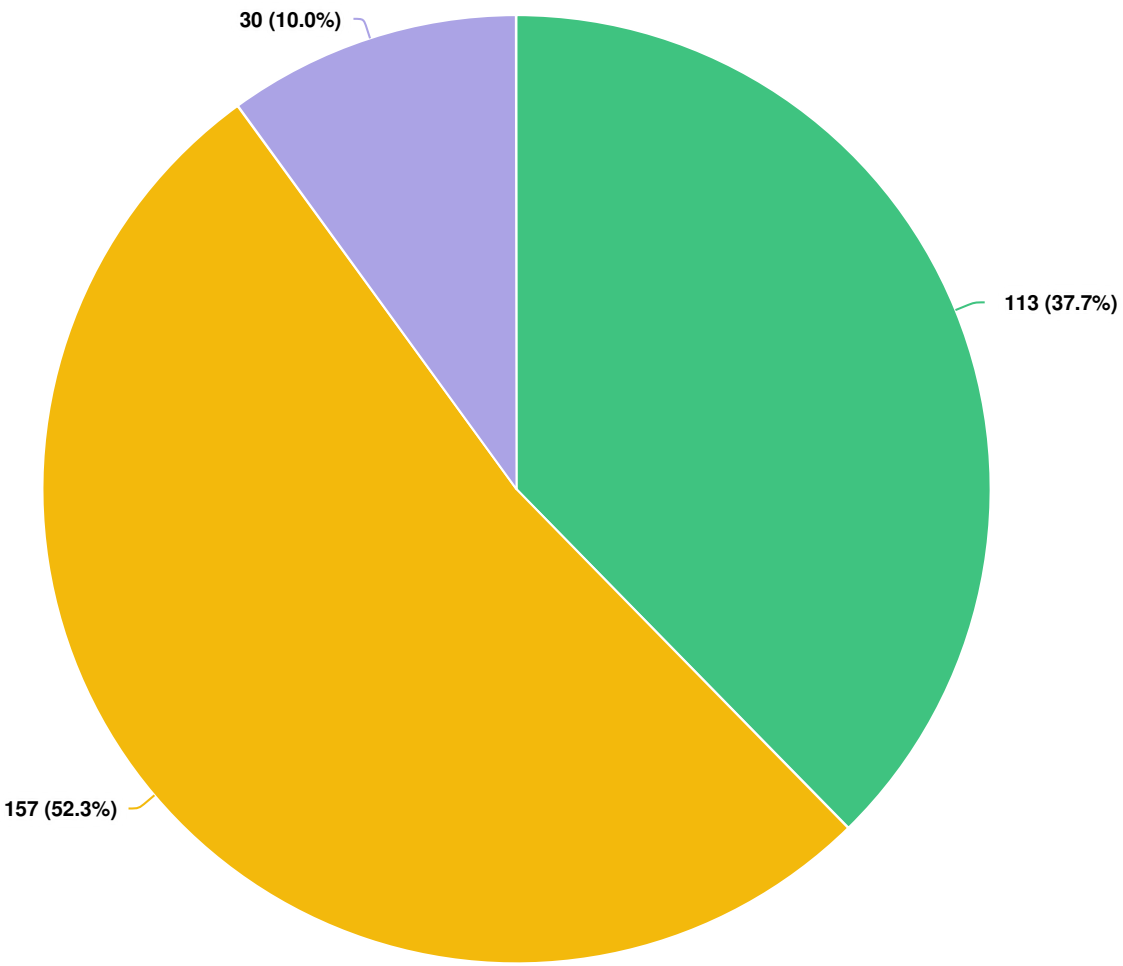


Question options

Agree Disagree No opinion

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q33 **Agree or disagree: My choice to use active transportation (walking or cycling) does not change year-round (summer versus winter).**

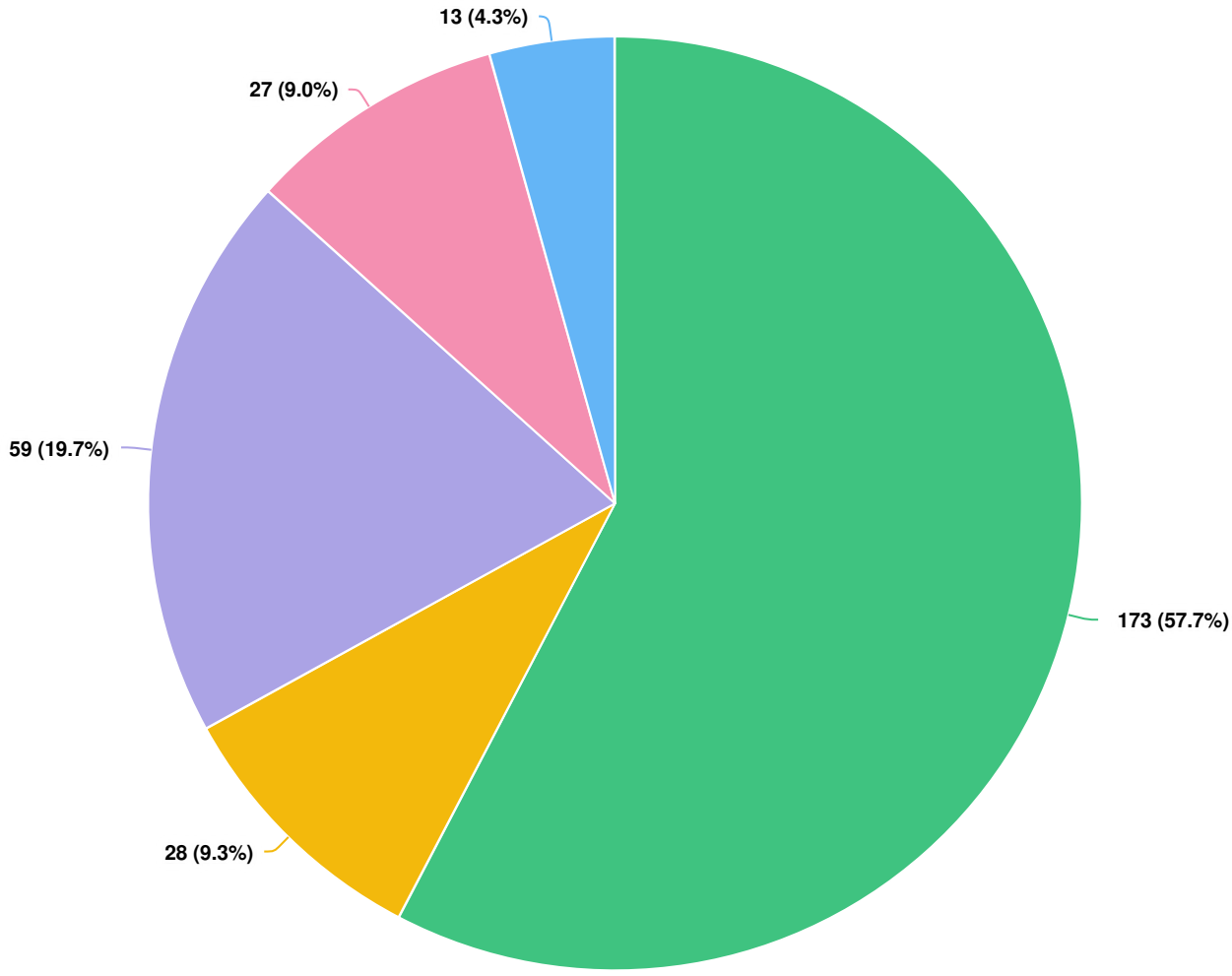


Question options

Agree Disagree No opinion

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q34 Where do you get your Town-related news from?



Question options

Town's Social Media Platforms | Town's Website | Local Newspaper | Word of Mouth | None of the above

Mandatory Question (300 response(s))
Question type: Radio Button Question

Q35 If there are any other news sources that are not listed in the previous question, please specify it here:

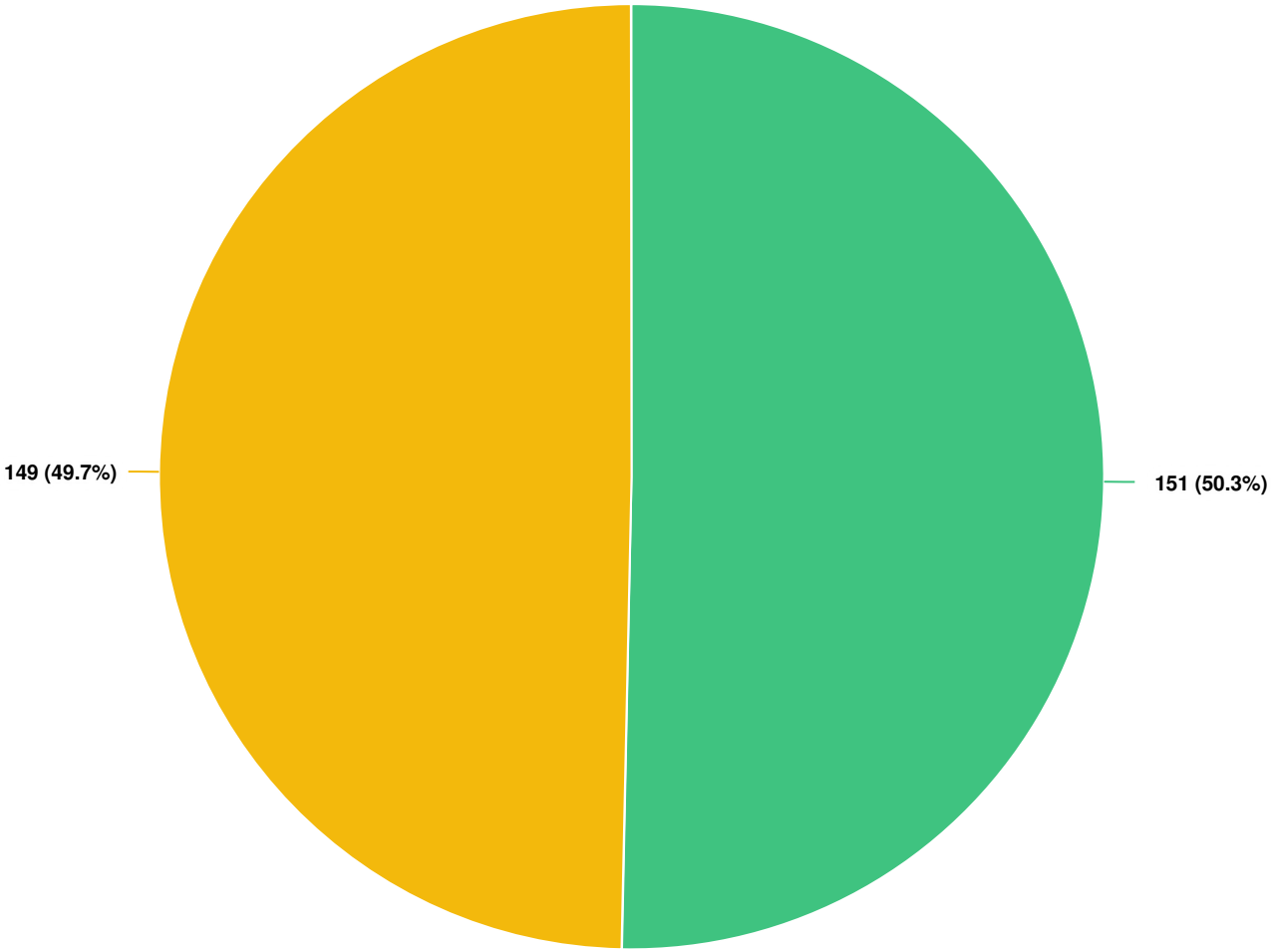
1/25/2023 01:29 PM	Facebook
1/25/2023 01:32 PM	no
1/25/2023 02:58 PM	We could only answer #32 with one answer. However we also get our news via the local newspaper.
1/25/2023 03:05 PM	Facebook
1/25/2023 04:54 PM	I also get information in the newspaper and word of mouth. Could only select one above.
1/25/2023 05:43 PM	Please help the kids of Malden public get their bussing back! Student transportation has caused so many job losses and home losses by taking away our right to safe bussing practices and they keep blaming it in the town and how unsafe the roads are
1/25/2023 06:10 PM	Facebook mom groups
1/25/2023 08:45 PM	Town councilors social media profiles
1/25/2023 09:47 PM	You only let me pick one, but I get my info from all of the above.
1/26/2023 09:53 AM	DON'T FORGET PART OF MCGREGOR BELONGS TO AMHERSTBURG ALSO!
1/26/2023 03:07 PM	Local blogger
	Windsor Star

1/26/2023 05:42 PM	
	Councillor McArthur’s newsletter
1/27/2023 06:31 PM	
	Councillor Don McArthur's quarterly newsletter
1/29/2023 07:30 PM	
1/31/2023 10:05 AM	Why don't you make these survey bubbles bigger so they can be more eaily selected. They are quite small to click on and would help from an accessibility point of view. Also, why is no opinion offered as an option for Q29? How about an other comments Q?
	radio
1/31/2023 10:12 AM	
	blogs
2/01/2023 01:12 PM	
2/07/2023 10:50 AM	62 years of observation, lose the Windsor cops and get some policing. Slow people down and have them actually stop at traffic lights.
	councilor newsletter
2/07/2023 11:46 AM	
	All of the above for question #32
2/07/2023 09:01 PM	
	Nothing
2/08/2023 02:03 AM	
	Am800
2/08/2023 09:27 PM	
	Individual councilor social media
2/09/2023 08:17 AM	
	Independent journalists
2/09/2023 05:24 PM	

	Facebook
2/09/2023 11:15 PM	
	FB town council pages
2/10/2023 08:59 AM	
	Am800, Windsor Star, CTV, tv
2/11/2023 09:50 AM	
	facebook groups, council meetings
2/11/2023 06:22 PM	
	I use all the above listed.
2/13/2023 09:36 AM	
	searching on line
2/13/2023 09:53 AM	
	Community Groups
2/14/2023 09:29 AM	
	Internet, not restricted to local sites.
2/14/2023 12:00 PM	
	Facebook
2/14/2023 12:09 PM	
	I think the town needs to promote every event equally. The town really promoted the pride event, please do so, with other ones. It was ridiculous how much advertisement there was for this one
2/14/2023 12:27 PM	
	n/a
2/14/2023 01:17 PM	
	am 800 and am 580
2/14/2023 02:33 PM	
	social media ex. facebook
2/14/2023 03:46 PM	

Optional question (38 response(s), 260 skipped)

Q36 Would you like to receive future notifications/updates about the Town of Amherstburg's Transportation Master Plan?



Question options

Yes No

Mandatory Question (300 response(s))
Question type: Radio Button Question

2nd Transportation Master Plan Survey

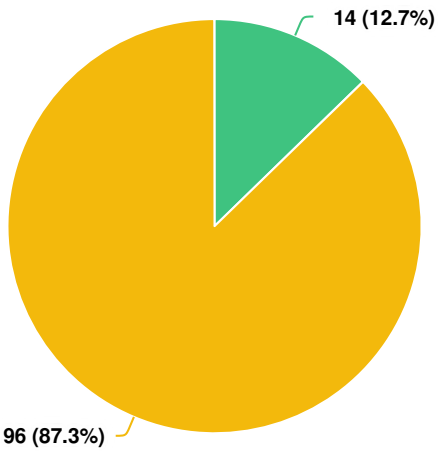
SURVEY RESPONSE REPORT
12 February 2024 - 01 March 2024

PROJECT NAME:
Transportation Master Plan

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Did you attend the first Public Open House, on May 9, 2023?

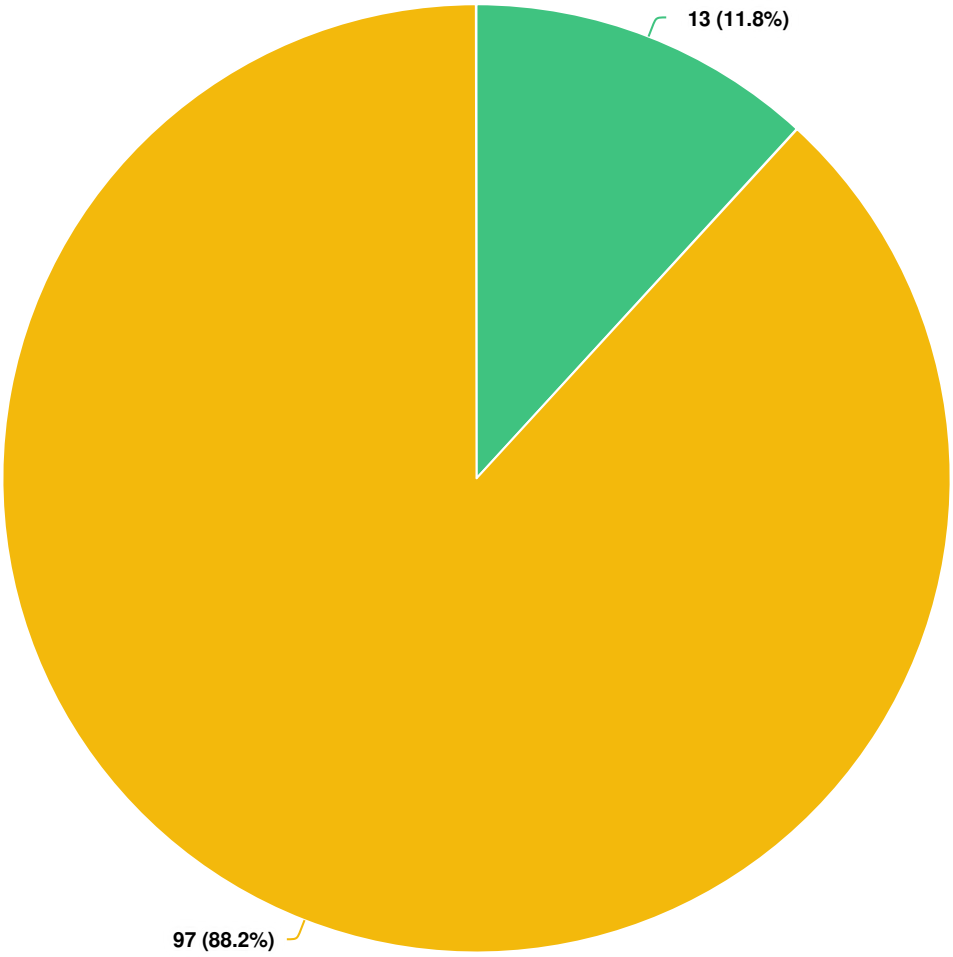


Question options

Yes No

Mandatory Question (110 response(s))
Question type: Radio Button Question

Q2 Did you attend the second Public Open House, on February 13, 2024?

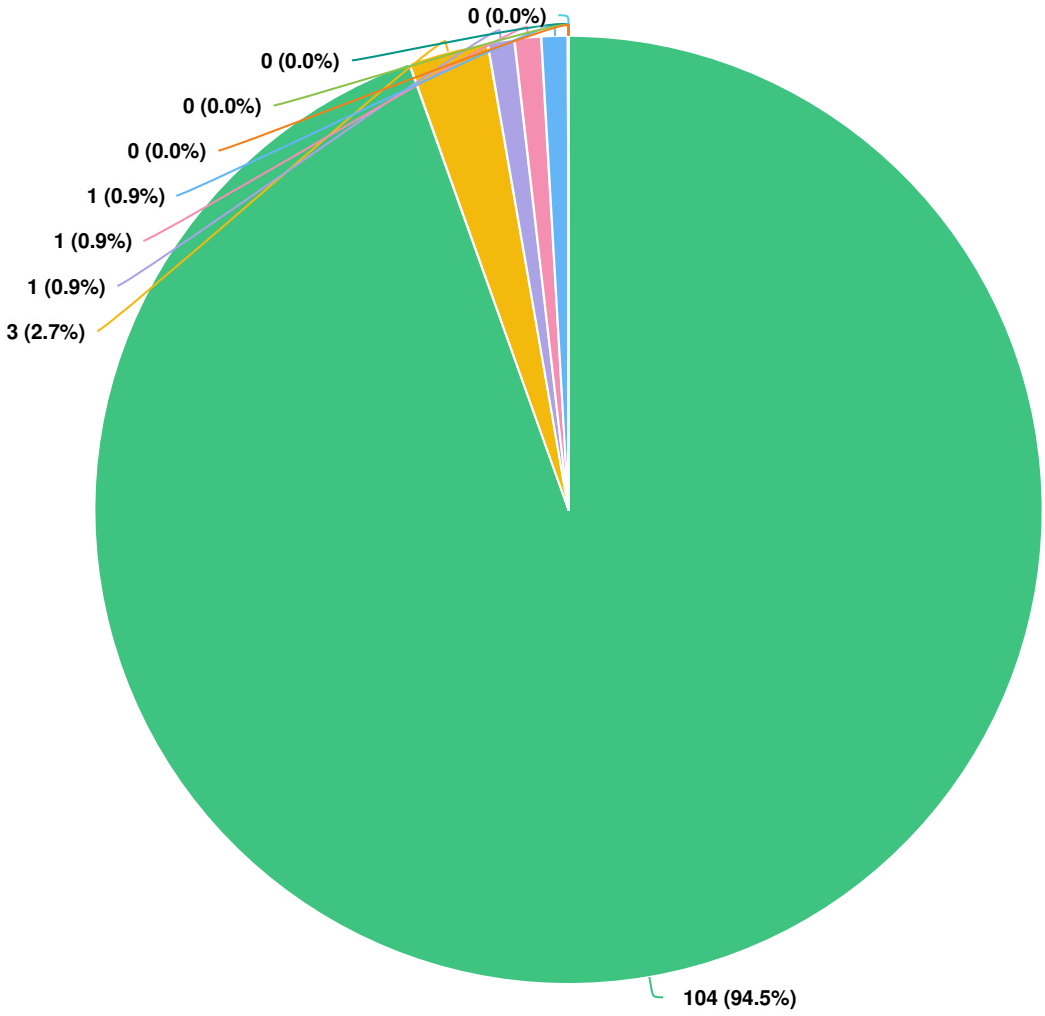


Question options

Yes No

Mandatory Question (110 response(s))
Question type: Radio Button Question

Q3 Which community do you live in?

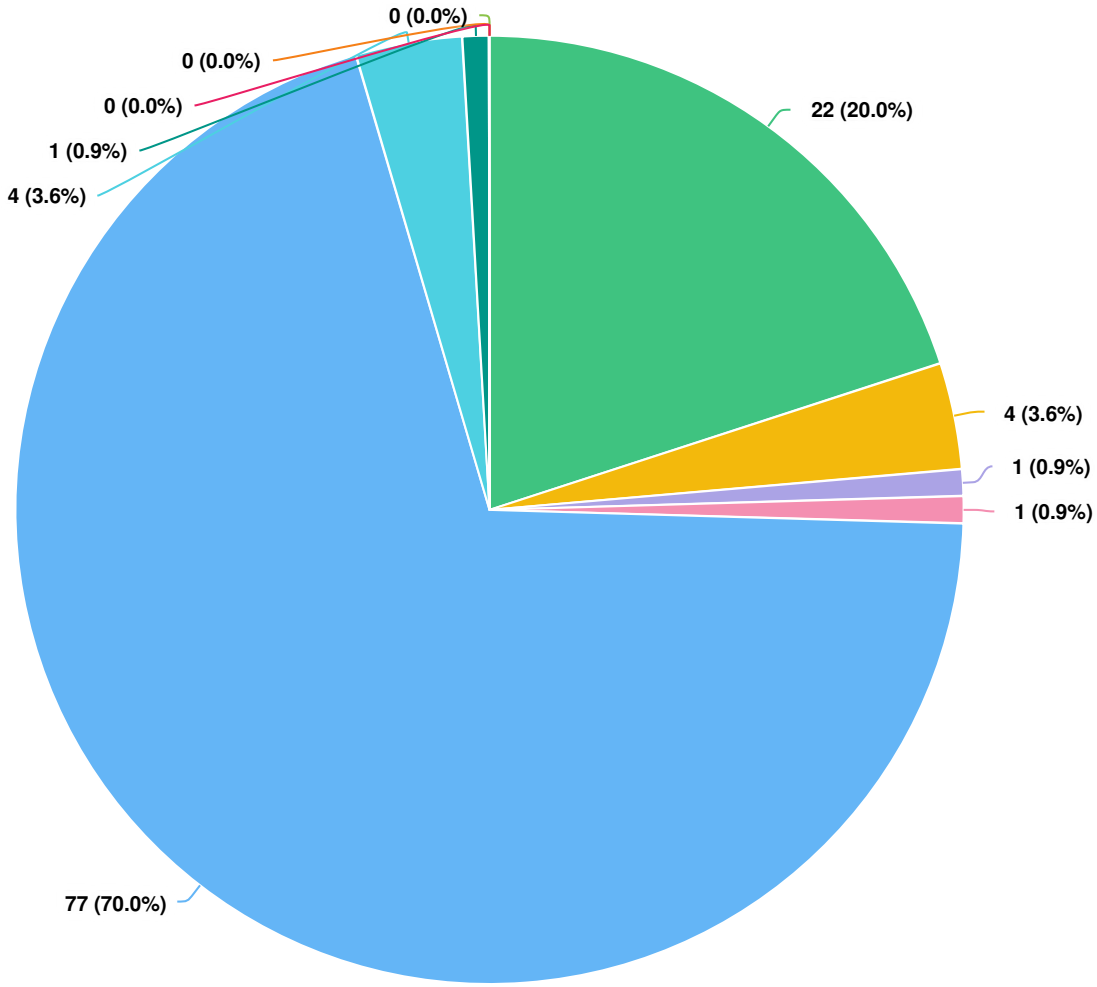


Question options

Amherstburg Windsor Lakeshore LaSalle Another community Essex Kingsville Tecumseh Leamington

Mandatory Question (110 response(s))
Question type: Radio Button Question

Q4 What is your PRIMARY mode of transportation to access Downtown Amherstburg?

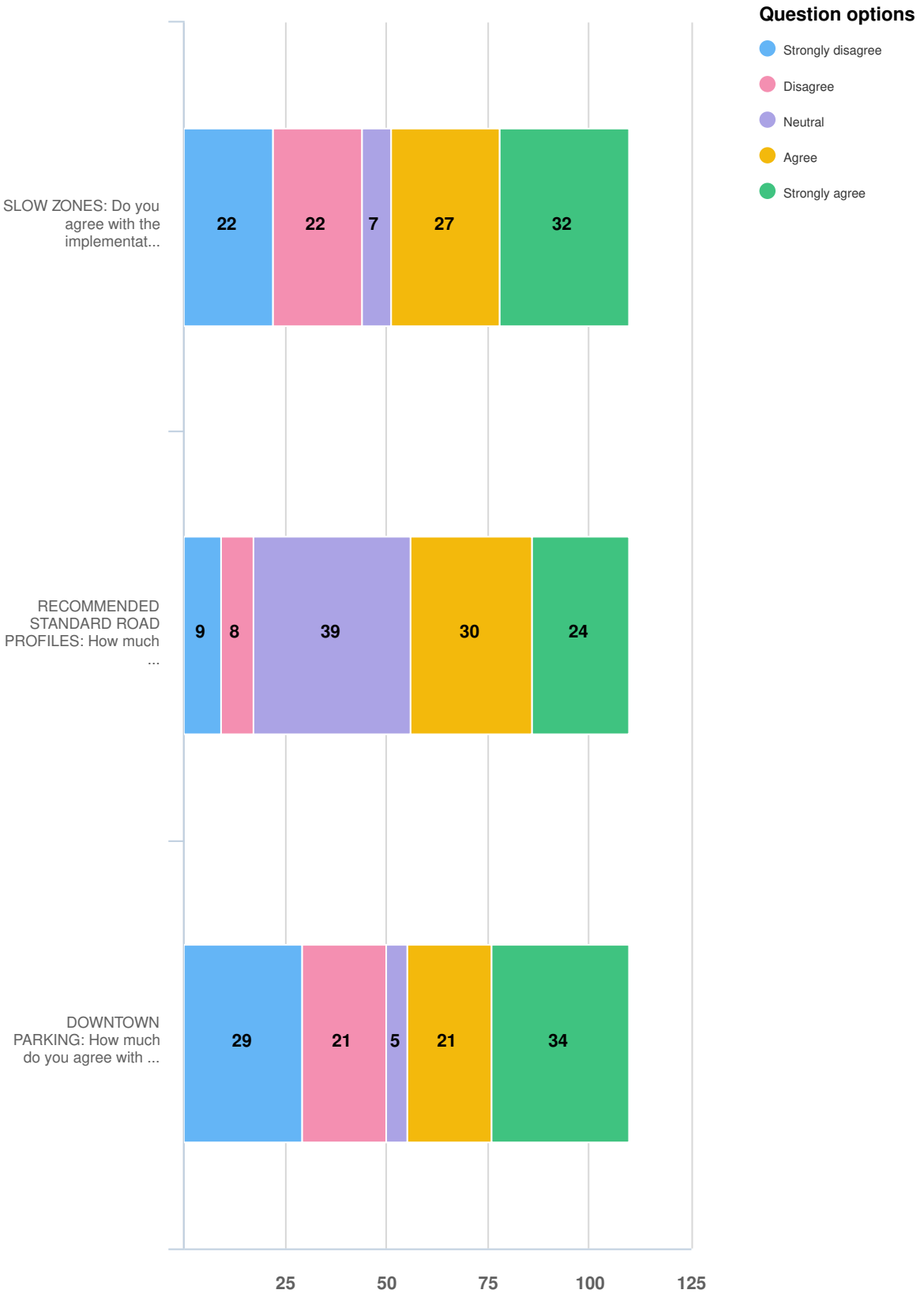


Question options

Walk Bike E-scooter/ E-bike Motorcycle Car driver Car passenger n/a
Taxi/ Rideshare Transit Other

Mandatory Question (110 response(s))
Question type: Radio Button Question

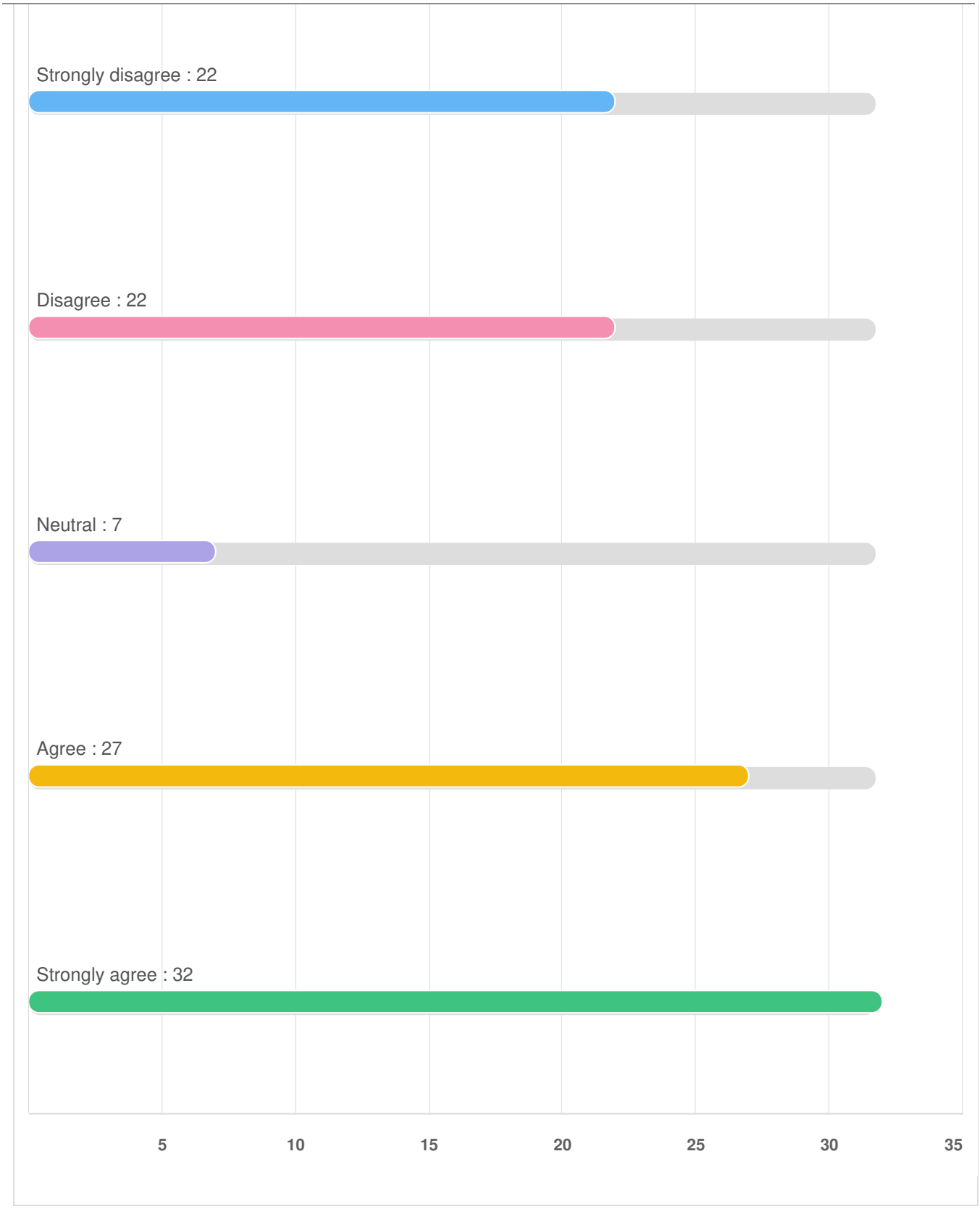
Q5 SLOW ZONES, ROAD PROFILES and DOWNTOWN PARKING



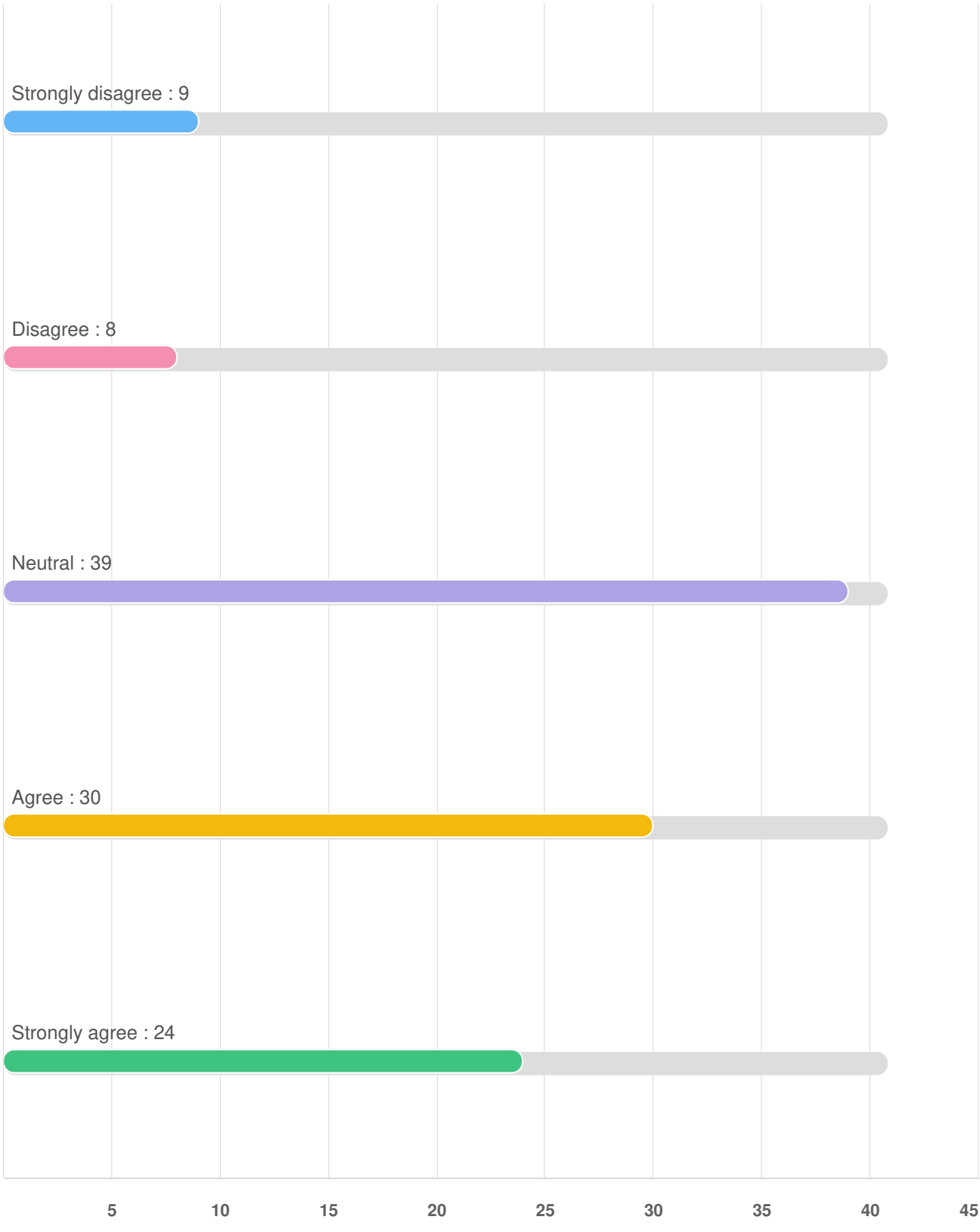
Mandatory Question (110 response(s))
Question type: Likert Question

Q5 SLOW ZONES, ROAD PROFILES and DOWNTOWN PARKING

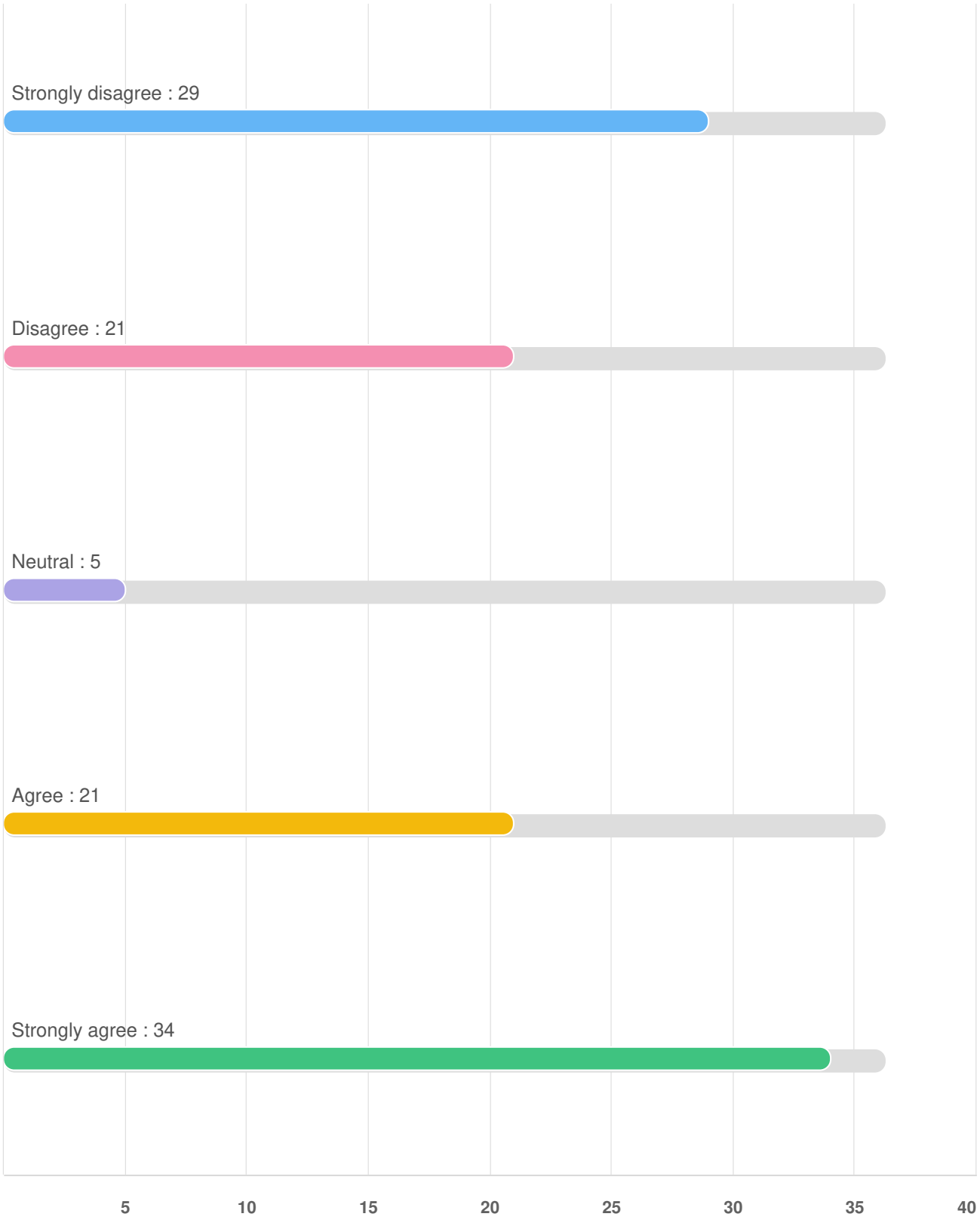
SLOW ZONES: Do you agree with the implementation of slow zones and corresponding infrastructure (mini roundabout, raised intersections, chicanes, speed bumps, etc.) to both enhance road safety and improve the pedestrian experience in the downtown core?


Strongly disagree : 22
Disagree : 22
Neutral : 7
Agree : 27
Strongly agree : 32
5
10
15
20
25
30
35

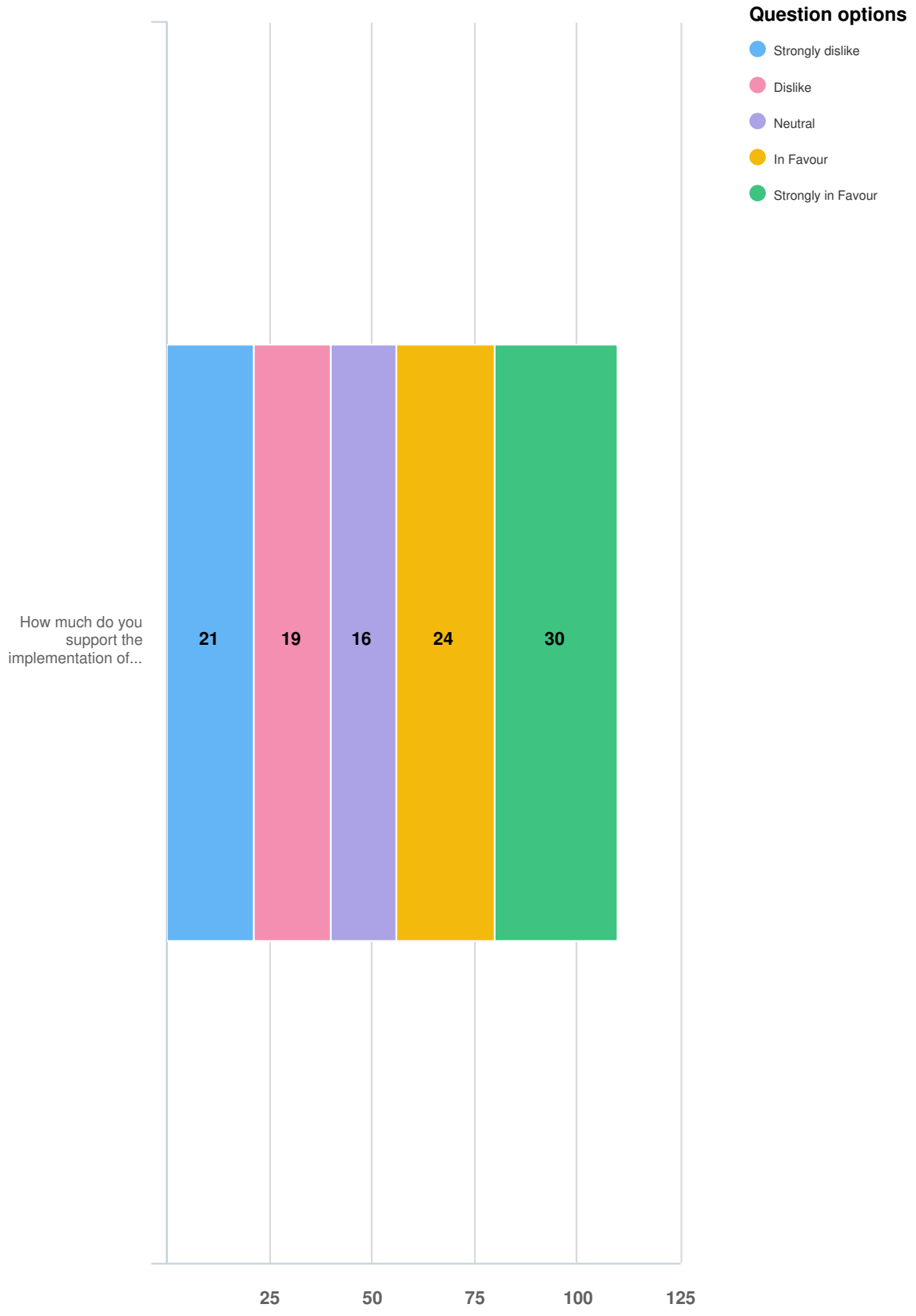
RECOMMENDED STANDARD ROAD PROFILES: How much do you agree with the cross-section guide provided for each road type (local, collector and arterial roads)



DOWNTOWN PARKING: How much do you agree with the limited reallocation of on-street parking spaces to improve the pedestrian experience in the downtown core?



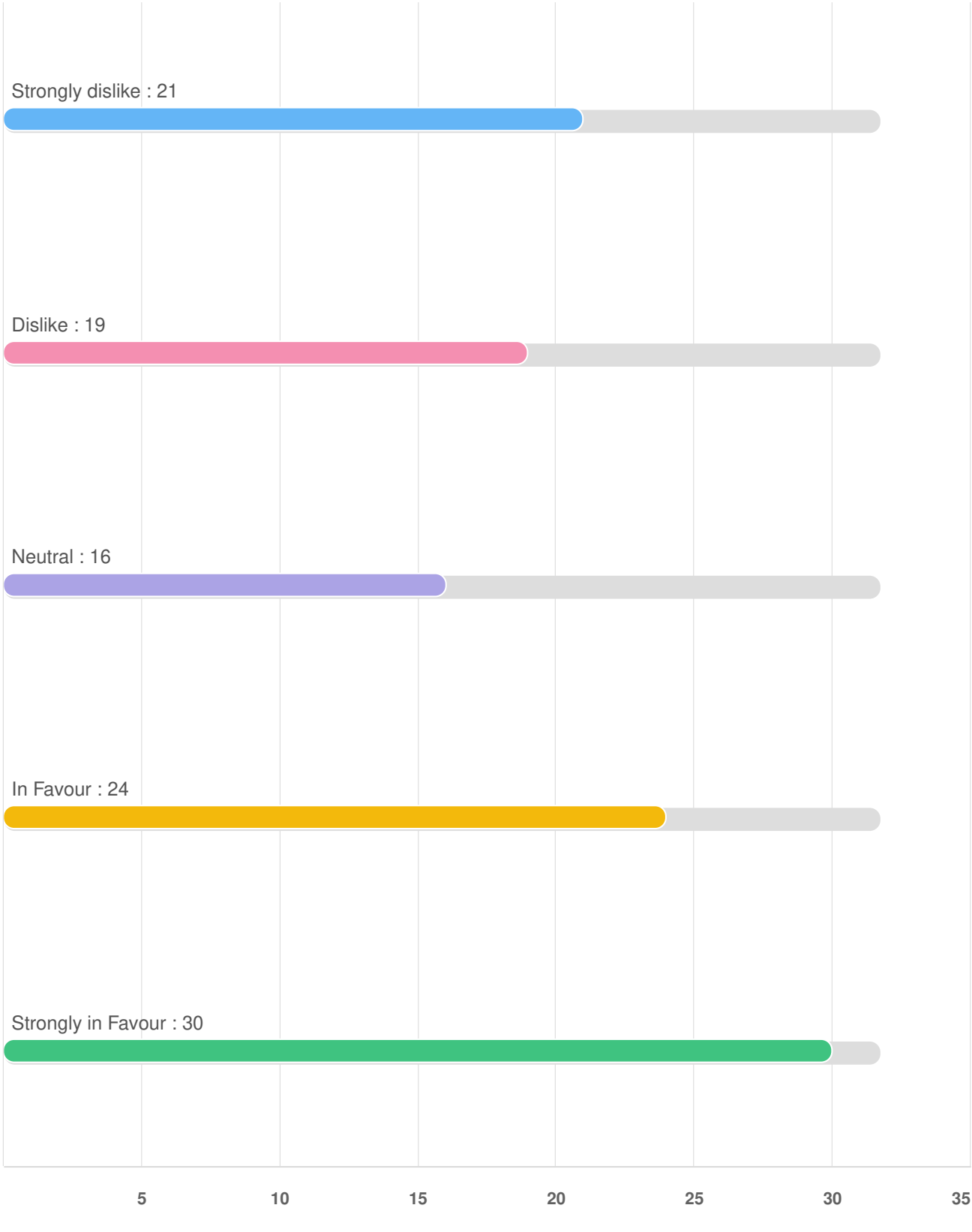
Q6 CROSSING IMPROVEMENTS



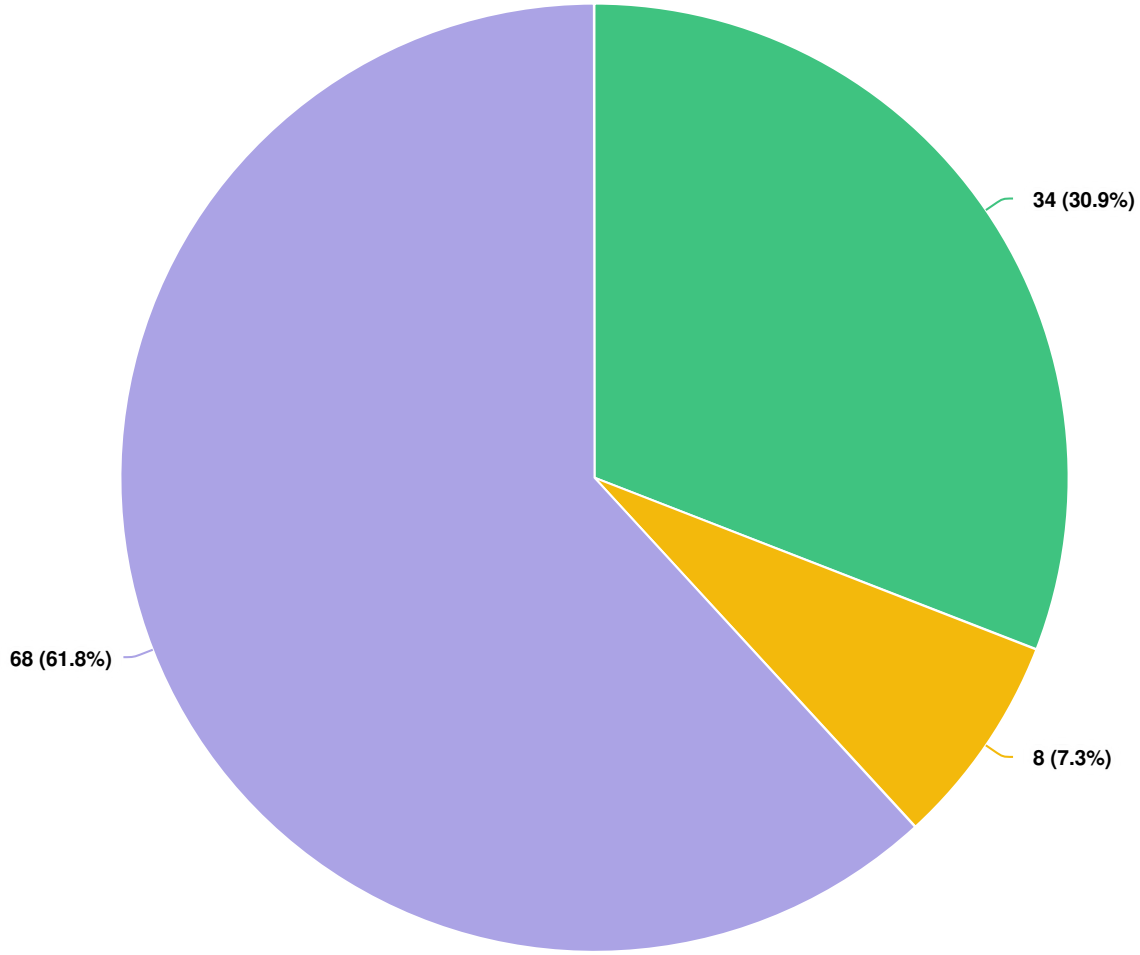
Mandatory Question (110 response(s))
Question type: Likert Question

Q6 CROSSING IMPROVEMENTS

How much do you support the implementation of Curb Bump-Outs to improve road safety and enhance the pedestrian crossing experience in the downtown core?



Q7 **MURRAY STREET: With regards to the potential re-design of Murray Street (between Ramsay and Dalhousie Streets), what is your preferred solution? Refer to the slide presentation CLICK HERE**

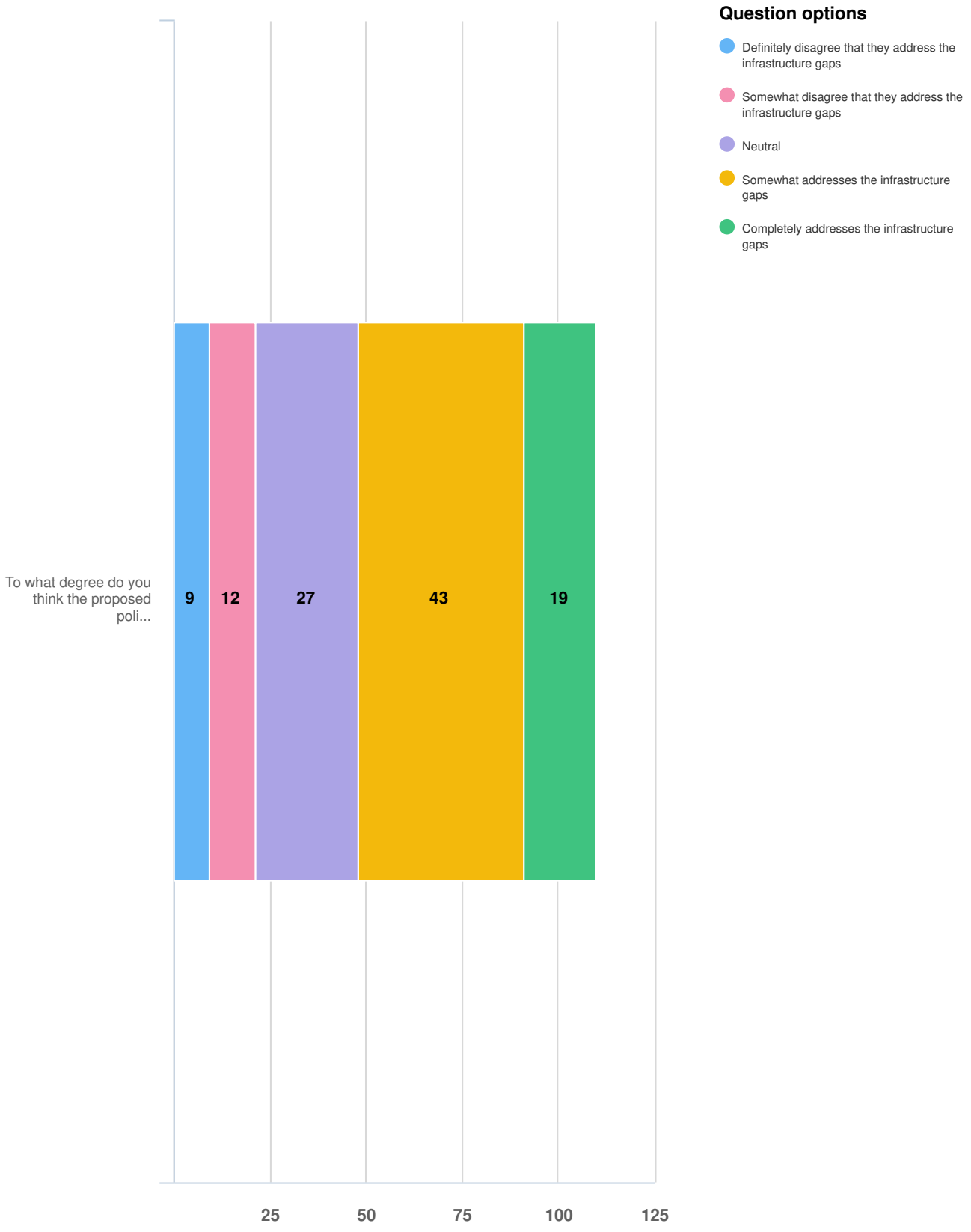


Question options

- Street closure between Dalhousie & Ramsay streets and the addition of pedestrianized, patio opportunities for restaurants & businesses.
- Removal of 8 on-street parking spaces and the addition of sidewalk widening with streetscape improvements.
- Do nothing.

Mandatory Question (110 response(s))
Question type: Radio Button Question

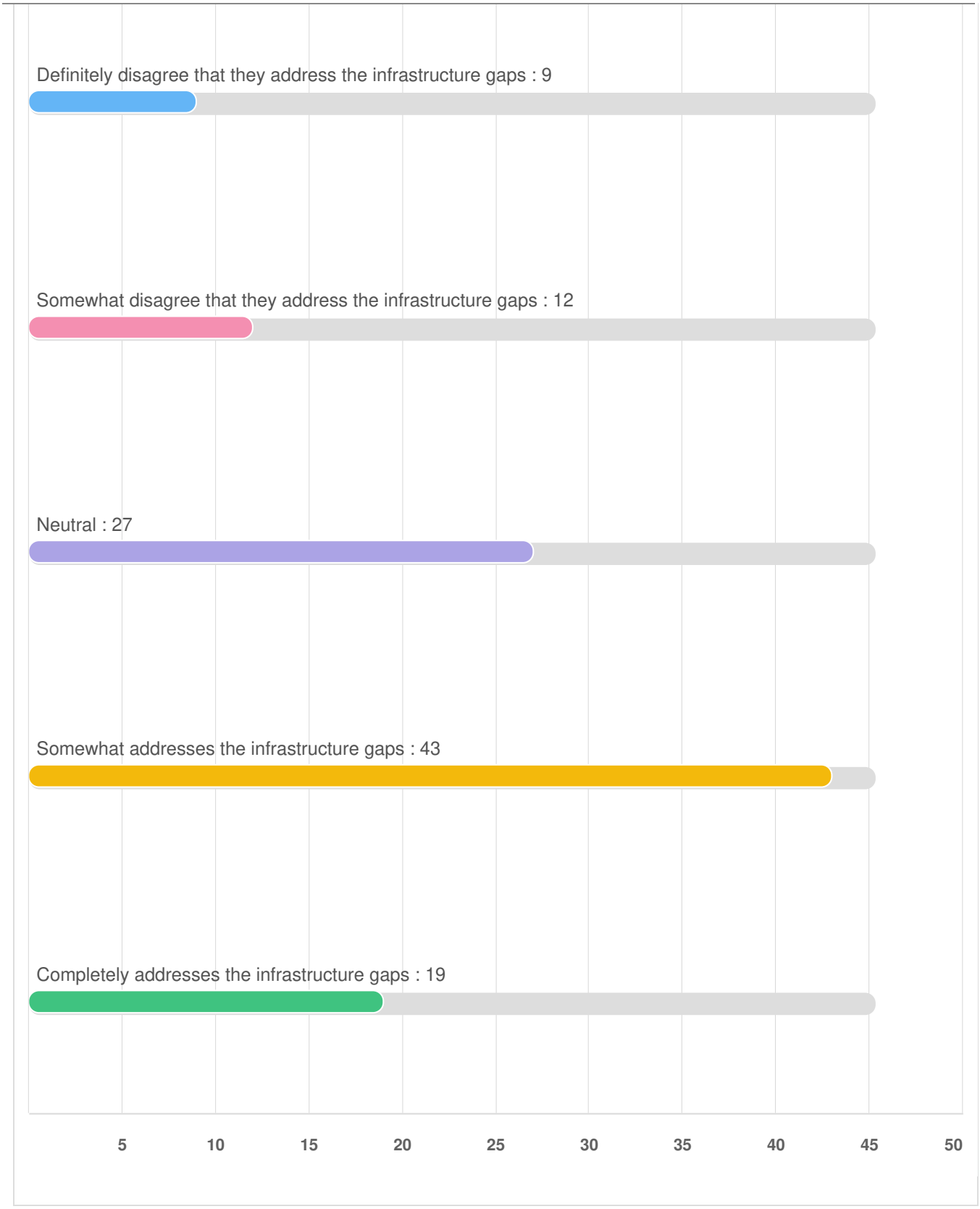
Q8 ACTIVE TRANSPORTATION - PEDESTRIAN - refer to the slide presentation, CLICK HERE.



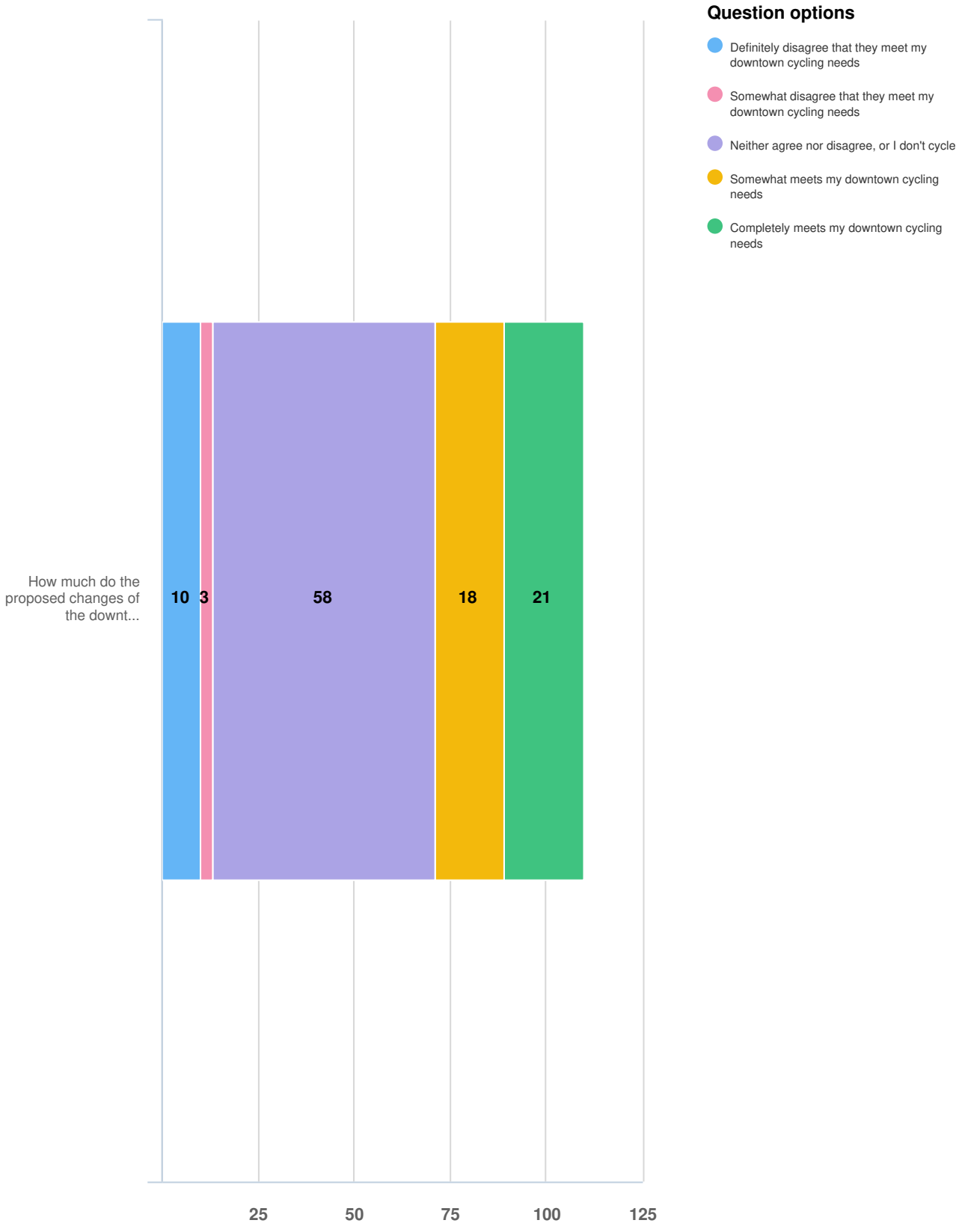
Mandatory Question (110 response(s))
Question type: Likert Question

Q8 ACTIVE TRANSPORTATION - PEDESTRIAN - refer to the slide presentation, CLICK HERE.

To what degree do you think the proposed policy improvements presented at the Public Open House will address the current sidewalk and pedestrian infrastructure gaps?


Definitely disagree that they address the infrastructure gaps : 9
Somewhat disagree that they address the infrastructure gaps : 12
Neutral : 27
Somewhat addresses the infrastructure gaps : 43
Completely addresses the infrastructure gaps : 19
5
10
15
20
25
30
35
40
45
50

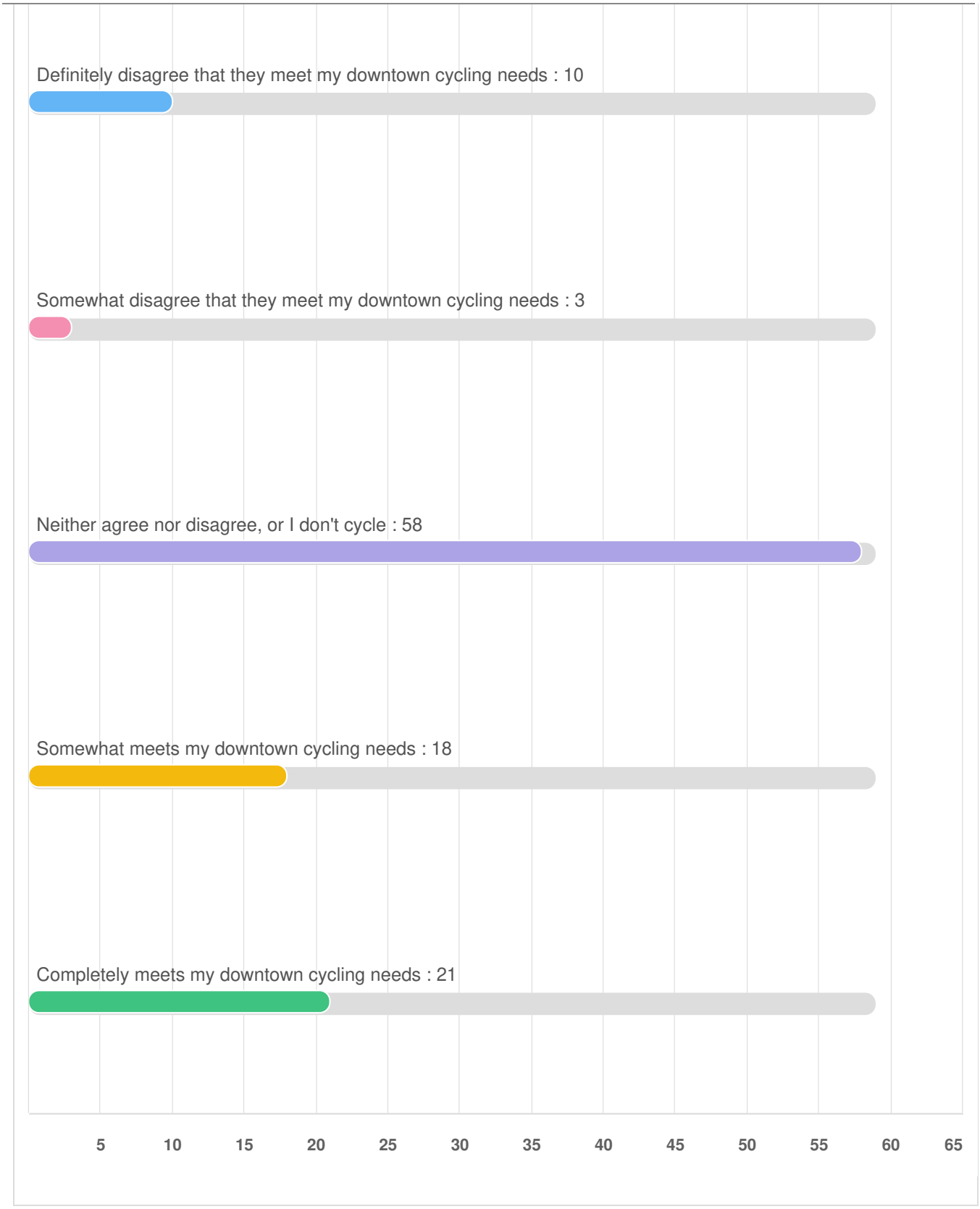
Q9 ACTIVE TRANSPORTATION - CYCLING DOWNTOWN - to view the map CLICK HERE for the slide presentation



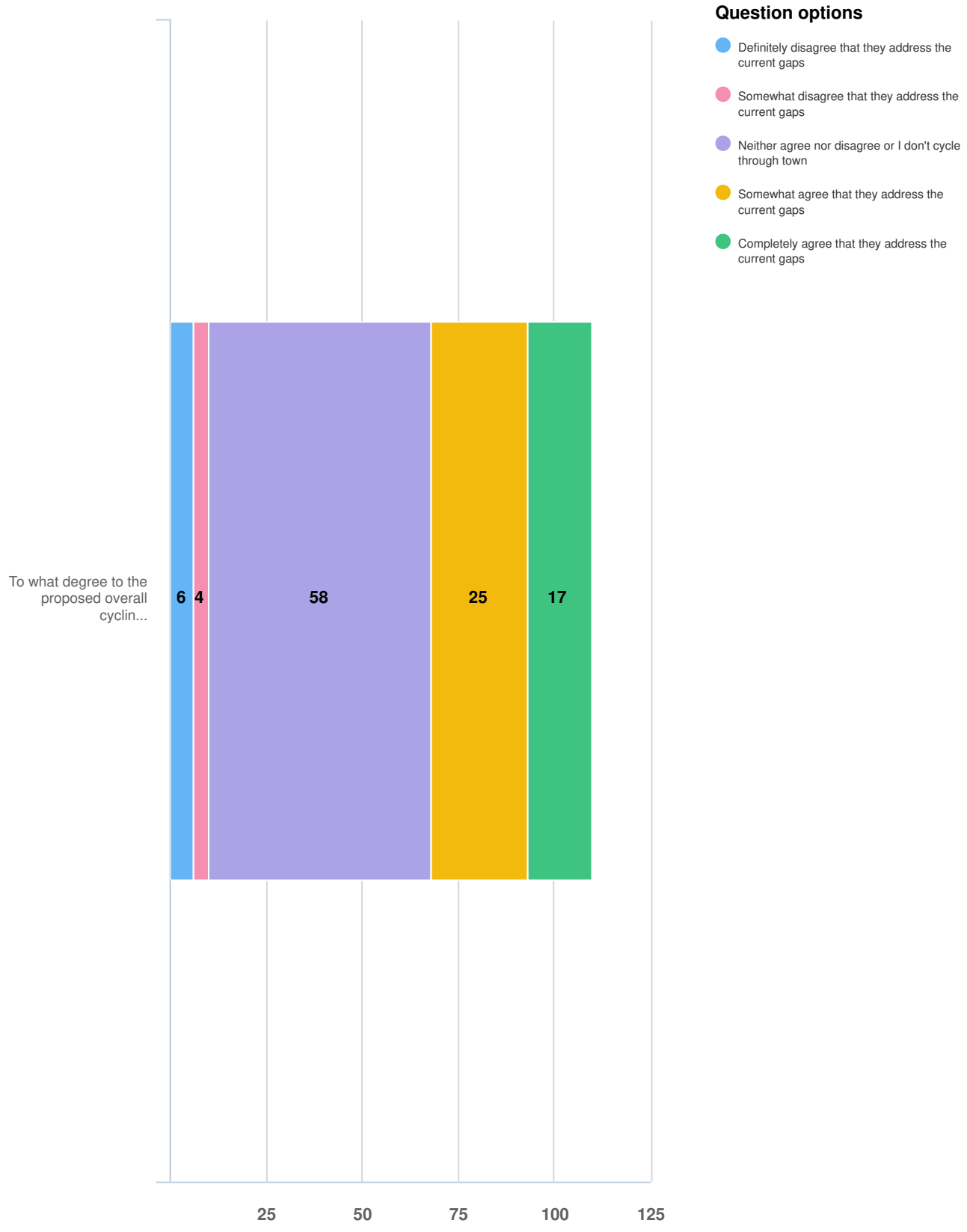
Mandatory Question (110 response(s))
Question type: Likert Question

Q9 ACTIVE TRANSPORTATION - CYCLING DOWNTOWN - to view the map CLICK HERE for the slide presentation

How much do the proposed changes of the downtown cycling network meet your needs?


Definitely disagree that they meet my downtown cycling needs : 10
Somewhat disagree that they meet my downtown cycling needs : 3
Neither agree nor disagree, or I don't cycle : 58
Somewhat meets my downtown cycling needs : 18
Completely meets my downtown cycling needs : 21
5
10
15
20
25
30
35
40
45
50
55
60
65

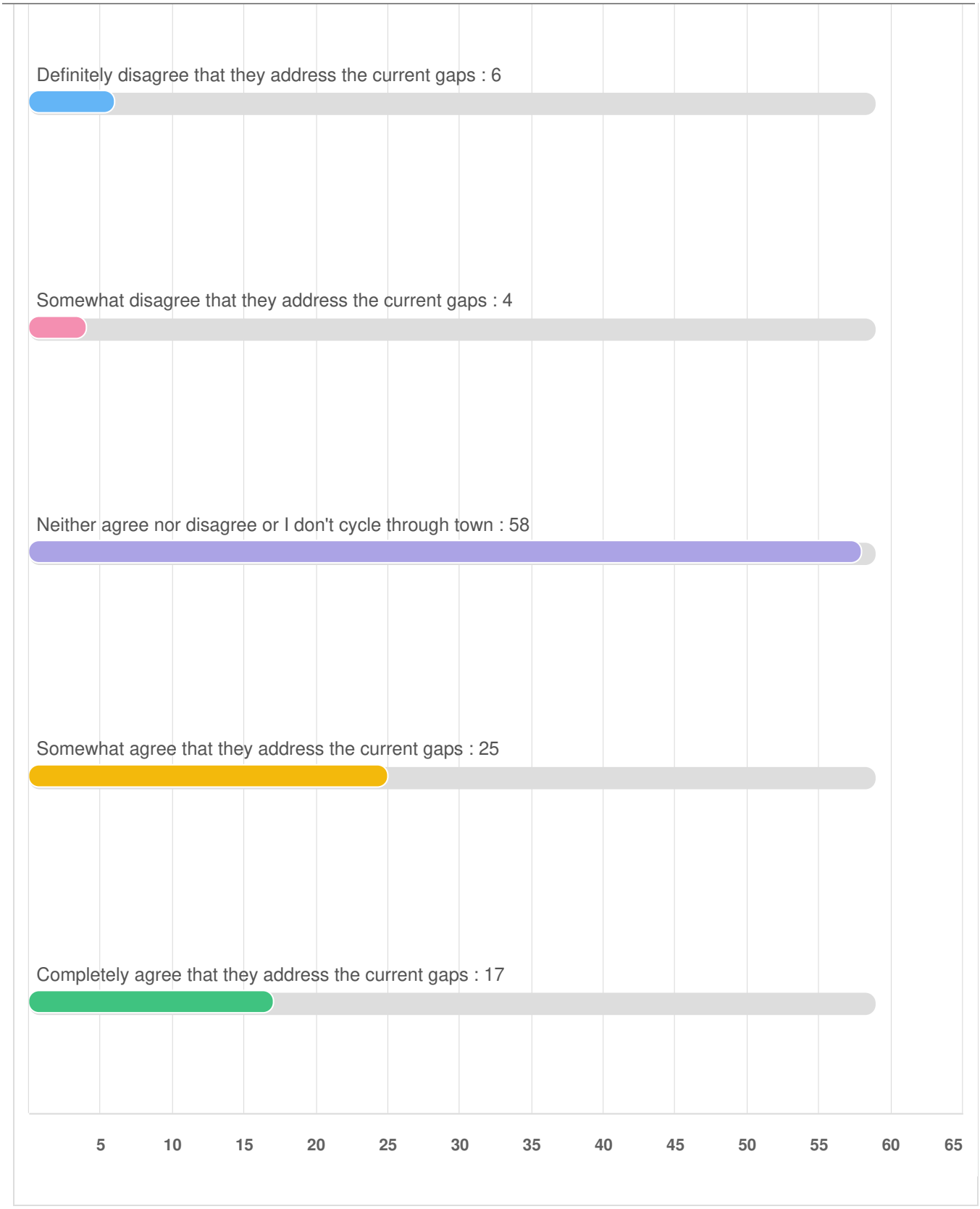
Q10 ACTIVE TRANSPORTATION- CYCLING - REST OF TOWN - to view a map CLICK HERE for the slide presentation



Mandatory Question (110 response(s))
Question type: Likert Question

Q10 ACTIVE TRANSPORTATION- CYCLING - REST OF TOWN - to view a map CLICK HERE for the slide presentation

To what degree to the proposed overall cycling network improvements address the current gaps?


Definitely disagree that they address the current gaps : 6
Somewhat disagree that they address the current gaps : 4
Neither agree nor disagree or I don't cycle through town : 58
Somewhat agree that they address the current gaps : 25
Completely agree that they address the current gaps : 17
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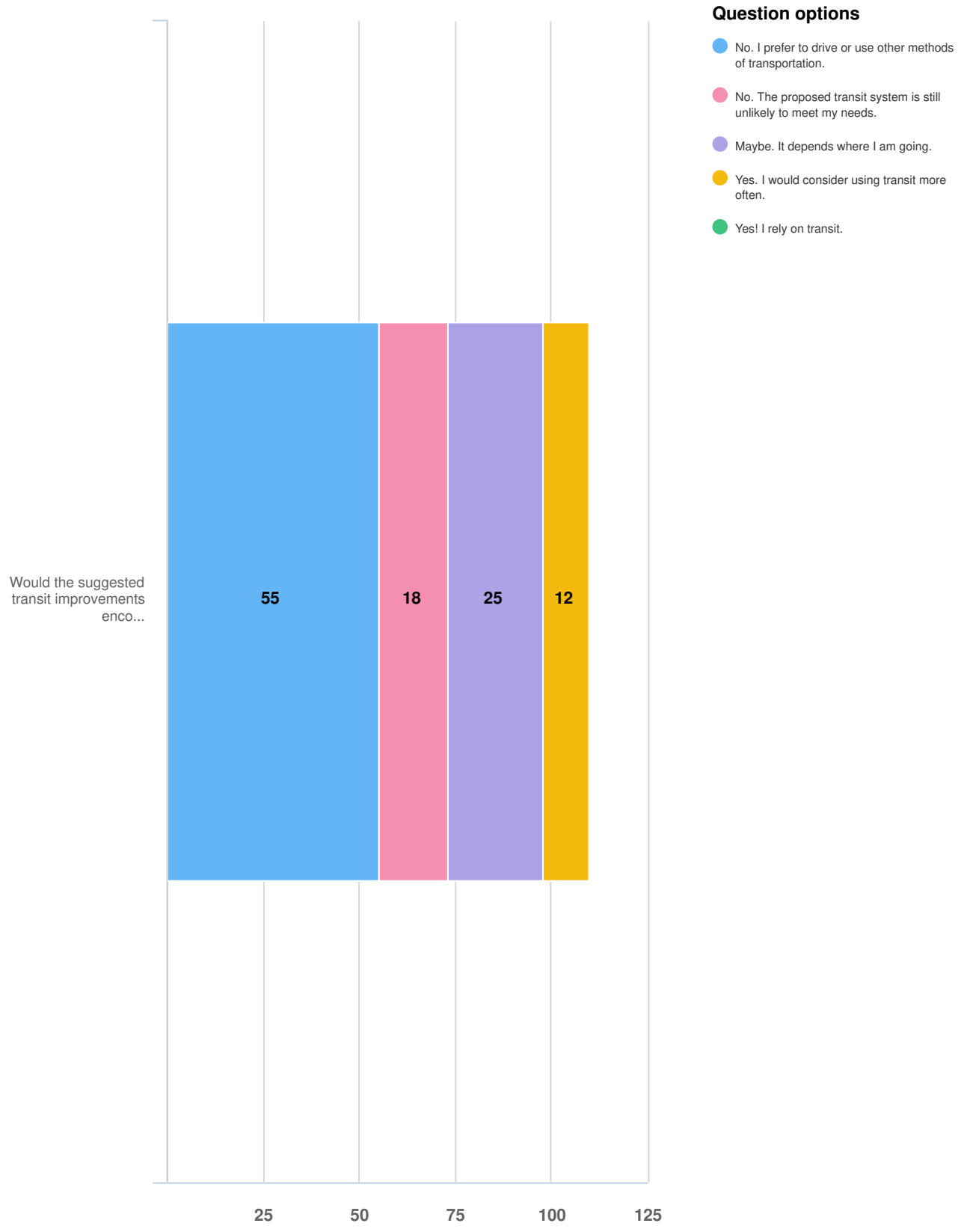
Q11 PUBLIC TRANSIT - to view the map from the slide presentation CLICK HERE

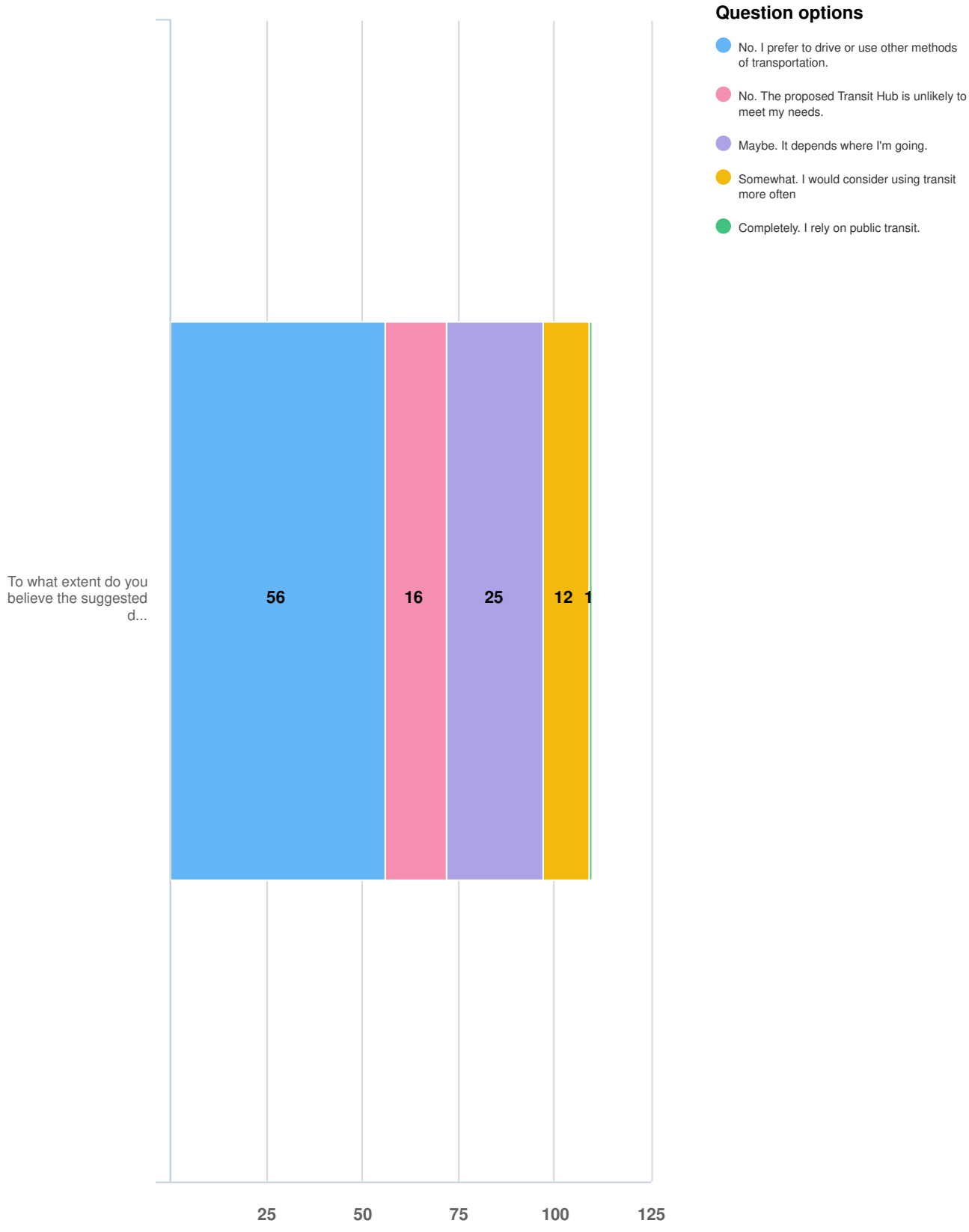


Mandatory Question (110 response(s))
Question type: Likert Question

Q11 PUBLIC TRANSIT - to view the map from the slide presentation CLICK HERE

Would the suggested transit improvements encourage you to travel more often by public transit?

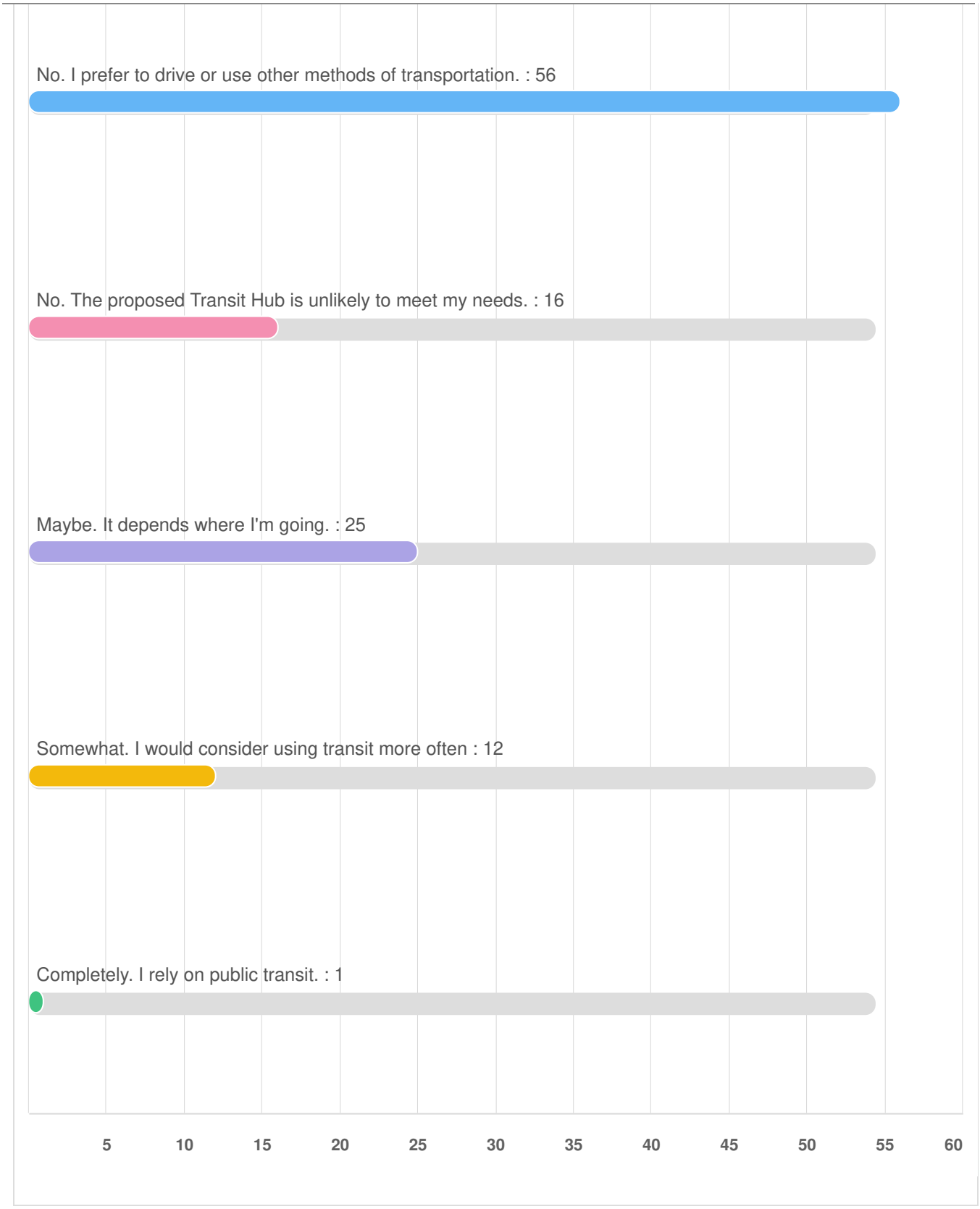
Q12 PUBLIC TRANSIT - TRANSIT HUB - to view the map from the slide presentation CLICK HERE



Mandatory Question (110 response(s))
Question type: Likert Question

Q12 PUBLIC TRANSIT - TRANSIT HUB - to view the map from the slide presentation CLICK HERE

To what extent do you believe the suggested downtown Transit Hub will enhance your experience?


No. I prefer to drive or use other methods of transportation. : 56
No. The proposed Transit Hub is unlikely to meet my needs. : 16
Maybe. It depends where I'm going. : 25
Somewhat. I would consider using transit more often : 12
Completely. I rely on public transit. : 1
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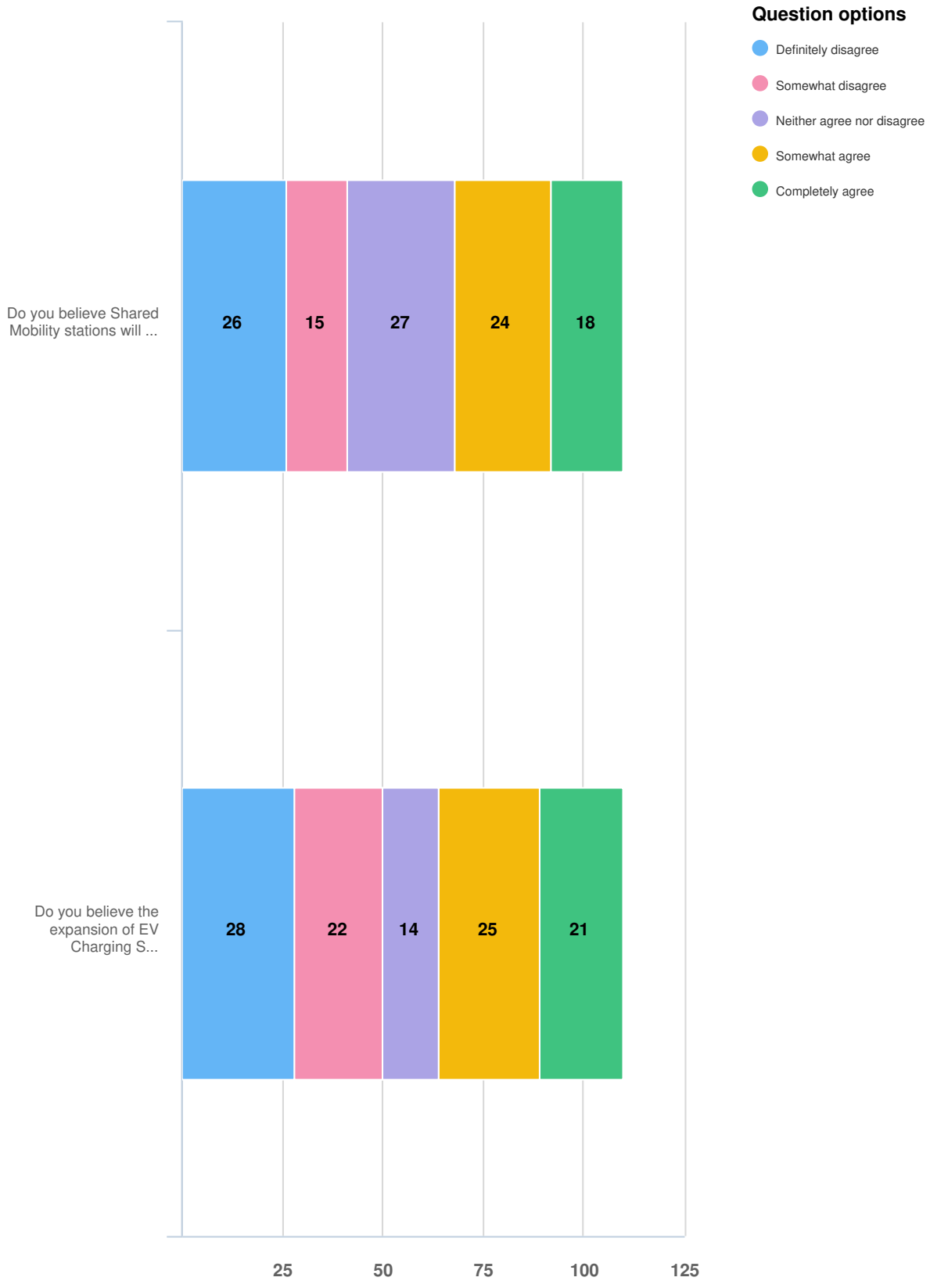
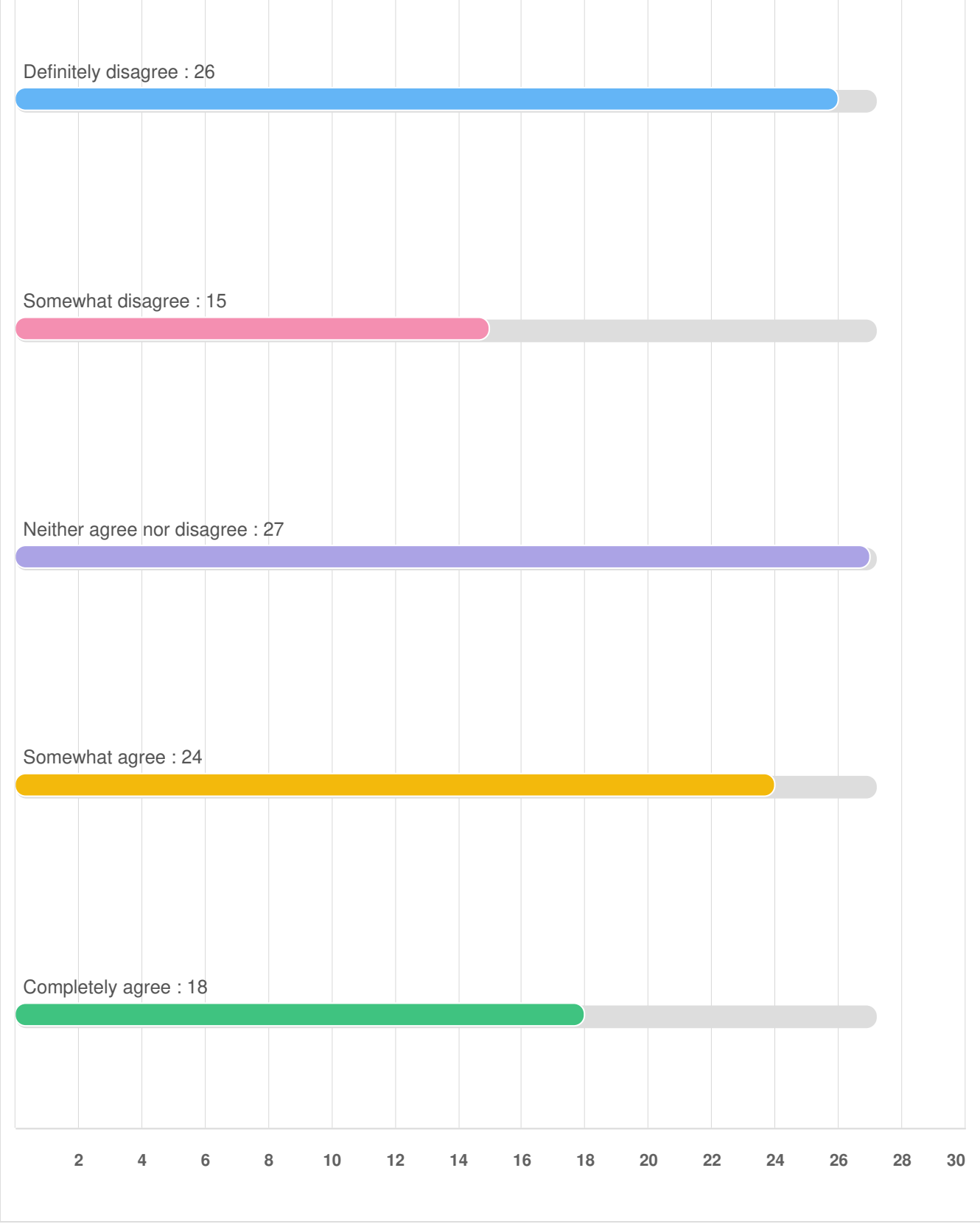
Q13 SMART MOBILITY



Mandatory Question (110 response(s))
Question type: Likert Question

Q13 SMART MOBILITY

Do you believe Shared Mobility stations will enhance the transportation experience in Amherstburg? Shared/ Smart Mobility Stations are integrated hubs that provide a diverse range of sustainable transportation options and amenities. Designed to enhance connectivity ad convenience, these stations encourage the use of various transportation modes, promoting an efficient and eco-friendly urban mobility experience.


Definitely disagree : 26
Somewhat disagree : 15
Neither agree nor disagree : 27
Somewhat agree : 24
Completely agree : 18
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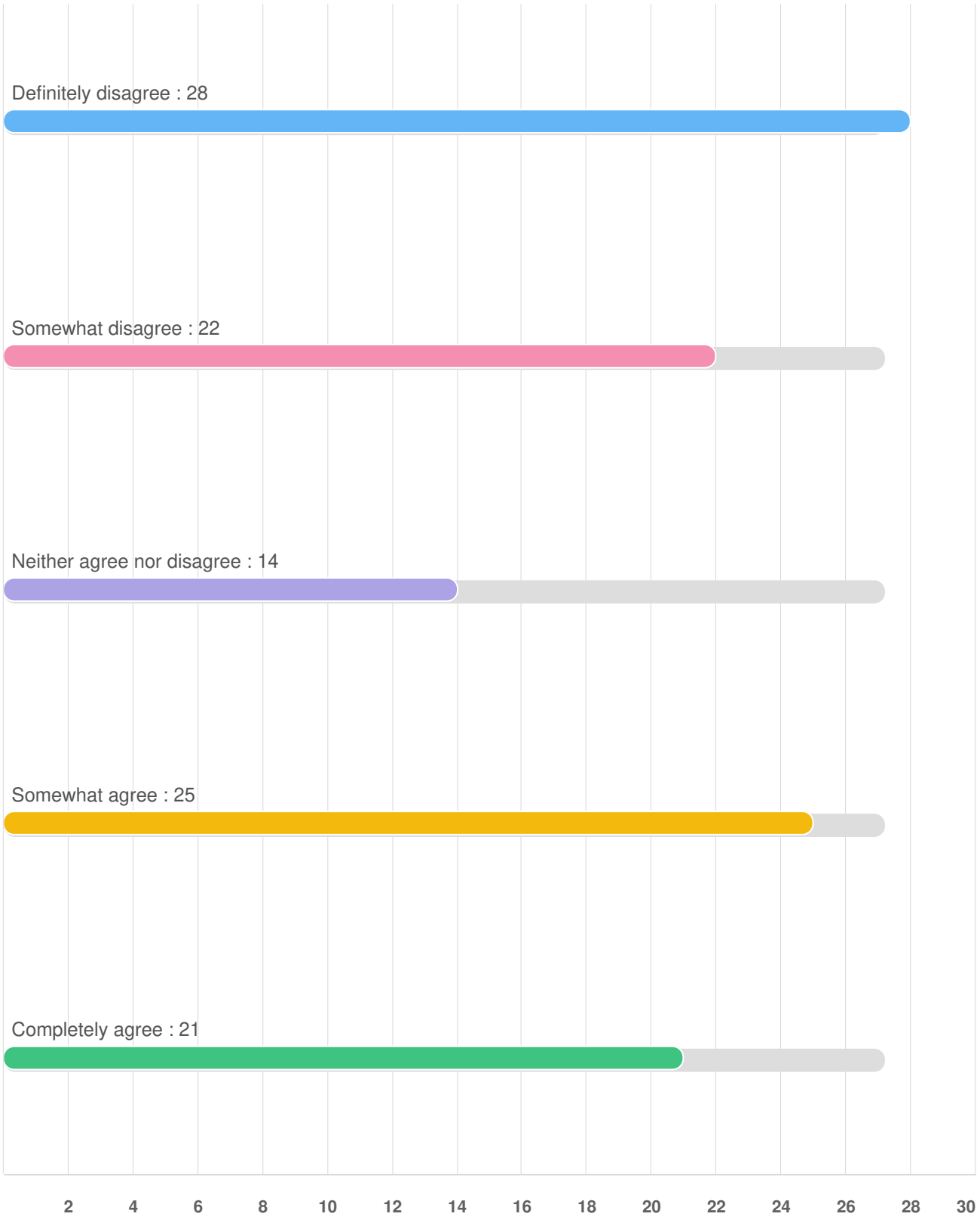
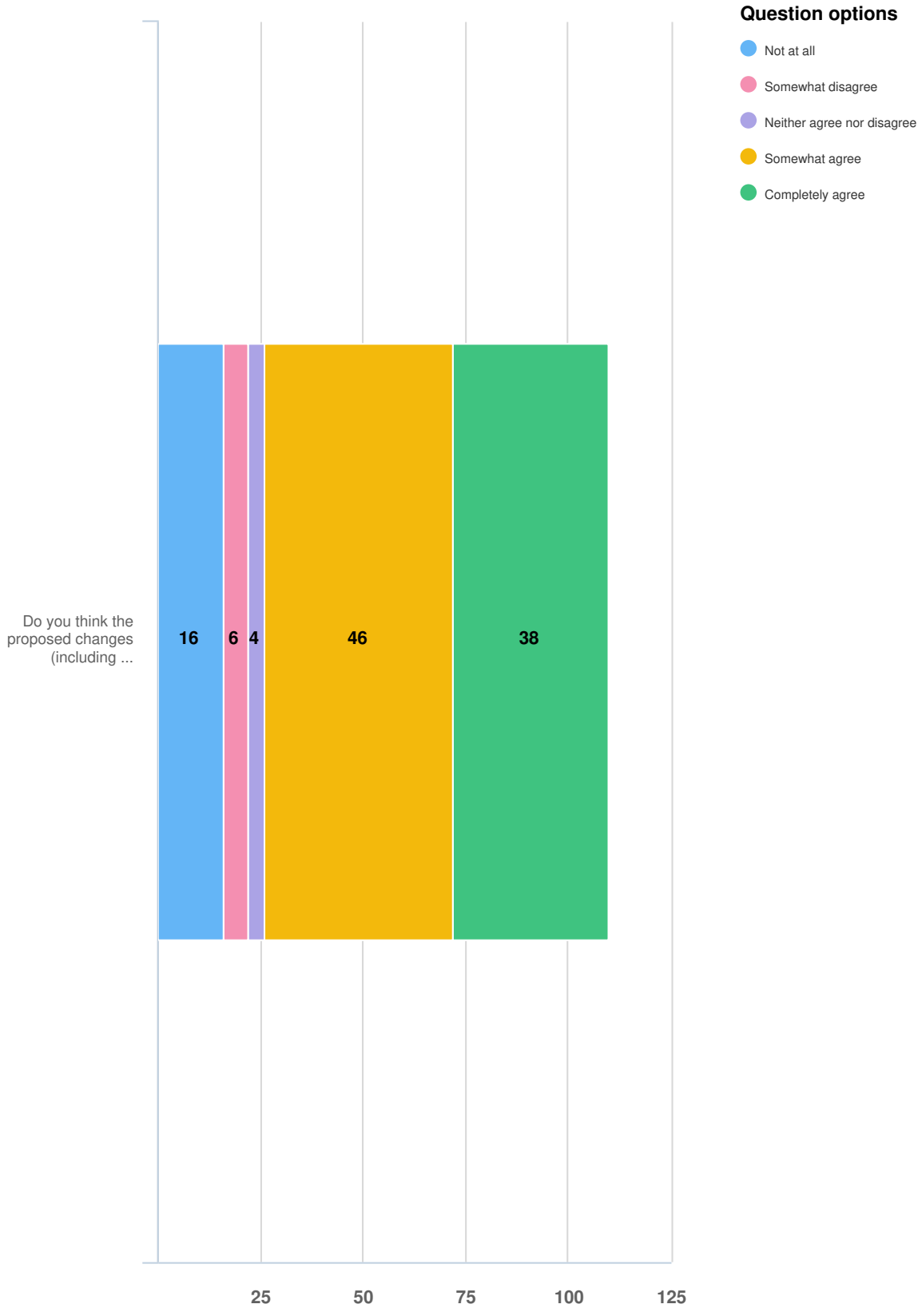
Do you believe the expansion of EV Charging Stations provide value to the transportation network?



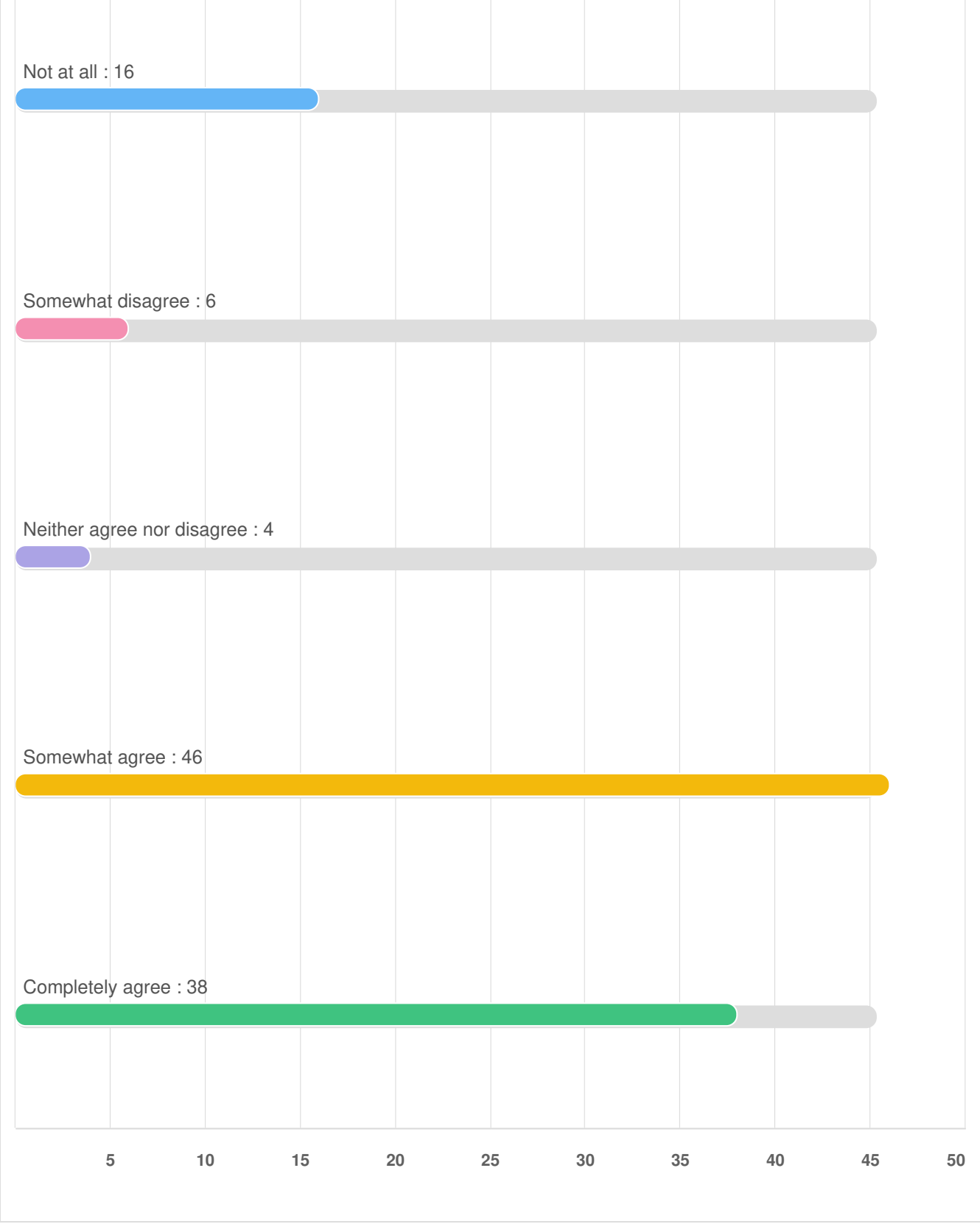
Q14 SIMCOE STREET and MELOCHE ROAD INTERSECTION - to view the aerial view of the proposed layout to to the slide presentation CLICK HERE



Mandatory Question (110 response(s))
Question type: Likert Question

Q14 SIMCOE STREET and MELOCHE ROAD INTERSECTION - to view the aerial view of the proposed layout to to the slide presentation CLICK HERE

Do you think the proposed changes (including all-way stop control, centre median, marketed crosswalks and curb extensions) will improve safety for all users at this intersection?


Not at all : 16
Somewhat disagree : 6
Neither agree nor disagree : 4
Somewhat agree : 46
Completely agree : 38
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Q15 Any additional comments on the proposed solutions can be provided below.

2/13/2024 05:55 PM	Move the lights from the old Amherst building as this stops traffic flow. Reuse these lights at Libro intersection with the purchase of additional lights. A four way stop will not solve the problems. Address traffic congestion in the downtown area.
2/13/2024 07:23 PM	I would like to see raised intersection at Rankin and Dalhousie as this is a busy pedestrian crossing as entrance to NYP is right there. Also curb bump outs on both sides of Rankin to stop cars from parking right up to stop sign. Totally agree with eliminating parking on east side of Dalhousie. Sidewalks around perimeter of Toddy Jones park a must.
2/13/2024 07:33 PM	I strongly believe that the town needs to focus on walkability and safety. Creating a safe and beautiful pedestrian experience will encourage tourism and result in a stronger economic base for the town! Great job on the plan overall! Council:PLEASE BE PROACTIVE AND FOLLOW THROUGH!!
2/13/2024 07:44 PM	Great job on this plan!
2/13/2024 10:03 PM	The public transportation, bus, has caused nothing but problems in our town. The vast majority of town tax payers do not use the bus, it is used to bring out of town people in, many of which are causing havoc in our town, our crime is going up, there are people getting off the bus doing drugs and talking to our youth on the streets about meth. There has been nothing positive about the bus in Amherstburg and I do not want my taxes funding rides for people coming to work in Amherstburg, from out of town, who are taking jobs away from our residents!
2/14/2024 06:26 AM	Rather than 4-way stop at Simcoe & Meloche, install pedestrian activated crosswalk flashers to cross Simcoe similar to those recently installed at North Star high school. Curb extensions, centre median, chevrons and other pavement markings & signage would serve as Simcoe Street traffic calming measures for the intersection.
2/14/2024 08:13 AM	Amherstburg receives the benefits of 'motor-tourism.' On the weekends people like to drive their cars to our town. Yes bicycles

	come for the coffee. Closed streets only means the motor-tourists by-pass downtown altogether and continue on to Colchester, Harrow, Kingsville, etc. Open the streets and let the motor-tourists come. Windsor Public transit - subsidized bus fares get off the bus and piss in my neighbours front lawn. They aren't here for the shops or museums. A portion of them are only here for the clinic, to make further drug deals, or they are en-route to their illegal beach camps. Open the summer streets downtown to accommodate the cars that carry the 'tourists' here.
2/14/2024 09:56 AM	If we encourage more bike they need to stay off the sidewalks. Need to make sure all intersections downtown are 4 way stops. Eg Gore is a crash hazard in waiting. Also Dalhousie as it bends to cross Park is a blind spot that needs a 4 way stop. All crossings need to be able to accommodate motorized scooters and people with mobility issues.
2/14/2024 10:25 AM	Get the police to slow people down on the north end of town. Do thier job!! Angle parking on Dalhousie north, push the curbs into the park 4 feet, it won't make a difference and can be done in an hour. Quit blocking sight lines with town planted growth, eg north and Sandwich. Leave Murray alone other than lose the 3 or four parking spots next to the Artisan. Put a right turn lane at Sandwich and Simcoe like there was before, very few turn left on a 300 foot road.
2/14/2024 12:05 PM	A lot of excellent suggestions! People complain that we don't have parking downtown but I rarely have a problem finding parking downtown and I go there several times per week. I am happy to see the walkability being improved since more and more people are health conscious and want to move more and walk more. It's good exercise and easy. I'm not sure if we can afford to put all of these changes into place but I hope so.
2/14/2024 12:24 PM	Cycling should not be a priority. Millions of dollars were spent on Fryer Street, and no one uses the bike lanes. Nice, wide sidewalks should be used instead. Simcoe and Meloche should be a roundabout, not a 4-way stop. A 4-way stop there is absurd. 99% of the time there's no reason to stop traffic on Simcoe. Simcoe needs to be widened to MINIMUM 3 lanes from Meloche to Sandwich (2 each way with a centre turn lane). Speed bumps should NEVER, EVER be used on public streets - they damage cars and impede emergency services.
2/14/2024 01:19 PM	I do not see any solutions for the traffic passing through Edgewater on Front Rd N. This road design does not meet the criteria of Federal

	or Provincial Guidelines. The speeds need to be reduced and traffic calming needs to be introduced. The housing density dictates that 40 to 50km speed limits need to be in place. Traffic passing by my house far exceeds allowable limits. Noise levels and particulate pollution also are exceeding provincial limits referenced from many studies on 4 lane roads. Also the vibration transmitted though the ground from heavy vehicles does not allow me to sleep in the morning after 5:30am.The health impact on the local citizens is hard to measure but the Board of Health can perform studies under Provincial Regulations. Also the vibration transmitted though the ground from heavy vehicles does not allow me to sleep in the morning after 5:30am. All these risks need to be dealt with before this goes any further.
2/14/2024 04:03 PM	I strongly encourage a transportation strategy that discourages car use and promotes pedestrian/cycling travel into the downtown. I am concerned that expanding Sandwich street in the arterial road manner as described does little - if anything at all - to encourage this behaviour. As a resident who lives adjacent to downtown and makes a consistent effort to walk downtown to support local businesses, I would be less inclined to do so based on this strategy. I have already been nearly run down multiple times by vehicles speeding out of drive-thrus and running the crosswalk light at Sandwich. Expanding the road would only increase the public safety risk. Please consider revising this strategy so that it encourages the behaviour we want to see (more non-vehicular travel) instead of setting residents up to fail by widening arterial roads so that they have nice new pavement to drive on.
2/14/2024 04:02 PM	I admire Amherstburg for being so forward thinking. These changes make your community much more attractive to live in.
2/14/2024 05:33 PM	I love cycling to Amherstburg and any measures to make my commute more safer would be appreciated.
2/14/2024 07:24 PM	I usually drive when I go to the downtown core. However, for the past few years, in the warmer months, I have relied on my bicycle for errands, exercise, going to Open Air, visiting our parks, etc. I like the idea of enhancing the downtown core for cyclists and adding extra safety enhancements for cyclists, walkers, and drivers too.
2/14/2024 07:49 PM	Meloche Simcoe should have been a round about to calm the speeding

2/14/2024 09:16 PM	Public transit buses are not safe to be driving thru already busy subdivisions such as Kingsbridge - these buses should only be on main roads
2/15/2024 02:11 PM	I work downtown and my employer does not provide parking (for employees or the public). I never have a problem finding a parking spot although I do have to walk about two blocks or so to get to work. No big deal. I think there are plenty of parking options downtown.
2/15/2024 07:09 PM	The plan for Simcoe and Meloche is super frustrating. Adding a 4 way stop does nothing but delay commuters on what is a main thoroughfare. If speeding is an issue in that corridor, where are the police? I can tell you where they aren't because I rarely see them during my commute. That is how we address the issue at Simcoe and Meloche. I also think that decreasing the speed limit to 30 in the area (if that is what is decided based on the photos) is ridiculous. Police don't deal with the racers on Victoria now so how is making that a 30 going to change things? These are all really nice looking plans but we DO NOT have the money to do these things. We currently have some of the highest taxes in the county.
2/15/2024 07:48 PM	Stop wasting tax dollars on this garbage we are a small town stop trying to make this a city
2/16/2024 10:34 AM	I think eventually a street light is going to be needed at the Simcoe and Meloche intersection . I believe it should be done now for safety reasons and avoid spending money on other things just to remove them later
2/16/2024 11:05 AM	We don’t need electric modes of transportation in town, ex: electric scooters. It’s a small town, and there no place that isn’t walkable within minutes . EV’s aren’t the main means of transportation either, there is no need to take up valuable space and allot it to charging stations. It appears as though most of our towns tax money is designated towards the improvement of the downtown area. Which has been the case for a very long time. I myself do not live in the downtown area. I live out in the county. I may frequent the downtown area once in a while with my family. I really don’t see how the downtown improvements to the extent to which we are going, affects or benefits me or my family’s needs in particular, in any fashion. I don’t work downtown, I don’t own a business downtown, my children don’t frequent anything downtown as there’s nothing there for them.

	Improvements to the downtown core appear to only serve business owners and residents in the downtown area. Redoing the roads and sidewalks seems unnecessary, but I do believe is that speed bumps or something to that effect to help control traffic would be ideal. We do indeed want everyone to be safe down there however, we've survived for many years with the downtown just the way it is. I would like to see safer biking lanes, and not just around town, but perhaps also in the county.
2/16/2024 12:37 PM	Install roundabouts instead of stop lights or signs where possible.
2/16/2024 11:32 AM	The core area cannot afford to lose parking spots. Some of the issues ex. Simcoe/meloche rd are enforcement issues, without it no sense in changing the way it is, right now.
2/16/2024 12:41 PM	The town needs to encourage walking. There is plenty of parking downtown. There needs to be better walkability in that area.
2/16/2024 05:02 PM	i have seen 1st hand if the round about is too small, nobody slows down, plus if say you plant a tree or put an obsticle in the round about, it hinders sight lines. otherwise great it's a great idea. i have seen 3-d road paintings that slow traffic. PLEASE CLOSE MURRAY ST. for a pedestrian mall. i love the ideas of making our streets more people friendly, wider sidewalks, separating traffic from people biking or walking. GREAT WORK PEOPLE.
2/16/2024 05:34 PM	I think a traffic circle is a better option.
2/17/2024 06:05 AM	I work downtown. I very much disagree to reducing parking spots as there aren't enough as it is. It's only 2h parking in most of downtown. It's not practical for me to move my vehicle every two hours. I work in public service and I need my car throughout the day
2/17/2024 08:54 AM	For me, Dalhousie Street and Simcoe near the Libro Centre should be the two highest priorities. It is so seldom that you actually see people come to a full stop at the stop signs on Dalhousie. Policing on foot could pull over and stop those who fly through. I think that the ultimate solution would be to make Dalhousie simply a one-way street in the core. If there ever was a place for a roundabout, it seems to me that Simcoe/Meloche would be the perfect spot. It would handle

	high traffic and people trying to beat the traffic and would just be a minor inconvenience when it's not high traffic time. I don't understand the value of the mini-roundabouts in the proposed plan.
2/17/2024 01:13 PM	I feel as though the traffic light option will be needed earlier than 2033. So to put the cost in to do part of the project, to only have to re-do it 5 years later seems silly. I'd prefer to put the light in now instead if making it a 2 step project. Then the focus can shift to other areas of concern instead of optically looking like the same intersection is getting attention/money multiple times over a relatively short period of time. With the focus being the Libro for the future development of recreation, it just makes sense to make the intersection robust enough to handle this aggressive development KNOWING the need will be there so close in the future.
2/17/2024 02:48 PM	I would like to see more alternatives to car dependent infrastructure and more pedestrian/cycling centred infrastructure in the core.
2/18/2024 05:37 PM	Cycling: Regarding the proposed cycling plan, there is a map, but minimal detail about the proposed infrastructure for each segment. What sections are protected on street bike lanes? Which are separated? Which are just a road we share with cars? Looking to the "Standard Road Profiles" slide, I can make a guess for Dalhousie, Simcoe, and Sandwich. But I shouldn't have to guess. An effective cycling network requires planning. Based on the info available in these slides and verbally given during the open house, it appears as though very little planning has been done in regards to defining the specific cycling infrastructure. Also, can we add Pacific and Pickering (between Fryer and Sandwich) to the cycling map. Pedestrian: The downtown core looks great! However, it looks like the plan just gave up after that. Looking to the slide "Active Transportation Plan - Pedestrian" under "Location of Formal Pedestrian Crossings", you can see Richmond street is a pedestrian's dream until Fryer. After Fryer, it looks like a highway where pedestrians have been forgotten about. There is not a single formal pedestrian crossing in a neighborhood filled with families. Additionally, on Simcoe, between Fryer and the arena, this also looks like a Highway with only one crossing. This section of Simcoe specifically will be where kids will be walking to soccer practice at the arena; it also should require specific attention. In general, no information is provided for the areas not shown. In Kingsbridge, in Golfview, in Pointe West... What is happening here?
	I feel the that downtown street layouts are fine. Sidewalks need to be

2/19/2024 02:11 PM	resurfaced and remain the size they are. I 100% do not agree with closing Murray St .I also do NOT agree with changing the sidewalks so that businesses can have patios, they can pay for their own. As far as busing, we really don't need it. All that I have witnessed from this is people coming to town to wander around, no not tourists. I've witnessed one off loading the bus and urinating a someone's front lawn. That's the kind of people that ride the bus. No thanks
2/21/2024 12:02 PM	1. Put all way stop signs at the intersection of Simcoe & Meloche roads immediately. When money is available, put in the long term solution including signals. Do not waste resources on the short terms curbs etc that you will only rip out at a later date. Take action now with minimal cost. More traffic control by the police will help with speeds at this intersection. 2. I note the distinct lack of discussion with regard to commercial truck routing within the Town. This needs to be looked at as commercial vehicles, including Class 8 trucks, are using residential streets to move around Town. Increased signage and enforcement need to take place. 3. Before anything is done with regard to busses and mass transit we need to see a complete report including number of passengers throughout the day, times of routes and true costing before any any further action is taken. 4. Downtown parking can be resolved by having the business employees not parking on the streets and taking up all the parking. Leave room for your Customers
2/21/2024 12:50 PM	Put a light at Simcoe and Meloche!
2/21/2024 01:52 PM	Sun or and meloche needs a traffic light or a traffic circle for me to feel safe walking Through the intersection. Especially when I’m walking with my children. Traffic moves too quickly through this area and I don’t think the proposed solution will slow traffic enough or at all.
2/21/2024 02:47 PM	If you’re limiting car access to downtown you should limit cycling as well ie bike parking areas . What about transient marina to limit car traffic. A greater need now and in the immediate future is traffic on Sandwich(too many drive thrus) in concentrated areas.
2/21/2024 03:35 PM	Park in the downtown core is a nightmare. Public transportation is essential to our growing community. Would encourage more people coming to events to not drink and drive with so many public transportion options and they can all quit complaining about no parking!

2/22/2024 07:55 AM	Do not lower speed limits or install speed bumps. That's going way to far and there really isn't a speeding problem in the areas cited.
2/22/2024 10:46 AM	The Town of Amherstburg should NOT be involved in EV charging stations. This should be provided by Independent Retail operators ONLY! Taking up parking spaces with EV Charging stations only is a waste of limited parking availability and an area the Town has NO EXPERTISE in maintaining! Cyclists being allowed to ride in the parks or downtown core is a Very Serious Hazard for pedestrians!
2/22/2024 10:43 AM	I see a large focus on improving pedestrian traffic but nothing about increasing parking spaces in a downtown that can already be difficult to access during busy weekends or festivals.
2/22/2024 11:04 AM	There should be some focus on sidewalks, traffic calming methods near Pointe West and 10. A number of young children get on and off the bus at these locations and drivers often run through the flashing bus lights. There have been many infractions that the WPS has issued tickets for. Infact, according to the plan, there are no improvments displayed for this area.
2/22/2024 05:27 PM	There is only much that can be done to help with safety on the roads. You're dealing with human errors both walking around and driving. "Bubble wrapping" the town won't make it better.
2/24/2024 03:30 PM	1)I discussed the need to strengthen a walk/cycle corridor between Amherst Point and A'burg w/ city of Essex. I still feel the need is there even after work was done. 2)At this point Meloche/Simcoe might better be served w/ a traffic circle. Currently I use the intersection frequently and don'yt experience the issues raised in the study? 3) Murray St. could better be improved with some parking kept while providing bump outs for restaurants where sensible. Removing all parking would be a mistake. 4) Many of the ideas presented are commonly used in other communities. Amherst burg will look just like those communities instead of going for something more unique. the whole study seemed 'boilerplate' to me. 5) Only respond to the comments contained in my survey. Otherwise do not send me updates and delete my address. thx
	Gearing Amherstburg in the direction of a 15 minute city is not

2/28/2024 09:56 AM	something that I support in any way. If you look at plans throughout the province and the country and other countries you will see that that is exactly what this proposal is. How about we leave Amherstburg as Amherstburg . People grow up here remain here because they enjoyed it, and people moved here from other communities because they enjoyed the way it was. This council needs to take a real look at the community and stop catering to the powers that be.
2/28/2024 06:28 PM	Get rid of brick and interlock sidewalks
2/28/2024 07:59 PM	I think the town should not look at all of these extras until they can keep up with what we have. I love adding multi use paved shoulders when replacing roads if very helpful.
2/28/2024 08:21 PM	Believe the closure of Murray Street and the elimination of parking on Dalhousie with the expansion of sidewalks will really change the downtown to be more people friendly and make the town a preferred destination for dining and socializing. Wish more was being done at the Simcoe and Meloche intersection, would like to see a roundabout there.
2/28/2024 08:35 PM	In theory, there are some good suggestions in the proposal. I have concerns about the cost to implement and also just how much streetspace will be taken away to make some of the calming things happen. The plan does not address the traffic area on the south end of town with the construction of the new stores. I think that converting downtown Dalhousie Street would help with traffic.
2/28/2024 08:42 PM	How about you fix the craters out on the concessions, and atop monkeying around in town and wasting money?
2/28/2024 08:44 PM	Meloche Road Intersection - NO curb extensions. These are county roads. There is a fair amount of truck traffic trying to navigate this intersection as it is and placing curb extensions will significantly prohibit their movement. The only thing I see as being a reasonable solution here is traffic lights. Downtown - Reducing parking along Dalhousie Street from Rankin to North is a must. One side of the street only. It is too tight through this section. Also, mini roundabouts anywhere downtown is a waste of money. Raised intersections seem to be a better choice. Same with curb extensions, waste of money. Murray Street - I feel as though closing Murray street is an excellent idea. Although I do not care for how this is being handled. This is

clearly not something the transportation study has proposed out of thin air. This has been deliberately placed within this study to justify the actions forthcoming to please council in suggesting it was an idea from a traffic study. People may be naive, but to try to completely pull the wool over their eyes is pathetic. Pedestrians - I don't agree with constantly needing studies to figure out basic needs of travel, especially pedestrians. It is not rocket science to see what is needed. It took this town years to figure out to put a sidewalk along front road from Lowes Side Road to Season's so that the residents of Seasons can connect to the rest of town. Also the town allowed the installation of the tourist trap, "The Hole in the Wall" next to the tourist booth and wants people to go there and take pictures, but the sidewalk on the west side of Sandwich street stops at St. Arnaud. Why hasn't this sidewalk tied into the one that ends at the south end of the tourist booth. Another fail by the town is that the "Trail" network that connects town to the Libro Credit Union Center doesn't actually connect to the Center. It runs East along the entrance way and terminates before it can connect again to the roundabout that exists around the front doors to the building. Absolutely ridiculous for someone with an electric wheelchair or scooter to safely reach the building. (For almost 15 years its been like this!!!!) Potential Bus Terminal - I don't know where this idea popped up from, and potentially a brainstorm idea I'm sure, but if I have ever seen a potential tremendous waste of land, this would be it. Prime real estate location here, and there is a proposed future bus terminal for the 30 people a day that utilize this service. We are not a major municipality in Ontario. We do not and will not need a bus terminal. If for some reason in the next 50 years we do, we will have A LOT of other problems to contend with in this town before this would ever be needed. Sandwich Street - This blows my mind that our town management can not see the problem, or if they do, and they do nothing to fix it. The amount of traffic on Sandwich street seems to have increased 10 fold in the past 10 years. People will be sitting at the Pickering street intersection in traffic waiting for the light to turn green at the Simcoe street intersection. The timing and the use of advanced signals is so misaligned, it is extremely frustrating as a driver in this town. Why can only 10 cars go through one green light at Simcoe and Sandwich? Why at Richmond and Sandwich is it that heading northbound, the advanced left signal will illuminate every time the light turns green, if there is a car there or not. Such a waste of time and inefficient flow of traffic. Also at Simcoe and Sandwich heading west on Simcoe, you are lucky to get through the intersection if you are the 5th vehicle lined up. Why is it that where two county roads meet, and the amount of traffic waiting can not get through on a single green light? If there is a pedestrian that walks across Sandwich, you will be lucky to have maybe two cars turn off of Simcoe street during a single green light. If these lights through town need to be completely reprogrammed to fix the problems, I don't see

	why this isn't a priority. The one older gentlemen that seems to come and "try" to fix these issues over the years, may not be the solution. Time to get a competent company in here to get this done!!! Lots to read here Mr Hewitt. I hope that some of these more basic problems can be rectified without the use of this traffic study and just the plain use of common sense. But seeing as how long these issues have plagued this town, and either have not been noticed or decided not to be fixed, I highly doubt we will have sensible solutions to these problems in a timely manner. Lots of brains in Town hall and in the public works building, but the problem is half of them don't live in this town or have to deal with these problems. As a resident we should be entitled to better service. Yes, entitled, because we pay dearly for it!
2/28/2024 09:35 PM	Richmond street by jack purdie park needs stops or speed bumps I've seen people fly down it and have almost been hit more then once on the bend, also a crosswalk at the park on Richmond, it's not safe for kids to cross the street. The simcoe street and meloche rd should be a high priority and should be considered a long term solution including lights and cross walks. The short term stuff will just have to be ripped out and replaced to soon and planning is all about planning for the future. Feels like a waste to just do a short term solution
2/29/2024 07:55 AM	Can I expect a rebate in taxes if I cannot traverse the roads in my vehicle, through the downtown core, where I live? The 'tourists' you covet drive their cars to Amherstburg. Many of these same tourists bypass Amhertburg altogether when roads are closed - they go to Wolfhead, Colchester Harrow, and beyond.
2/29/2024 10:32 AM	Amherstburg does not need roundabouts at all. They are dangerous for people who do not know how to use them. In addition this plan does NOT help/support persons with disabilities at all. Also, we should be focusing on an indoor swimming pool at the Libro centre - family centric - something that would benefit all of Amherstburg, not just certain people and tourists!!

Optional question (55 response(s), 55 skipped)
Question type: Essay Question

Q16 If you want to receive updates about this study, please provide your email address below.

2/13/2024 05:55 PM	

Summary of Public Feedback and Comments

Subject: Transportation Master Plan thoughts....

[redacted]

Thank you for your comments, they are appreciated and will be sent to the consultant for consideration. I will attempt to answer some of them below in RED that I know the details to.
Regards,
Todd

[redacted]

Subject: Transportation Master Plan thoughts....

Hello Mr. Hewitt,

Thanks for reviewing my thoughts regarding the transportation master plan. Forgive me for sending them in this manner, but due to mobility constraints I will not be able to attend the open house that I was invited to via email this evening.

My input is as follows:

- **Road surfaces**
  - It would appear that prior repairs to front road between 10 side road and County Road 3 have disintegrated in our mild winter. The size of potholes in the inner lanes are concerning. I will pass this concern onto the County of Essex, they maintain Front Road.
  - So many of the surrounding county roads are in such rough shape – so many people have been complaining for a very long time. The Town continues to repair our rural roads when budget allows but the are vary costly. For example, we will be reconstructing the 2nd Concession this spring at a cost of approximately $4,000,000
- **Traffic Lights**
  - The number of lights and programming of traffic lights in town along Sandwhich street could be improved so that they change when a car or pedestrian are at a cross street allowing for better thru traffic. They are generally set up to operate this way (only change if there is someone at the crossing street) unless we have an infrastructure failure that requires us to operate the lights strictly on timers
  - Also, aligning and timing of the lights, so you don't wind up stopping at several of them (unless of course it's for a pedestrian). Due to the fact we operate the lights on a request basis (a car / person must be at the crossing street) it is impossible to 'time' the lights
  - The speed with which the lights change – even driving at the speed limit – requires me to brake harder than I normally would to react to a sudden change. The light timing is

set based on traffic standards based on road speeds

- Longer time periods are clearly required for pedestrians to get across safely The pedestrian crossing timing is set based on industry timing. We have recently extending pedestrian timing at Pickering due to resident requests

- **Signage and Line Painting**
  - Some of the roads are narrow, and to support wider turning vehicles it is intended for cars to stop further back than normal. Also, to aid right turning vehicles (i.e. where the left lane vehicle might block clear vision of traffic), they have the left lane stop earlier than the right lane. However, the lines are worn and not clearly marked and so are not observed. An example of this is Kingsbridge at Front Road. Many roads are not designed for truck traffic so if they are required to use these roads it does cause some adjustment to other drivers. I will note to maintenance staff that refreshed linework is required
  - Approaching Alma from the North, where 2 lanes becomes one and the left lane is a "left turn only", there isn't enough/proper warning or visibility. Even improving the street painting would help. But there should be advanced warning, such as a lane merge sign or a sign that indicates that one lane is a turn lane, and the other a thru lane. Will note for the maintenance staff to review
  - Street signs are small and difficult to read. Other municipalities use taller signs with larger fonts. Also Blue on White is easier than Green on White. And the White could be a reflective surface. Will note for the maintenance staff to review
  - Posting street signs 20-30FT **before** the intersection is ideal. This would be especially useful in the more rural areas of town, and at main intersections. Will note for the maintenance staff to review
  - Why is it allowed that there are 2 different names on either side of the intersection? These in particular, need to be better marked. (Example – on the maps, Knobb Hill becomes Lambert at Whelan, and then turns into Oxford on the opposite side of Whelan? In fact, all along Whelan, the names on the North vs South side of the road are different? The street names established during design due to road design (i.e. Knobb Hill is considered a 'Drive' and Oxford is a 'Crescent') based on the criteria of our traffic bylaw and official plan. It can be confusing though.
  - And just when does Front Road turn into Sandwhich street? I can't quite figure that out. Plus, everyone has 5 names for that road (Front Road, Sandwhich Street, Old Hwy 18, County Road 20, SeaCliffe Road, Main Street, Ojibway). My family have lovingly taken to just calling it the "River Road". At least we all know what road we're talking about. From a tourism perspective, this can be confusing. Much of this is based on old naming using former township boundaries (Anderdon / Amherstburg / Malden) that have remained after amalgamation. Definitely a challenge as people do refer to it differently.
- **Turning Lanes** - When building higher density residential or commercial, we will need turning lanes
  - With the new mall/complex being built near the existing Tim Hortons (with 2 drive thru's and a number of other locations) pending, it is going to require a center turn lane to avoid backing up traffic. The initial traffic analysis did not support the center turn lane in this area

Similarly coming in or out of the Libro bank, or Amherstburg health center is difficult, and will only become more so as those buildings are enhanced for more business/traffic. A center turn lane is in order here as well.

- One example is near Kingsbridge, if the mid-rise apartment building(s) are constructed, an indent on the East Side to get slowing/turning vehicles out of the path of 70km traffic coming around a curve will be important. This will be considered when the developer completes a traffic analysis
- The bus stops should have indents for the bus to pull into, so that they are not stopping/blocking traffic while passengers load/unload.

- **Residential Street Parking**
  - One thing I notice about our community, is that even though people have huge driveways, they still tend to park on the streets. And there doesn't seem to be any time limit, or restrictions for overnight parking. Most cities at least have a 3hr parking bylaw (which is enforced). Enacting and enforcing this would be extremely difficult and is often not done in residential areas
  - Could we please limit parking to one side of the road? Alternate parking done on many streets throughout town and is rolled out to more streets every year
  - Could the cops please enforce that traffic is supposed to yield around these parked barriers. So often I am being forced to hug the non-existent curb next to a pedestrian walking their dog because someone coming from the opposite direction didn't pause behind the parked car until I passed, instead of speeding through expecting there was adequate space for a three lane road. Either that, or the roads should be a little bit wider? If you have an enforcement concern I would suggest that you contact the police directly.
- **Accessible/HandiCapped parking** (I will request that the consultant review the identified accessible parking spots in the core)
  - In downtown areas, we need to protect accessible parking, particularly during events.
    - When I first moved to town 3yrs ago, there was always a handicapped parking spot in the lot at the Navy Yard. Then I found that when the publics works people were there with their trucks, they would take it away so that they could park next to their shed. Now I'm finding, the handicapped sign is never out.
    - People with vehicles with ramps for mobility scooters or for their wheel chairs need more width, and protection from ongoing traffic while we load/unload. The Navy yard is safer than street parking.
  - Could there be an extra couple of accessible spots designated where Murray merges with Dalhousie, or on Dalhousie near Murray to provide coverage to the business on that side of Dalhousie.
  - Hopefully additional parking (and accessible parking) will be provided for when the Duffy's expansion of the Navy yard is completed.
  - In the new plans for any establishment (like Harvey's or Dairy Queen), there just aren't enough accessible spots near the entrance. I know your plans were recently reviewed, but for small lots with less than 24 spots you only require 1 accessible spot? Min of 2 are needed wherever accessible parking is mandated. And at least one of those spots should be a wide spot for egress from a vehicle with a ramp. Even if the 2nd spot were just designated for expectant mothers or seniors with arthritis. Protecting these close

spots for people who need them is the goal. Newer developments are reviewed to meet current requirements.

- **Commercial Parking** I will pass these items of to the Planning dept.
    - the width of spots in new construction is too narrow. Despite what everyone thinks, the smaller cars are not what is being driven, and the SUV's and vans need more width. Particularly for people with kids, who are aging and have disabilities.
    - Also, so many people drive pickups, or extended length vans/SUV's – which do not fit well in the length of spot provided, and only narrows the lane that people drive in. You get a couple of these pickups in a row, and then it's hard to get in and out of spots. Walmart, Sobeys, No Frills are great examples.
    - The flow in that Walmart parking lot is going to become very problematic with the new LCBO. Currently to enter from Sandwhich street, which moves cars along the front of the store, there are pedestrians constantly crossing causing traffic to move slowly (and to sometimes backup on to Sandwhich street). Cars tend to exit towards the back of the lot to avoid having to merge into this traffic in front of the store. However, this path is now blocked by the new LCBO (i.e. an LCBO location nearer the corner on Sandwhich street would have made flow in that lot much safer!)
- **Sidewalks** need to be fit for both pedestrians, as well as people with canes, using mobility scooters or in wheelchairs. We continue to widen sidewalks as budget allows
    - Sidewalks along front road are treacherous. Not only are they narrow, but they aren't even one surface. And then you get to the odd property (like the old Anderdon Tavern), there is all of the sudden no sidewalk at all. To make matters worse, you are walking along a 70km highway and are right next to the curb. I will pass this concern onto our maintenance staff
    - I love riding the path along Texas Road – until you hit the places where the road has been dug and resurfaced. Shouldn't there be rules about how well the road is resurfaced when a resident must break through. At minimum, it should at least come to close to the same height rather leaving a 1" drop. Unfortunately these repairs often settle over time and require repair.
    - As nice as the cobble stone paths look at the Navy path, they are very difficult and uncomfortable for passage in a mobility scooter or wheel chair – in part because of spacing and height variations. Noted
    - Even sidewalks on Dalhousie near Artisan Grill are narrow and uneven and unsafe for people with mobility constraints. Noted
    - The new sidewalks in the Kingsbridge division are the absolute worst. I have an open invitation to anyone from planning who would do me the favour of coming to ride my mobility scooter up and down this crazy surface. I stopped using the sidewalk as I felt it was not only damaging the suspension/steering, but at times I felt like the scooter was leaning/tipping in an unsafe way. Someone in a wheel chair will feel even more unsafe. But now I am riding a motorized vehicle on a main thru road, and driving against the grain of traffic so I can protect my dog between me and the curb (allowing me to control the drive mechanism with my dominant right hand). Even my other (healthy) family members have commented how difficult it is for them to walk with those elevations and have expressed concerns about twisting an ankle as the elevation change has a steep slant. If they complain in good weather, how will this be in the

winter? The design is truly flawed. noted

- Once the Kingsbridge sidewalks were installed, we were suddenly faced with the issue of where to put our bin. Do we put it at the curb and block the sidewalk? Or do we put it at the sidewalk further away from where it will be needed for dumping. Since Windsor Disposal has a man who loads the bin I guess it doesn't matter if we don't place the bin near the curb. But in most municipalities, they have gone to trucks that load those bins themselves to reduce the workforce needed to collect. That could become a problem for us in the future. Noted
- At many intersections in Kingsbridge (old and new) they are missing accessible cutouts for leaving the sidewalk to cross the road We will review. If you have certain areas please advise
- FYI – some other municipalities make the developer put in the sidewalks. The Developer is responsible to install all sidewalks

- **Main arteries, ingress/egress roads during construction** take a lot of wear and tear:
  - The existing roads (at Kingsbridge and likely along Fryer) are not built for large transports (18-wheel trucks with 53FT trailers of SOD/Lumber/building supplies, or cement trucks). We need to think through where these trucks should enter (for example, Kingsbridge is supposed to use Texas Road but it is not enforced). Agreed. This is an enforcement issue
  - What can be done to enforce the builders to keep the roads cleaner? I've been in sub-divisions where road cleaners are used every Friday (and paid for by the developer). In cleaning the roads, what can be done to avoid all of that dropped soil from landing in the sewers that you seem to be clearing out so regularly? This has been a battle for many years and we continue to do our best to have the streets clean (even if it doesn't seem that way…)
  - In newer areas, the Top Coat of Asphalt should be applied just as the town takes possession of the roads or at the very least be resurfaced. For example, so much wear and tear on Whelan Road, and the town keeps taking possession instead of pushing back to the developer. Some sections of Whelan are 25 years old now and will require resurfacing when budget allows
- **Enforcement & Safety:**
  - Residential roads that have parks, schools, school bus loading, public buses need to be better enforced for speed and rolling stops (in particular early mornings, late afternoons when contractors/come and go, and evenings/weekends when visitors are in the neighbourhood and don't seem to know how many kids we have out playing). Please contact the Windsor Police for enforcement concerns
  - In Kingsbridge, I see we have signs warning of the wildlife that may be crossing, but we have nothing on Knobb Hill warning about Children playing at the park? Children playing signs is a challenge as children should not be in the roadway. Community safety signage is often installed instead at parks instead (the wildlife signage was required by the province and installed by the developer)
  - Throughout town, City & School Bus stops shouldn't be near or at the leading side of an intersection, blocking access to right turns.
  - Could the bus Stop have an indent to pull into, to avoid interfering with traffic? Amherstburg has only recently initiated transit. As it matures these items can be

considered

- **Protecting the RiverFront**
    - I think it was Mayor Bert Weeks that worked so hard for so many years in Windsor to develop the beautiful parkland along the river front. It would be great if we had similar goals? The view is one thing that makes Amherstburg truly beautiful and special. Take that away, and passers through won't know what we have to offer.
    - At the very least, is there a way to limit new construction along the river front? The number of new homes are not only blocking the view, but it creates a huge hazard when lanes suddenly close at different times of the day for months at a time. This is privately owned land and building cannot be restricted. If the builder closes lanes he must adhere to MTO guidelines.
    - I was told that the town owns the land on both the North and South sides of the visitor center. That is not accurate, the Town does not own this land.
        - You can't get near the visitor center parking at lunch time, or sunset. Could we have more parking/access?
        - It would also be ideal if there was a sidewalk along that entire area, and more benches to sit at.

Thanks again for your time and consideration!

[redacted]

Good morning
I am sure everyone is seeing the complaints about the links to the surveys and the actually surveys themselves on Facebook.
I always encourage people to NOT complain on Facebook but to email members of council.
There are always issues with the survey links.
The surveys are not well written surveys.
The questions are very leading and cause confusion amongst those taking the survey.
Might be good timing to look at who is writing the surveys or maybe look at other municipalities to see how theirs are written and presented.
Thanks again for your time.
[redacted]

[redacted]

[redacted]

Good day
I tried multiple times to take the transportation survey, I was unsuccessful.
I did see on Facebook others had the same issue.
That being said, I do want voice my thoughts on one issue in particular.

The anchor district..... and shutting down Murray Street.

No thank you.

Shutting the street when we already shut down the streets for Open Air, will not bring more people to Amherstburg.
Please add my thoughts when the survey results comes out.
Thank you
[redacted]

[redacted]

To: Todd Hewitt [redacted]
Subject: New feedback on Transportation Master Plan

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi

You have received new feedback on the Guestbook on project **Transportation Master Plan** on your site,

-

I believe that closing off of MURRAY ST is not a good idea we live right there and we have enough problems when close the streets four the Sumer weekends with traffic people not stop at stop sign now and going the wrong down one way streets now .We ready got a letter from the mayer promising more policing which did not happen what will happen with more traffic and no where to go but the wrong way on the one streets now

-

[redacted]

Click here to view the feedback

[redacted]
Subject: Re: Master Transportation Presentation #2

[redacted]

Hi Todd, thank-you for getting back to me and providing further information. We appreciated it. We look forward to further updates and rollout of the projects.

kind regards,

[redacted]

On Fri, Feb 16, 2024 at 8:17 AM Todd Hewitt [redacted] wrote:

Good Morning [redacted]

Thank you for taking the time to provide your input, it is appreciated. I will provide some comments below in red. I have also included the consultant who is working on the project to consider this in the final report.

Regards,
Todd

Todd Hewitt
Manager of Engineering and Operations
Town of Amherstburg
512 Sandwich St South, Amherstburg, ON, N9V 3R2
Tel: 519-736-3664 x2313 Fax: 519-736-7080 TTY: 519-736-9860

[redacted]
Subject: Master Transportation Presentation #2

Hi Todd, my wife and I attended the presentation at the Libro Center last night. I thought I would share a few observations for what they are worth!

Living here for 3 years after years in Toronto area and being raised in Tecumseh area; it appears that the town has 3 significant drivers. This would be tourism, bedroom community for Windsor area and senior/relocation for larger metro areas. Aside from wineries, most of tourism and commercial enterprises are in a small area. Outside the "monopoly area" and immediate areas, people need to get to this area. Tourists and people outside the immediate area will drive automobile traffic.

This leads to questions and thoughts on parking. The charts demonstrated both public and private parking. The question here is; are all private parking locations available to the public without recourse? If these are not readily available, the parking availability is rather largely impacted. Dependant on the parking lot these are not always available to general public but the reasoning for showing these is that employees and customers who attend those shops can then use them for parking and can also be used during special events at the control of the lot owner. The proposal also calls for the removal of many parking spaces in the core area. Given that the area has a large concentration or restaurants, shops and financial institutes, all of which require staffing that needs to be accommodated, how can tourists, seniors and non-immediate residents attend the area? The challenge of staff using premium parking spaces is one the Town is facing. We have instituted 2h parking in some areas to try and reduce this practice. If the new hotels and new businesses being proposed for the area come to pass, this will only compound this situation. Side note to this, Murray Street should not be closed below Ramsey. This route would provide access to the parking on Dalhousie while avoiding the main intersection. Noted

As a somewhat related observation; mobility stations are planned for core and river areas. Given the limited parking proposed, where are people to park to recharge? Strategic locating of these stations is important as they roll out, knowing that our government has determined the future of automobiles is electric. The availability of micromobility stations will encourage users to avoid bringing vehicles into the core.

We were talking to a couple of ladies that were part of the presentation team and about bicycle paths. Living in Kingsbridge area adding a path along Front from Middle Sideroad would be very beneficial. I realize it would be a challenge once you near William Street to extend it, but would be much easier than the round about paths. Agreed. This would be a great thing that may occur in the future but it is both a financial and spatial challenge. Reducing driving lanes to incorporate active transportation is not always received well. There is a sidewalk that currently links the area to the core.

Lastly, the transit proposals. Extended the routes and access really would have an impact if the routes stayed local to offer an option to parking in the core. If local routes could be established with smaller, less intrusive buses and higher frequency, they would be a very positive option. To go with this, could be express type buses to Windsor which would benefit those commuters with less travel time to the city. Noted.

Apologize for the length of this, but I was time restricted last night. I hope these are taken as constructive thoughts. We truly enjoy Amherstburg and look forward to continuing our enjoyment.

[redacted]

Subject: RE: Amherstburg Transportation Master Plan - Notice of 2nd Transportation Master Plan Survey

> You don't often get email from [redacted]. Learn why this is important

Good afternoon,

Please be advised that [redacted] is now responsible for coordinating streamlined EA projects in the ministry's Southwest Region, and has taken over as the assigned MECP Regional Environmental Planner for this project and all other projects in this geographical area. Please remove me from the project contact list and direct all further correspondence with the ministry for this project to [redacted]

Thank you,

[redacted]

[redacted]

Subject: Amherstburg Transportation Master Plan - Notice of 2nd Transportation Master Plan Survey

AMHERSTBURG
TRANSPORTATION MASTER PLAN
2023-2024

To whom it may concern,

The Town of Amherstburg is looking for your input as a valued stakeholder. TYLin International Canada Inc. has been retained to undertake a Town-wide Transportation Master Plan (TMP) including active transportation as a key consideration.

As noted in the email below, a second Public Open House was held yesterday, Tuesday February 13th, 2024, at the City's Libro Community Centre. The information presented via display boards at this event are now published on the project website at www.talktheburg.ca/transportation.

This email is being sent you to as a gentle reminder that a second Transportation Master Plan Survey is now online, which can also be accessed via the project website at www.talktheburg.ca/transportation. We encourage you to review the information presented at yesterday's Public Open House when taking the survey.

Your feedback will help create a forward-thinking plan that enhances connectivity, promotes sustainability, and ensures a vibrant and accessible future for the Town. Thank you for contributing to the transformation of Amherstburg's transportation landscape.

Those requiring assistance with accommodation, please contact Town Hall at 519-736-0012 or accessibility@amherstburg.ca

[redacted]

TYLin

[redacted]

Subject: Amherstburg Transportation Master Plan - Notice of Public Open House #2 - February 13, 2024 5-7 pm

AMHERSTBURG
TRANSPORTATION MASTER PLAN
2023-2024

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The Town of Amherstburg is looking for your input as a valued stakeholder. TYLin International Canada Inc. has been retained to undertake a Town-wide Transportation Master Plan (TMP) including active transportation as a key consideration.

The purpose of this email is to inform you regarding the second Public Open House, which shall be held in-person on:

Date: **Tuesday, February 13th, 2024**
Time: **5:00-7:00 PM: Drop-in Interactive Public Open House #2**
Location: **Libro Community Centre, 3295 Meloche Road, Amherstburg, ON, N9V 2Y8**

The first Public Open House was held on May 9, 2023, and an online survey was made available with the Notice of Commencement for this study on January 25, 2023.

This second Public Open House will present the recommended transportation network solutions and offer an opportunity to the public and relevant stakeholders meet the project team, ask questions, and provide comments. A second online survey will also be made available on the project website on the day of the event to gather more feedback.

See the attached Notice of Public Open House #2 and visit www.talktheburg.ca/transportation for more information on the project.

Please advise if there is updated contact information for you or if you prefer to be removed from the project distribution list.

Best regards,

[redacted]
TYLin
209 Dundas Street East
Suite 301
Whitby, ON L1N 7H8, Canada
TYLin.com

[redacted]

Subject: RE: Fascinating presentation last night

Good Morning Councillor,

The proposed Dalhousie Street Concept with the angled parking that was shown was only for the section between Rankin and the Riccardo's entrance where the Town can place the sidewalk in the KNYP. Achieving a similiar cross section between Rankin and North street would be a challenge. That being said, I will reach out to the consultant to discuss what layout options are available in this area as well as south of Murray street to maximize pedestrian safety and comfort as well as parking options.

Regards,
Todd

Todd Hewitt
Manager of Engineering and Operations
Town of Amherstburg
512 Sandwich St South, Amherstburg, ON, N9V 3R2
Tel: 519-736-3664 x2313 Fax: 519-736-7080 TTY: 519-736-9860

[redacted]

Subject: Re: Fascinating presentation last night

Hey everyone,

I took a walk last night and figured out the answer to this question so don't worry about it. (Angled parking remains!)

I do have one additional one, though: If we follow the proposed Dalhousie Street concept, with angled parking on the west side, does that increase the number of spaces on the west side of Dalhousie south of Richmond?

Thanks,

[redacted]

[redacted]
Town of Amherstburg
271 Sandwich St. South, Amherstburg, ON, N9V 2A5
Tel: Fax: (Town Hall) 519-736-5403 TTY: 519-736-9860

Subject: Fascinating presentation last night

Hey everyone,

I was blown away by the presentation last night. Some amazing concepts and food for thought that will no doubt spark some discussion when the report comes back to Council.

I just have two questions about the Road Diet suggestions for Dalhousie Street.

It calls for the removal 19 parking spaces on Dalhousie.

Are those just the horizontal/curb-lane ones? Or does that include the angled ones across the street from the ice cream shop?

What about the horizontal ones across from the Legion and by Duffy's? Do they remain horizontal? Or do they become angled so that the number of spots there increases?

Thanks,

[redacted]

Subject: RE: Amherstburg Transportation Master Plan - Notice of 2nd Transportation Master Plan Survey

> You don't often get email from [redacted]. Learn why this is important

Good afternoon [redacted]

Thank you for circulating our office with the Amherstburg Transportation Master Plan. We have received and reviewed the PIC #2 slides and the materials provided. We advise that any connections to ERCA owned lands, such as trails, be discussed with [redacted] our [redacted]

[redacted]

Essex Region Conservation Authority
360 Fairview Avenue West, Suite 311 | Essex, Ontario | N8M 1Y6
P. 519-776-5209 x3794 | F. 519-776-8688
agood@erca.org www.essexregionconservation.ca

While this email is sent when it is convenient for me, I do not expect a response or action outside of your own regular working hours.

The ERCA Office is now open to the public **Tuesdays, Wednesdays and Thursdays** to provide "counter service"; however, services continue to be delivered online and through email. Please consult ERCA's website for more information and direction regarding online services (i.e. permitting, cottage bookings, seasonal passes etc.)

[redacted]
Subject: Amherstburg Transportation Master Plan - Notice of 2nd Transportation Master Plan Survey

> You don't often get email from ridhita.ghose@tylin.com. Learn why this is important

AMHERSTBURG
TRANSPORTATION MASTER PLAN
2023-2024

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Those requiring assistance with accommodation, please contact Town Hall at 519-736-0012 or accessibility@amherstburg.ca

Best regards,

[redacted] INEER
TYLin

[redacted]
Sent: Thursday, February 1, 2024 1:24 PM

[redacted]

Subject: Amherstburg Transportation Master Plan - Notice of Public Open House #2 - February 13, 2024 5-7 pm

AMHERSTBURG
TRANSPORTATION MASTER PLAN
2023-2024

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Please advise if there is updated contact information for you or if you prefer to be removed from the project distribution list.

Best regards,

[redacted] INEER
T +1 289.349.1854
TYLin
209 Dundas Street East
Suite 301
Whitby, ON L1N 7H8, Canada
TYLin.com

[redacted]

Subject: NationsConnect: Town of Amherstburg - Transportation Master Plan regarding Town of Amherstburg - Transportation Master Plan

A reply has been sent and you have been involved in the conversation or were indicated as a person to notify.

Subject: Town of Amherstburg - Transportation Master Plan

Thank you for sharing the Public Open House #2 information. We have reviewed the presentation, at this time we no recommendations. We do look forward to receiving updates at the plan evolves.

Thank you,

[redacted]

Transportation Master Plan Comments from Parks, Facilities and Recreation

February 23, 2023

1. We really like all the traffic calming ideas, but would prefer no plantings at the corners of the bump out areas. If these could be done with decorative concrete and or low planters that would not obstruct views that would be preferred.
2. Page 7 looking at the cross sections for collector roads and arterial roads, why do we need bike lanes on both sides of the street? Would it not save cost to make and extra wide bike lanes that are painted for two way pedestrian traffic and have a larger landscape buffer wherever it is possible along one side with trees and rest areas so that pedestrians are separated from vehicular traffic. Example: Looking at Simcoe street CWATS has bike lanes currently on both sides and people do not feel safe using these. If we moved the bike lanes to one side and put extra wide pathway and landscape buffer on one side pedestrians would feel safer using this stretch of road to access the Libro from Town.
3. On page 7 , 1.5 M hedge planting we do not support as it will be difficult to maintain and to have anything grow in such a small space. We would recommend moving bike lane to one side of the road have bikes 2 ways on one side of road with painted lines on the bike lane.
4. Intersection at Simcoe and Meloche – was a roundabout ever considered for here with pedestrian crossing if possible. New Fire statin will be just up the road they may be against round about if so we would support a full signalized intersection with crossings for pedestrians as a major juncture and connection to the Libro.
5. Would recommend making Dalhousie one way from North Street heading south to Park Street at which point would turn back into two way traffic. With angled parking the entire stretch. This would open up a tone of room on the street and would tie in with Open Air initiatives.
6. Agree close Murray street best option Page 9 Option 3! Amazing!
7. Do not agree with the location for the Transit Hub, cuts off park space. Should be at Libro or parking lot across main street behind old Marias. Town owns the large parking lot would be a good location central. Could Amherstburg support it's own transit system?
8. Slide 10 makes references to connections to schools can we please add Parks to this and the connectivity within them. We have many parks that should all be connected especially the Libro we just installed 3km loop around the park which adds to the active transportation network in the Town from an off road perspective. Can you please include this and all parks where we have trails already. I believe all park active transportation networks should be mapped and included. Parks is planning to have trails active transportation networks at all parks: Jack Purdie, Briar Ridge, Thrasher, Ranta,

Golfview…almost all will have this component added to them. All parks should be connected to on road or off road cycling networks noted and mapped.

9. Scooters and Bike Share awesome idea for the community!
10. Bottle refill stations great in the parks.
11. Page 15, was a roundabout with pedestrian crossing considered? Would be better as lighted intersection rather than 4 way stop but roundabout would work best here. Roundabout with the bump outs would work a small roundabout here. The New Fire station may not be able to make turns with median as shown.
12. What constitutes a safe bike lane, tied into the type/classification of road. I.e. on Simcoe, a busy county road, or a road over 60km, a safe bike lane may be separated whereas a residential street may be on-road.
13. There should be identified key areas where bike lanes are a priority to link areas, such as Libro to residential. Subdivision to Co-An, etc.
14. Active transportation should become part of the Planning process when subdivisions and road networks are planned, before they are built to ensure there are pathways to areas such as parks, schools and the Libro if possible. This type of wording should be in both the Transportation Master Plan as well as the Official Plan.

COMMENT SHEET

Town of Amherstburg Transportation Master Plan Study

https://www.talktheburg.ca/transportation

Public Open House #2:
TUESDAY, February 13, 2024 | 5:00-7:00 PM
Libro Community Centre, 3295 Meloche Road, Amherstburg, ON, N9V 2Y8

Your views are important to us. Please take a moment to complete this comment sheet. You can deposit it in the comment box or complete it later and submit it by mail or e-mail.

Please provide your contact information below (PLEASE PRINT):

Name: [redacted]

Address:

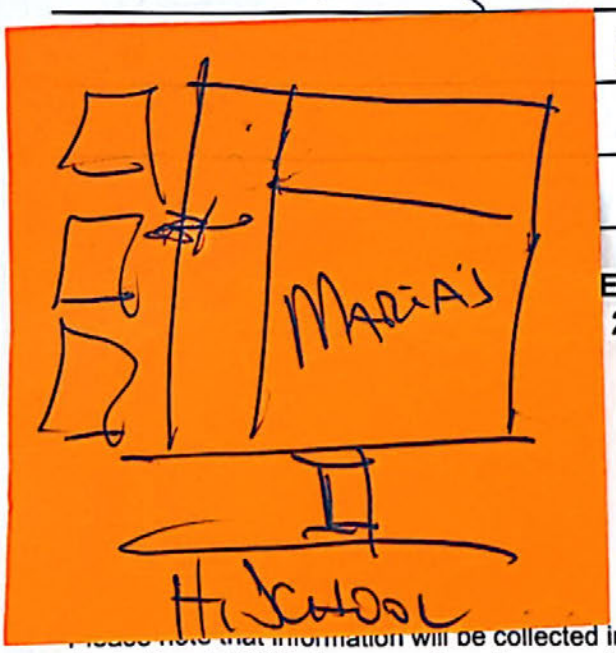
Telephone No.:

Email Address:

Do you want to be added to the project mailing list? [ ] Yes [ ] No

Comments:

FORT STREET PARKING LOT CHANGES
OPTION 1 - DEVELOPER
" 2 - MARAIS POTENTIAL
" 3 - ADD TO MARAIS LARGER COMMERCIAL DEVELOPMENT



ET IN THE COMMENT BOX PROVIDED,
2024 TO:

Scan the QR Code for more information on the project.

Please note that information will be collected in accordance with the *Municipal Freedom of Information* and *Privacy Protection Act*. With the exception of personal information, all comments will become part of the public record.

COMMENT SHEET

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Please provide your contact information below (PLEASE PRINT):

Name: [redacted]

Address:

Telephone N

Email Addres

Do you want to be added to the project mailing list? [✓] Yes [ ] No

Comments:

While some ~~so~~ recommendations - like wider sidewalks - seem practical, others read more like solutions looking for problems. Overall not convinced and not ~~interested~~ interested in speed bumps / roundabouts, nor a bussing system. Would be better off encouraging Lyft ~~or~~ / Uber at that point. Also, why is General Amherst labeled "Unused Building"? Who would pay for this?

PLEASE PUT THIS COMMENT SHEET IN THE COMMENT BOX PROVIDED, OR MAIL/E-MAIL IT BY MARCH 1ST, 2024 TO:

EMAIL: thewitt@amherstburg.ca
MAIL: Todd Hewitt
Town of Amherstburg
512 Sandwich Street
Amherstburg, ON N9V 3R2

Scan the QR Code for more information on the project.

Please note that information will be collected in accordance with the *Municipal Freedom of Information* and *Privacy Protection Act*. With the exception of personal information, all comments will become part of the public record.

COL already to high to afford tak.
[illegible] tax etc. increases.

APPENDIX E

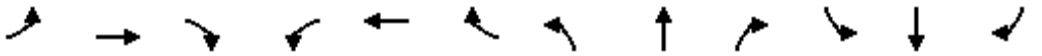
Detailed Synchro Reports for Horizon Year 1 - 2028

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	89	150	789	135	21	378
Future Volume (vph)	89	150	789	135	21	378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	0.98		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.92		1.00	0.85		1.00
Flt Protected	0.98		1.00	1.00		1.00
Satd. Flow (prot)	1583		3500	1396		3244
Flt Permitted	0.98		1.00	1.00		0.89
Satd. Flow (perm)	1583		3500	1396		2895
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	96	161	848	145	23	406
RTOR Reduction (vph)	42	0	0	61	0	0
Lane Group Flow (vph)	215	0	848	84	0	429
Confl. Peds. (#/hr)				1	1	
Heavy Vehicles (%)	6%	9%	2%	12%	12%	7%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	15.5		24.5	24.5		24.5
Effective Green, g (s)	15.5		24.5	24.5		24.5
Actuated g/C Ratio	0.30		0.47	0.47		0.47
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	471		1649	657		1363
v/s Ratio Prot	c0.14		c0.24			
v/s Ratio Perm				0.06		0.15
v/c Ratio	0.46		0.51	0.13		0.31
Uniform Delay, d1	14.8		9.6	7.7		8.5
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.7		1.1	0.4		0.6
Delay (s)	15.5		10.7	8.1		9.1
Level of Service	B		B	A		A
Approach Delay (s)	15.5		10.4			9.1
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	157	23	686	114	10	432
Future Volume (vph)	157	23	686	114	10	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.98			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1668	1597	3326			3225
Flt Permitted	0.95	1.00	1.00			0.93
Satd. Flow (perm)	1668	1597	3326			3009
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	167	24	730	121	11	460
RTOR Reduction (vph)	0	18	18	0	0	0
Lane Group Flow (vph)	167	6	833	0	0	471
Confl. Peds. (#/hr)				2	2	
Heavy Vehicles (%)	7%	0%	5%	3%	0%	7%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	11.7	11.7	27.1			27.1
Effective Green, g (s)	11.7	11.7	27.1			27.1
Actuated g/C Ratio	0.23	0.23	0.53			0.53
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	384	367	1774			1605
v/s Ratio Prot	c0.10		c0.25			
v/s Ratio Perm		0.00				0.16
v/c Ratio	0.43	0.02	0.47			0.29
Uniform Delay, d1	16.7	15.1	7.4			6.6
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.0	0.9			0.5
Delay (s)	17.0	15.1	8.3			7.0
Level of Service	B	B	A			A
Approach Delay (s)	16.8		8.3			7.0
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	50.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	15	2	108	10	208	3	568	134	107	443	14
Future Volume (vph)	27	15	2	108	10	208	3	568	134	107	443	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1818			1648	1521	1685	1729	1414	1427	1699	
Flt Permitted		0.80			0.71	1.00	0.48	1.00	1.00	0.21	1.00	
Satd. Flow (perm)		1503			1221	1521	845	1729	1414	320	1699	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	17	2	120	11	231	3	631	149	119	492	16
RTOR Reduction (vph)	0	2	0	0	0	175	0	0	78	0	2	0
Lane Group Flow (vph)	0	47	0	0	131	56	3	631	71	119	506	0
Confl. Peds. (#/hr)	2		3	3		2			5	5		
Heavy Vehicles (%)	8%	7%	0%	7%	40%	7%	0%	5%	5%	18%	5%	8%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		16.6			16.6	16.6	32.7	32.7	32.7	41.9	41.9	
Effective Green, g (s)		16.6			16.6	16.6	32.7	32.7	32.7	41.9	41.9	
Actuated g/C Ratio		0.24			0.24	0.24	0.48	0.48	0.48	0.61	0.61	
Clearance Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0			5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		364			295	368	403	825	675	279	1039	
v/s Ratio Prot								c0.36		0.03	c0.30	
v/s Ratio Perm		0.03			c0.11	0.04	0.00		0.05	0.23		
v/c Ratio		0.13			0.44	0.15	0.01	0.76	0.11	0.43	0.49	
Uniform Delay, d1		20.3			22.0	20.4	9.4	14.7	9.9	8.6	7.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3			2.2	0.4	0.0	6.7	0.3	1.1	1.6	
Delay (s)		20.6			24.3	20.8	9.4	21.4	10.2	9.7	9.0	
Level of Service		C			C	C	A	C	B	A	A	
Approach Delay (s)		20.6			22.1			19.2			9.1	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

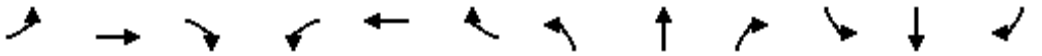
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	88	131	582	54	53	487
Future Volume (vph)	88	131	582	54	53	487
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	2.8	2.8	3.8	3.8	3.7	3.7
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1645	1280	1838		1823	1830
Flt Permitted	0.95	1.00	1.00		0.33	1.00
Satd. Flow (perm)	1645	1280	1838		624	1830
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	138	613	57	56	513
RTOR Reduction (vph)	0	115	5	0	0	0
Lane Group Flow (vph)	93	23	665	0	56	513
Confl. Peds. (#/hr)				3	3	
Heavy Vehicles (%)	0%	15%	4%	7%	0%	5%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	6.4	6.4	22.3		22.3	22.3
Effective Green, g (s)	6.4	6.4	22.3		22.3	22.3
Actuated g/C Ratio	0.17	0.17	0.59		0.59	0.59
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	279	217	1087		369	1082
v/s Ratio Prot	c0.06		c0.36			0.28
v/s Ratio Perm		0.02			0.09	
v/c Ratio	0.33	0.11	0.61		0.15	0.47
Uniform Delay, d1	13.8	13.2	4.9		3.5	4.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.2	2.6		0.9	1.5
Delay (s)	14.5	13.5	7.5		4.3	5.9
Level of Service	B	B	A		A	A
Approach Delay (s)	13.9		7.5			5.7
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	37.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	4	45	0	52	2	569	26	18	543	4
Future Volume (Veh/h)	6	0	4	45	0	52	2	569	26	18	543	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	0	4	48	0	56	2	612	28	19	584	4
Pedestrians		1			1							
Lane Width (m)		4.1			3.0							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								237			199	
pX, platoon unblocked	0.84	0.84	0.89	0.84	0.84	0.78	0.89			0.78		
vC, conflicting volume	1297	1270	587	1257	1258	627	589			641		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	961	929	473	913	914	387	475			405		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	99	77	100	89	100			98		
cM capacity (veh/h)	175	221	529	209	225	521	975			913		

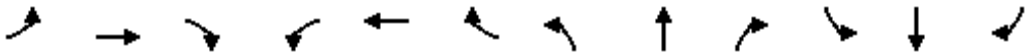
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	10	104	2	640	19	588
Volume Left	6	48	2	0	19	0
Volume Right	4	56	0	28	0	4
cSH	239	309	975	1700	913	1700
Volume to Capacity	0.04	0.34	0.00	0.38	0.02	0.35
Queue Length 95th (m)	1.0	11.0	0.0	0.0	0.5	0.0
Control Delay (s)	20.7	22.5	8.7	0.0	9.0	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	20.7	22.5	0.0		0.3	
Approach LOS	C	C				

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	44.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	25	3	42	52	71	14	450	21	45	477	65
Future Volume (vph)	35	25	3	42	52	71	14	450	21	45	477	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1607	1638	1489		1706		1745	1868	1610	1696	1908	1502
Flt Permitted	0.53	1.00	1.00		0.92		0.32	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	899	1638	1489		1592		591	1868	1610	518	1908	1502
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	27	3	46	57	77	15	489	23	49	518	71
RTOR Reduction (vph)	0	0	2	0	32	0	0	0	13	0	0	38
Lane Group Flow (vph)	38	27	1	0	148	0	15	489	10	49	518	33
Confl. Peds. (#/hr)	1		9	9		1	1		3	3		1
Heavy Vehicles (%)	6%	16%	0%	5%	0%	5%	0%	4%	0%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	29.1	29.1	29.1		21.2		35.2	34.0	34.0	41.9	37.2	37.2
Effective Green, g (s)	29.1	29.1	29.1		21.2		35.2	34.0	34.0	41.9	37.2	37.2
Actuated g/C Ratio	0.36	0.36	0.36		0.26		0.44	0.42	0.42	0.52	0.46	0.46
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	357	589	536		417		274	786	677	337	878	691
v/s Ratio Prot	c0.01	0.02					0.00	0.26		c0.01	c0.27	
v/s Ratio Perm	0.03		0.00		c0.09		0.02		0.01	0.07		0.02
v/c Ratio	0.11	0.05	0.00		0.36		0.05	0.62	0.01	0.15	0.59	0.05
Uniform Delay, d1	17.5	16.8	16.6		24.2		13.7	18.4	13.6	11.1	16.2	12.0
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.0		0.7		0.1	3.7	0.0	0.3	2.9	0.1
Delay (s)	17.7	16.9	16.6		25.0		13.8	22.1	13.7	11.4	19.1	12.2
Level of Service	B	B	B		C		B	C	B	B	B	B
Approach Delay (s)		17.3			25.0			21.5			17.7	
Approach LOS		B			C			C			B	

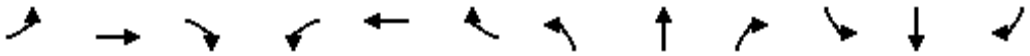
Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	0	4	0	512	5	2	494	0
Future Volume (Veh/h)	0	0	0	2	0	4	0	512	5	2	494	0
Sign Control		Stop			Stop			Free			Free	
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)	0	0	0	2	0	4	0	539	5	2	520	0
Pedestrians		2			4			1			2	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.88	0.88	0.80	0.88	0.88	0.83	0.80			0.83		
vC, conflicting volume	1071	1074	523	1070	1072	548	522			548		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	588	592	275	588	589	357	274			358		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	99	100	99	100			100		
cM capacity (veh/h)	368	370	612	370	371	573	971			1007		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	6	0	544	2	520
Volume Left	2	0	0	2	0
Volume Right	4	0	5	0	0
cSH	485	1700	1700	1007	1700
Volume to Capacity	0.01	0.00	0.32	0.00	0.31
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0
Control Delay (s)	12.5	0.0	0.0	8.6	0.0
Lane LOS	B			A	
Approach Delay (s)	12.5	0.0		0.0	
Approach LOS	B				

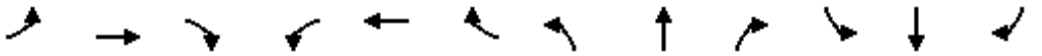
Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	37.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	8	2	0	9	0	508	6	7	473	1
Future Volume (Veh/h)	7	1	8	2	0	9	0	508	6	7	473	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	7	1	9	2	0	10	0	540	6	7	503	1
Pedestrians		2			3							
Lane Width (m)		3.7			3.5							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.88	0.88	0.81	0.88	0.88	0.78	0.81			0.78		
vC, conflicting volume	1072	1068	506	1072	1066	546	506			549		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	520	516	266	520	513	284	267			288		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	100	100	98	100			99		
cM capacity (veh/h)	383	406	625	403	407	594	1053			1006		

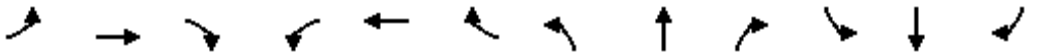
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	17	2	10	546	7	504
Volume Left	7	2	0	0	7	0
Volume Right	9	0	10	6	0	1
cSH	484	403	594	1700	1006	1700
Volume to Capacity	0.04	0.00	0.02	0.32	0.01	0.30
Queue Length 95th (m)	0.8	0.1	0.4	0.0	0.2	0.0
Control Delay (s)	12.7	14.0	11.2	0.0	8.6	0.0
Lane LOS	B	B	B		A	
Approach Delay (s)	12.7	11.6		0.0	0.1	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	43.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	1	107	14	96	0	421	85	136	333	4
Future Volume (vph)	4	5	1	107	14	96	0	421	85	136	333	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0			6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.94			0.97		1.00	1.00	
Flt Protected		0.98			0.98			1.00		0.95	1.00	
Satd. Flow (prot)		1685			1885			1815		1888	1887	
Flt Permitted		0.86			0.84			1.00		0.29	1.00	
Satd. Flow (perm)		1476			1619			1815		572	1887	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	5	1	114	15	102	0	448	90	145	354	4
RTOR Reduction (vph)	0	1	0	0	49	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	9	0	0	182	0	0	529	0	145	358	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	20%	0%	5%	0%	3%	0%	3%	2%	3%	5%	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		
Actuated Green, G (s)		12.9			12.9			24.7		34.3	34.3	
Effective Green, g (s)		12.9			12.9			24.7		34.8	34.3	
Actuated g/C Ratio		0.22			0.22			0.42		0.59	0.58	
Clearance Time (s)		6.0			6.0			6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		321			352			757		482	1093	
v/s Ratio Prot								c0.29		0.03	c0.19	
v/s Ratio Perm		0.01			c0.11					0.14		
v/c Ratio		0.03			0.52			0.70		0.30	0.33	
Uniform Delay, d1		18.2			20.4			14.2		6.6	6.5	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.0			1.7			5.3		0.4	0.8	
Delay (s)		18.3			22.1			19.5		6.9	7.3	
Level of Service		B			C			B		A	A	
Approach Delay (s)		18.3			22.1			19.5			7.2	
Approach LOS		B			C			B			A	

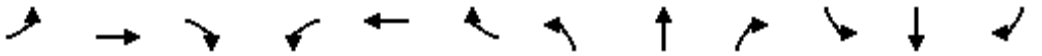
Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	59.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	3	11	1	0	3	12	482	2	0	420	16
Future Volume (Veh/h)	26	3	11	1	0	3	12	482	2	0	420	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	3	12	1	0	3	13	524	2	0	457	17
Pedestrians		4			3							
Lane Width (m)		3.9			3.9							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.95	0.95	0.91	0.95	0.95	0.90	0.91			0.90		
vC, conflicting volume	1022	1024	470	1024	1032	528	478			529		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	776	778	363	778	786	426	372			427		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	99	98	100	100	99	99			100		
cM capacity (veh/h)	294	308	620	287	305	571	1081			1031		

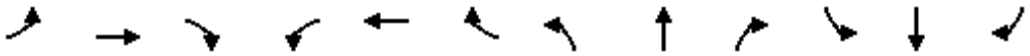
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	43	4	13	526	0	474
Volume Left	28	1	13	0	0	0
Volume Right	12	3	0	2	0	17
cSH	346	458	1081	1700	1700	1700
Volume to Capacity	0.12	0.01	0.01	0.31	0.00	0.28
Queue Length 95th (m)	3.2	0.2	0.3	0.0	0.0	0.0
Control Delay (s)	16.9	12.9	8.4	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	16.9	12.9	0.2		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	37.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	12	17	70	24	110	23	331	33	51	314	48
Future Volume (vph)	37	12	17	70	24	110	23	331	33	51	314	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91			0.93		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1659	1658			1784		1618	1808		1670	1760	
Flt Permitted	0.54	1.00			0.87		0.51	1.00		0.46	1.00	
Satd. Flow (perm)	942	1658			1586		875	1808		816	1760	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	13	18	76	26	120	25	360	36	55	341	52
RTOR Reduction (vph)	0	14	0	0	55	0	0	3	0	0	4	0
Lane Group Flow (vph)	40	17	0	0	167	0	25	393	0	55	389	0
Confl. Peds. (#/hr)	5					5	2		3	3		2
Heavy Vehicles (%)	6%	0%	12%	3%	9%	0%	9%	3%	8%	8%	5%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.2	13.2			13.2		40.0	36.4		43.8	38.3	
Effective Green, g (s)	13.2	13.2			13.2		42.0	36.4		44.9	38.3	
Actuated g/C Ratio	0.20	0.20			0.20		0.63	0.54		0.67	0.57	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	185	326			312		598	980		628	1004	
v/s Ratio Prot		0.01					0.00	0.22		c0.01	c0.22	
v/s Ratio Perm	0.04				c0.11		0.02			0.05		
v/c Ratio	0.22	0.05			0.53		0.04	0.40		0.09	0.39	
Uniform Delay, d1	22.6	21.9			24.2		4.8	9.0		4.0	7.9	
Progression Factor	1.00	1.01			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.1			2.7		0.0	1.2		0.1	1.1	
Delay (s)	23.7	22.1			26.9		4.8	10.2		4.0	9.1	
Level of Service	C	C			C		A	B		A	A	
Approach Delay (s)		23.0			26.9			9.9			8.4	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	67.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	0	0	0	14	197	0	0	162	4
Future Volume (Veh/h)	6	0	5	0	0	0	14	197	0	0	162	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	7	0	6	0	0	0	16	232	0	0	191	5
Pedestrians		1						1				
Lane Width (m)		4.1						3.9				
Walking Speed (m/s)		1.1						1.1				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	458	458	196	464	461	232	197			232		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	458	458	196	464	461	232	197			232		
tC, single (s)	7.3	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.7	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	100	100	100	99			100		
cM capacity (veh/h)	483	496	849	502	494	812	1386			1348		

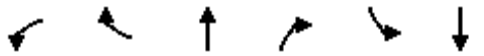
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	13	0	16	232	196
Volume Left	7	0	16	0	0
Volume Right	6	0	0	0	5
cSH	603	1700	1386	1700	1348
Volume to Capacity	0.02	0.00	0.01	0.14	0.00
Queue Length 95th (m)	0.5	0.0	0.3	0.0	0.0
Control Delay (s)	11.1	0.0	7.6	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	11.1	0.0	0.5		0.0
Approach LOS	B	A			

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	22.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	19	1	7	39	1	13
Future Volume (vph)	19	1	7	39	1	13
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	25	1	9	51	1	17

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	26	60	18
Volume Left (vph)	25	0	1
Volume Right (vph)	1	51	0
Hadj (s)	0.35	-0.47	0.01
Departure Headway (s)	4.4	3.5	4.0
Degree Utilization, x	0.03	0.06	0.02
Capacity (veh/h)	799	1013	882
Control Delay (s)	7.5	6.7	7.1
Approach Delay (s)	7.5	6.7	7.1
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	39	22	40	35	10	25
Future Volume (vph)	39	22	40	35	10	25
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	46	26	48	42	12	30

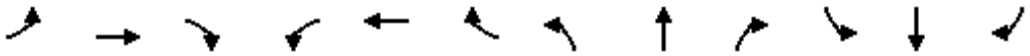
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	72	90	42
Volume Left (vph)	46	0	12
Volume Right (vph)	26	42	0
Hadj (s)	-0.03	-0.16	0.20
Departure Headway (s)	4.2	3.9	4.3
Degree Utilization, x	0.08	0.10	0.05
Capacity (veh/h)	837	884	807
Control Delay (s)	7.5	7.4	7.6
Approach Delay (s)	7.5	7.4	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	26	35	23	28	22
Future Volume (Veh/h)	22	26	35	23	28	22
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	27	32	43	28	34	27
Pedestrians	9		1			4
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	162	70			80	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162	70			80	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	97	97			98	
cM capacity (veh/h)	806	963			1515	

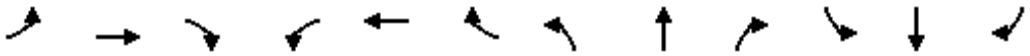
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	59	71	61
Volume Left	27	0	34
Volume Right	32	28	0
cSH	884	1700	1515
Volume to Capacity	0.07	0.04	0.02
Queue Length 95th (m)	1.6	0.0	0.5
Control Delay (s)	9.4	0.0	4.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	4.2
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	134	20	13	120	30	26	71	11	9	54	66
Future Volume (vph)	54	134	20	13	120	30	26	71	11	9	54	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			1.00			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.93	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1669			1643			1868			1577	
Flt Permitted		0.87			0.97			0.90			0.98	
Satd. Flow (perm)		1471			1596			1695			1546	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	67	165	25	16	148	37	32	88	14	11	67	81
RTOR Reduction (vph)	0	6	0	0	12	0	0	6	0	0	52	0
Lane Group Flow (vph)	0	251	0	0	189	0	0	128	0	0	107	0
Confl. Peds. (#/hr)	12		2	2		12	12		6	6		12
Heavy Vehicles (%)	8%	10%	5%	8%	8%	0%	8%	3%	0%	25%	10%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			35.0			22.0			22.0	
Effective Green, g (s)		35.0			35.0			22.0			22.0	
Actuated g/C Ratio		0.49			0.49			0.31			0.31	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		725			786			525			479	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.12			c0.08			0.07	
v/c Ratio		0.35			0.24			0.24			0.22	
Uniform Delay, d1		11.0			10.4			18.3			18.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.1			1.1			1.1	
Delay (s)		11.1			10.4			19.4			19.2	
Level of Service		B			B			B			B	
Approach Delay (s)		11.1			10.4			19.4			19.2	
Approach LOS		B			B			B			B	

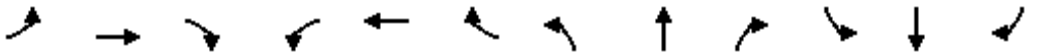
Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	144	54	43	93	23	42	119	74	18	55	9
Future Volume (Veh/h)	12	144	54	43	93	23	42	119	74	18	55	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	14	171	64	51	111	27	50	142	88	21	65	11
Pedestrians								1				
Lane Width (m)								3.5				
Walking Speed (m/s)								1.1				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	138			236			502	472	204	616	490	124
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	138			236			502	472	204	616	490	124
tC, single (s)	4.3			4.3			7.2	6.5	6.2	7.1	6.6	6.5
tC, 2 stage (s)												
tF (s)	2.4			2.4			3.6	4.0	3.3	3.5	4.1	3.6
p0 queue free %	99			96			87	70	90	92	85	99
cM capacity (veh/h)	1348			1236			389	468	841	267	445	858

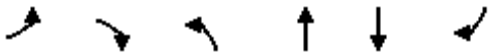
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	249	189	280	97
Volume Left	14	51	50	21
Volume Right	64	27	88	11
cSH	1348	1236	522	409
Volume to Capacity	0.01	0.04	0.54	0.24
Queue Length 95th (m)	0.2	1.0	23.9	6.9
Control Delay (s)	0.5	2.4	19.6	16.5
Lane LOS	A	A	C	C
Approach Delay (s)	0.5	2.4	19.6	16.5
Approach LOS			C	C

Intersection Summary				
Average Delay	9.4			
Intersection Capacity Utilization	45.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	80	0	58	0	862	161	49	329	0
Future Volume (vph)	0	0	0	80	0	58	0	862	161	49	329	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1457		1358		3579	1693	1719	3553	
Flt Permitted				0.76		1.00		1.00	1.00	0.22	1.00	
Satd. Flow (perm)				1161		1358		3579	1693	407	3553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	84	0	61	0	907	169	52	346	0
RTOR Reduction (vph)	0	0	0	0	0	35	0	0	103	0	0	0
Lane Group Flow (vph)	0	0	0	84	0	26	0	907	66	52	346	0
Heavy Vehicles (%)	0%	0%	0%	17%	0%	7%	0%	2%	6%	5%	5%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				456		533		1406	665	159	1395	
v/s Ratio Prot								c0.25			0.10	
v/s Ratio Perm				c0.07		0.02			0.04	0.13		
v/c Ratio				0.18		0.05		0.65	0.10	0.33	0.25	
Uniform Delay, d1				11.1		10.5		13.8	10.7	11.8	11.4	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				0.9		0.2		2.3	0.3	5.4	0.4	
Delay (s)				12.0		10.7		16.1	11.0	17.2	11.9	
Level of Service				B		B		B	B	B	B	
Approach Delay (s)		0.0			11.5			15.3			12.6	
Approach LOS		A			B			B			B	

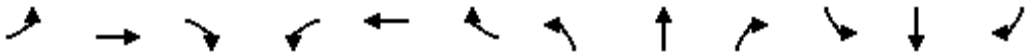
Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	17	11	131	111	25
Future Volume (Veh/h)	34	17	11	131	111	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	39	20	13	151	128	29
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	320	142	157			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320	142	157			
tC, single (s)	6.5	6.3	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.5			
p0 queue free %	94	98	99			
cM capacity (veh/h)	659	895	1279			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	59	164	157
Volume Left	39	13	0
Volume Right	20	0	29
cSH	724	1279	1700
Volume to Capacity	0.08	0.01	0.09
Queue Length 95th (m)	2.0	0.2	0.0
Control Delay (s)	10.4	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	10.4	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	196	3	4	123	23	10	170	5	18	56	17
Future Volume (vph)	35	196	3	4	123	23	10	170	5	18	56	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			1.00			0.98	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1759			1524			1774			1500	
Flt Permitted		0.93			0.99			0.98			0.92	
Satd. Flow (perm)		1650			1509			1751			1396	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	40	223	3	5	140	26	11	193	6	20	64	19
RTOR Reduction (vph)	0	1	0	0	14	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	265	0	0	157	0	0	208	0	0	91	0
Heavy Vehicles (%)	3%	6%	34%	50%	20%	27%	0%	7%	0%	28%	20%	24%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		618			565			656			523	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.10			c0.12			0.07	
v/c Ratio		0.43			0.28			0.32			0.17	
Uniform Delay, d1		11.2			10.5			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.2			1.2			1.3			0.7	
Delay (s)		13.3			11.7			11.9			10.8	
Level of Service		B			B			B			B	
Approach Delay (s)		13.3			11.7			11.9			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	248	42	41	210	73	78
Future Volume (Veh/h)	248	42	41	210	73	78
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)	261	44	43	221	77	82
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			305		590	283
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			305		590	283
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			97		83	89
cM capacity (veh/h)			1233		443	744

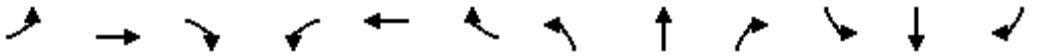
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	305	264	159
Volume Left	0	43	77
Volume Right	44	0	82
cSH	1700	1233	560
Volume to Capacity	0.18	0.03	0.28
Queue Length 95th (m)	0.0	0.8	8.8
Control Delay (s)	0.0	1.6	14.0
Lane LOS		A	B
Approach Delay (s)	0.0	1.6	14.0
Approach LOS			B

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	0	0	72	0	0	65
Future Volume (vph)	0	0	72	0	0	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	78	0	0	71

Direction, Lane #	NB 1	SB 1
Volume Total (vph)	78	71
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.10	0.08
Departure Headway (s)	4.1	4.1
Degree Utilization, x	0.09	0.08
Capacity (veh/h)	870	880
Control Delay (s)	7.5	7.4
Approach Delay (s)	7.5	7.4
Approach LOS	A	A

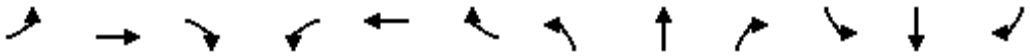
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	35	0	4	16	9	0	55	3	4	39	1
Future Volume (Veh/h)	16	35	0	4	16	9	0	55	3	4	39	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	20	44	0	5	20	11	0	69	4	5	49	1
Pedestrians		6			3			1				
Lane Width (m)		3.1			3.5			3.6				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	157	141	56	156	139	74	55			76		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	157	141	56	156	139	74	55			76		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	97	94	100	99	97	99	100			100		
cM capacity (veh/h)	763	746	1010	769	747	958	1555			1532		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	64	36	73	54	1
Volume Left	20	5	0	5	0
Volume Right	0	11	4	0	1
cSH	751	805	1555	1532	1700
Volume to Capacity	0.09	0.04	0.00	0.00	0.00
Queue Length 95th (m)	2.1	1.1	0.0	0.1	0.0
Control Delay (s)	10.2	9.7	0.0	0.7	0.0
Lane LOS	B	A		A	
Approach Delay (s)	10.2	9.7	0.0	0.7	
Approach LOS	B	A			

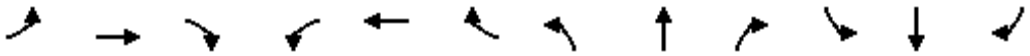
Intersection Summary				
Average Delay	4.6			
Intersection Capacity Utilization	22.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	14	84	14	51	125	26	19	114	35	14	130	14
Future Volume (vph)	14	84	14	51	125	26	19	114	35	14	130	14
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	18	108	18	65	160	33	24	146	45	18	167	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	144	258	215	203
Volume Left (vph)	18	65	24	18
Volume Right (vph)	18	33	45	18
Hadj (s)	0.03	0.07	0.05	0.07
Departure Headway (s)	5.5	5.4	5.4	5.5
Degree Utilization, x	0.22	0.39	0.32	0.31
Capacity (veh/h)	585	621	605	605
Control Delay (s)	10.1	11.7	11.0	10.9
Approach Delay (s)	10.1	11.7	11.0	10.9
Approach LOS	B	B	B	B

Intersection Summary				
Delay	11.1			
Level of Service	B			
Intersection Capacity Utilization	37.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	264	43	109	329	2	52	3	92	9	3	6
Future Volume (Veh/h)	3	264	43	109	329	2	52	3	92	9	3	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	4	347	57	143	433	3	68	4	121	12	4	8
Pedestrians		13						10			1	
Lane Width (m)		3.2						3.2			4.3	
Walking Speed (m/s)		1.1						1.1			1.1	
Percent Blockage		1						1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	437			414			1137	1116	386	1228	1144	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	437			414			1137	1116	386	1228	1144	448
tC, single (s)	4.1			4.2			7.1	6.5	6.3	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.4	3.5	4.0	3.5
p0 queue free %	100			87			56	98	81	89	98	99
cM capacity (veh/h)	1132			1099			153	180	642	111	173	573

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	408	579	193	24
Volume Left	4	143	68	12
Volume Right	57	3	121	8
cSH	1132	1099	294	165
Volume to Capacity	0.00	0.13	0.66	0.15
Queue Length 95th (m)	0.1	3.4	32.5	3.8
Control Delay (s)	0.1	3.3	37.8	30.4
Lane LOS	A	A	E	D
Approach Delay (s)	0.1	3.3	37.8	30.4
Approach LOS			E	D

Intersection Summary				
Average Delay	8.3			
Intersection Capacity Utilization	60.1%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	155	43	550	149	108	862
Future Volume (vph)	155	43	550	149	108	862
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frt	0.97		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	1656		3433	1581		3425
Flt Permitted	0.96		1.00	1.00		0.80
Satd. Flow (perm)	1656		3433	1581		2764
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	167	46	591	160	116	927
RTOR Reduction (vph)	22	0	0	76	0	0
Lane Group Flow (vph)	191	0	591	84	0	1043
Heavy Vehicles (%)	2%	26%	4%	1%	4%	1%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	11.7		26.1	26.1		26.1
Effective Green, g (s)	11.7		26.1	26.1		26.1
Actuated g/C Ratio	0.23		0.52	0.52		0.52
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	389		1799	828		1448
v/s Ratio Prot	c0.12		0.17			
v/s Ratio Perm				0.05		c0.38
v/c Ratio	0.49		0.33	0.10		0.72
Uniform Delay, d1	16.5		6.8	6.0		9.1
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	1.0		0.5	0.2		3.1
Delay (s)	17.4		7.3	6.2		12.2
Level of Service	B		A	A		B
Approach Delay (s)	17.4		7.1			12.2
Approach LOS	B		A			B

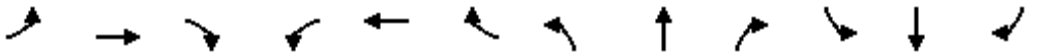
Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	49.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	183	22	611	191	34	836
Future Volume (vph)	183	22	611	191	34	836
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	0.96			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1750	1452	3365			3374
Flt Permitted	0.95	1.00	1.00			0.90
Satd. Flow (perm)	1750	1452	3365			3038
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	189	23	630	197	35	862
RTOR Reduction (vph)	0	18	42	0	0	0
Lane Group Flow (vph)	189	5	785	0	0	897
Heavy Vehicles (%)	2%	10%	3%	0%	3%	2%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	11.7	11.7	26.5			26.5
Effective Green, g (s)	11.7	11.7	26.5			26.5
Actuated g/C Ratio	0.23	0.23	0.53			0.53
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	407	338	1776			1603
v/s Ratio Prot	c0.11		0.23			
v/s Ratio Perm		0.00				c0.30
v/c Ratio	0.46	0.02	0.44			0.56
Uniform Delay, d1	16.6	14.8	7.3			7.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.0	0.8			1.4
Delay (s)	16.9	14.8	8.1			9.4
Level of Service	B	B	A			A
Approach Delay (s)	16.6		8.1			9.4
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

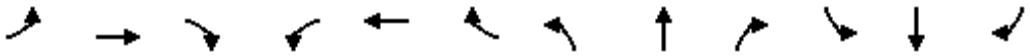


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	14	4	180	26	134	6	642	183	191	831	22
Future Volume (vph)	33	14	4	180	26	134	6	642	183	191	831	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1812			1795	1547	1684	1798	1457	1604	1765	
Flt Permitted		0.76			0.72	1.00	0.21	1.00	1.00	0.16	1.00	
Satd. Flow (perm)		1416			1341	1547	377	1798	1457	262	1765	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	34	14	4	186	27	138	6	662	189	197	857	23
RTOR Reduction (vph)	0	3	0	0	0	102	0	0	106	0	1	0
Lane Group Flow (vph)	0	49	0	0	213	36	6	662	83	197	879	0
Confl. Peds. (#/hr)	4		4	4		4	1		4	4		1
Heavy Vehicles (%)	7%	8%	0%	1%	0%	5%	0%	1%	2%	5%	1%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		17.8			17.8	17.8	30.1	30.1	30.1	40.6	40.6	
Effective Green, g (s)		17.8			17.8	17.8	30.1	30.1	30.1	40.6	40.6	
Actuated g/C Ratio		0.26			0.26	0.26	0.44	0.44	0.44	0.59	0.59	
Clearance Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0			5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		368			348	402	165	791	641	283	1047	
v/s Ratio Prot								0.37		0.07	c0.50	
v/s Ratio Perm		0.03			c0.16	0.02	0.02		0.06	0.35		
v/c Ratio		0.13			0.61	0.09	0.04	0.84	0.13	0.70	0.84	
Uniform Delay, d1		19.4			22.3	19.2	10.9	17.0	11.4	11.1	11.3	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3			4.5	0.2	0.4	10.2	0.4	7.3	8.1	
Delay (s)		19.7			26.8	19.4	11.3	27.2	11.8	18.3	19.3	
Level of Service		B			C	B	B	C	B	B	B	
Approach Delay (s)		19.7			23.9			23.7			19.1	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	68.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	93	101	686	128	126	844
Future Volume (vph)	93	101	686	128	126	844
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	2.8	2.8	3.8	3.8	3.7	3.7
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1645	1437	1876		1821	1902
Flt Permitted	0.95	1.00	1.00		0.19	1.00
Satd. Flow (perm)	1645	1437	1876		372	1902
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	99	107	730	136	134	898
RTOR Reduction (vph)	0	75	10	0	0	0
Lane Group Flow (vph)	99	32	856	0	134	898
Confl. Peds. (#/hr)		3		9	9	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	6.6	6.6	23.1		23.1	23.1
Effective Green, g (s)	6.6	6.6	23.1		23.1	23.1
Actuated g/C Ratio	0.17	0.17	0.60		0.60	0.60
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	280	245	1119		222	1135
v/s Ratio Prot	c0.06		0.46			c0.47
v/s Ratio Perm		0.02			0.36	
v/c Ratio	0.35	0.13	0.76		0.60	0.79
Uniform Delay, d1	14.2	13.6	5.8		4.9	6.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.2	5.0		11.6	5.7
Delay (s)	14.9	13.8	10.8		16.5	11.6
Level of Service	B	B	B		B	B
Approach Delay (s)	14.4		10.8			12.3
Approach LOS	B		B			B

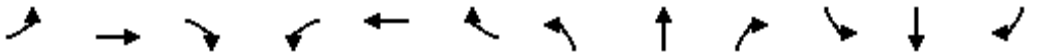
Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	38.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	0	22	33	0	35	9	755	65	28	875	23
Future Volume (Veh/h)	14	0	22	33	0	35	9	755	65	28	875	23
Sign Control		Stop			Stop			Free			Free	
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)	15	0	23	35	0	37	9	795	68	29	921	24
Pedestrians					2							
Lane Width (m)					3.0							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								237			199	
pX, platoon unblocked	0.71	0.71	0.53	0.71	0.71	0.63	0.53			0.63		
vC, conflicting volume	1841	1874	933	1851	1852	831	945			865		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	819	865	424	833	834	444	447			497		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	100	93	81	100	91	98			96		
cM capacity (veh/h)	182	196	334	183	205	391	592			681		

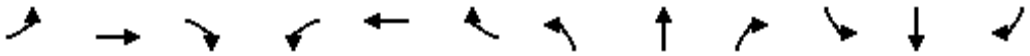
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	38	72	9	863	29	945
Volume Left	15	35	9	0	29	0
Volume Right	23	37	0	68	0	24
cSH	252	252	592	1700	681	1700
Volume to Capacity	0.15	0.29	0.02	0.51	0.04	0.56
Queue Length 95th (m)	4.0	8.7	0.4	0.0	1.0	0.0
Control Delay (s)	21.8	24.9	11.2	0.0	10.5	0.0
Lane LOS	C	C	B		B	
Approach Delay (s)	21.8	24.9	0.1		0.3	
Approach LOS	C	C				

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	59.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	52	27	60	62	80	13	653	58	73	714	80
Future Volume (vph)	91	52	27	60	62	80	13	653	58	73	714	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.98		1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1694	1900	1499		1743		1616	1923	1572	1765	1965	1557
Flt Permitted	0.49	1.00	1.00		0.89		0.11	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	878	1900	1499		1575		194	1923	1572	192	1965	1557
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	57	29	65	67	87	14	710	63	79	776	87
RTOR Reduction (vph)	0	0	19	0	27	0	0	0	37	0	0	46
Lane Group Flow (vph)	99	57	10	0	192	0	14	710	26	79	776	41
Confl. Peds. (#/hr)	13		5	5		13	3		16	16		3
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	8%	1%	0%	0%	1%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	31.0	31.0	31.0		21.7		36.2	35.0	35.0	45.4	40.2	40.2
Effective Green, g (s)	31.0	31.0	31.0		21.7		36.2	35.0	35.0	45.4	40.2	40.2
Actuated g/C Ratio	0.36	0.36	0.36		0.25		0.42	0.41	0.41	0.53	0.47	0.47
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	368	687	542		398		101	785	642	224	921	730
v/s Ratio Prot	c0.02	0.03					0.00	0.37		c0.03	c0.39	
v/s Ratio Perm	0.08		0.01		c0.12		0.06		0.02	0.16		0.03
v/c Ratio	0.27	0.08	0.02		0.48		0.14	0.90	0.04	0.35	0.84	0.06
Uniform Delay, d1	19.4	18.0	17.6		27.2		18.3	23.8	15.2	16.0	20.0	12.4
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.0		1.3		0.9	15.9	0.1	1.3	9.3	0.1
Delay (s)	19.9	18.1	17.6		28.5		19.2	39.6	15.4	17.3	29.2	12.5
Level of Service	B	B	B		C		B	D	B	B	C	B
Approach Delay (s)		19.0			28.5			37.3			26.7	
Approach LOS		B			C			D			C	

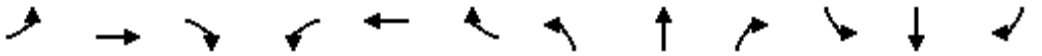
Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	17.3
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	0	7	0	714	10	10	784	0
Future Volume (Veh/h)	0	0	0	2	0	7	0	714	10	10	784	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	2	0	8	0	776	11	11	852	0
Pedestrians		4			9			2			6	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.79	0.79	0.63	0.79	0.79	0.68	0.63			0.68		
vC, conflicting volume	1668	1674	858	1666	1668	796	856			796		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	801	808	485	799	801	464	481			463		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	100	98	100			99		
cM capacity (veh/h)	232	246	370	237	248	404	690			748		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	10	0	787	11	852
Volume Left	2	0	0	11	0
Volume Right	8	0	11	0	0
cSH	354	1700	1700	748	1700
Volume to Capacity	0.03	0.00	0.46	0.01	0.50
Queue Length 95th (m)	0.7	0.0	0.0	0.3	0.0
Control Delay (s)	15.5	0.0	0.0	9.9	0.0
Lane LOS	C			A	
Approach Delay (s)	15.5	0.0		0.1	
Approach LOS	C				

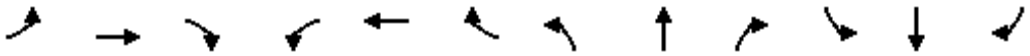
Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	53.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2	12	4	0	10	0	727	5	8	773	0
Future Volume (Veh/h)	7	2	12	4	0	10	0	727	5	8	773	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	8	2	13	4	0	11	0	782	5	9	831	0
Pedestrians		5			10						2	
Lane Width (m)		3.7			3.5						4.2	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.79	0.79	0.61	0.79	0.79	0.65	0.61			0.65		
vC, conflicting volume	1652	1651	836	1658	1648	796	836			797		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	685	684	419	692	681	411	419			412		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	99	97	98	100	97	100			99		
cM capacity (veh/h)	273	288	390	266	289	412	703			741		

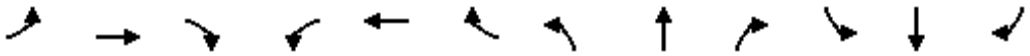
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	23	4	11	787	9	831
Volume Left	8	4	0	0	9	0
Volume Right	13	0	11	5	0	0
cSH	331	266	412	1700	741	1700
Volume to Capacity	0.07	0.02	0.03	0.46	0.01	0.49
Queue Length 95th (m)	1.7	0.3	0.6	0.0	0.3	0.0
Control Delay (s)	16.7	18.7	14.0	0.0	9.9	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	16.7	15.2		0.0	0.1	
Approach LOS	C	C				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	6	131	8	130	4	572	93	152	637	8
Future Volume (vph)	19	34	6	131	8	130	4	572	93	152	637	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0		6.5	6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.93		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1833			1944		1899	1848		1945	1960	
Flt Permitted		0.86			0.81		0.38	1.00		0.14	1.00	
Satd. Flow (perm)		1606			1621		768	1848		297	1960	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	36	6	139	9	138	4	609	99	162	678	9
RTOR Reduction (vph)	0	5	0	0	57	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	57	0	0	229	0	4	701	0	162	687	0
Confl. Peds. (#/hr)	2					2	6		11	11		6
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%	0%	1%	3%	0%	1%	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		
Actuated Green, G (s)		14.5			14.5		24.1	24.1		33.8	33.8	
Effective Green, g (s)		14.5			14.5		24.1	24.1		34.3	33.8	
Actuated g/C Ratio		0.24			0.24		0.40	0.40		0.57	0.56	
Clearance Time (s)		6.0			6.0		6.5	6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Grp Cap (vph)		386			389		306	738		352	1098	
v/s Ratio Prot								c0.38		0.05	c0.35	
v/s Ratio Perm		0.04			c0.14		0.01			0.21		
v/c Ratio		0.15			0.59		0.01	0.95		0.46	0.63	
Uniform Delay, d1		18.0			20.3		10.9	17.5		9.9	9.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			2.7		0.1	22.9		1.0	2.7	
Delay (s)		18.3			23.0		11.0	40.4		10.8	11.7	
Level of Service		B			C		B	D		B	B	
Approach Delay (s)		18.3			23.0			40.2			11.5	
Approach LOS		B			C			D			B	

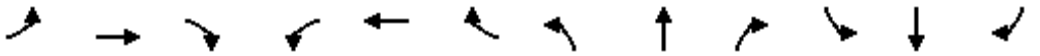
Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1	17	6	1	2	13	656	5	6	745	25
Future Volume (Veh/h)	9	1	17	6	1	2	13	656	5	6	745	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	1	18	7	1	2	14	713	5	7	810	27
Pedestrians		6			11			1				
Lane Width (m)		3.9			3.9			4.0				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.83	0.83	0.73	0.83	0.83	0.81	0.73			0.81		
vC, conflicting volume	1587	1600	830	1598	1612	726	843			729		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1079	1095	589	1092	1108	540	606			543		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	95	95	99	100	98			99		
cM capacity (veh/h)	148	171	374	146	168	435	717			825		

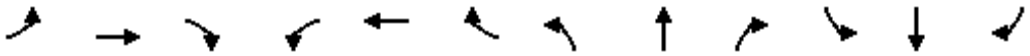
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	29	10	14	718	7	837
Volume Left	10	7	14	0	7	0
Volume Right	18	2	0	5	0	27
cSH	239	171	717	1700	825	1700
Volume to Capacity	0.12	0.06	0.02	0.42	0.01	0.49
Queue Length 95th (m)	3.1	1.4	0.5	0.0	0.2	0.0
Control Delay (s)	22.1	27.4	10.1	0.0	9.4	0.0
Lane LOS	C	D	B		A	
Approach Delay (s)	22.1	27.4	0.2		0.1	
Approach LOS	C	D				

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	51.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	67	46	70	41	81	33	450	80	124	471	126
Future Volume (vph)	123	67	46	70	41	81	33	450	80	124	471	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			0.98		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94			0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1727	1806			1844		1649	1831		1749	1797	
Flt Permitted	0.58	1.00			0.83		0.35	1.00		0.33	1.00	
Satd. Flow (perm)	1058	1806			1563		610	1831		600	1797	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	127	69	47	72	42	84	34	464	82	128	486	130
RTOR Reduction (vph)	0	32	0	0	34	0	0	5	0	0	7	0
Lane Group Flow (vph)	127	84	0	0	164	0	34	541	0	128	609	0
Confl. Peds. (#/hr)	14		4	4		14	2		15	15		2
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	7%	1%	0%	3%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	14.6	14.6			14.6		38.9	35.3		44.9	39.3	
Effective Green, g (s)	14.6	14.6			14.6		40.9	35.3		45.9	39.3	
Actuated g/C Ratio	0.21	0.21			0.21		0.59	0.51		0.66	0.57	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	222	379			328		427	929		538	1016	
v/s Ratio Prot		0.05					0.01	0.30		c0.03	c0.34	
v/s Ratio Perm	c0.12				0.10		0.04			0.13		
v/c Ratio	0.57	0.22			0.50		0.08	0.58		0.24	0.60	
Uniform Delay, d1	24.6	22.7			24.2		6.3	11.9		5.3	9.9	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.5			2.1		0.1	2.7		0.2	2.6	
Delay (s)	29.5	23.3			26.3		6.4	14.6		5.6	12.5	
Level of Service	C	C			C		A	B		A	B	
Approach Delay (s)		26.5			26.3			14.1			11.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	40	0	0	0	17	219	0	0	284	3
Future Volume (Veh/h)	9	0	40	0	0	0	17	219	0	0	284	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	0	43	0	0	0	18	235	0	0	305	3
Pedestrians					2							
Lane Width (m)					4.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	578	580	306	622	581	237	308			237		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	578	580	306	622	581	237	308			237		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	94	100	100	100	99			100		
cM capacity (veh/h)	425	422	738	373	421	805	1264			1339		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	53	0	18	235	308
Volume Left	10	0	18	0	0
Volume Right	43	0	0	0	3
cSH	648	1700	1264	1700	1339
Volume to Capacity	0.08	0.00	0.01	0.14	0.00
Queue Length 95th (m)	2.0	0.0	0.3	0.0	0.0
Control Delay (s)	11.1	0.0	7.9	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	11.1	0.0	0.6		0.0
Approach LOS	B	A			

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	25.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	41	6	15	43	6	23
Future Volume (vph)	41	6	15	43	6	23
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	52	8	19	54	8	29

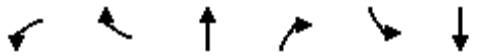
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	60	73	37
Volume Left (vph)	52	0	8
Volume Right (vph)	8	54	0
Hadj (s)	0.09	-0.44	0.04
Departure Headway (s)	4.2	3.6	4.1
Degree Utilization, x	0.07	0.07	0.04
Capacity (veh/h)	829	963	850
Control Delay (s)	7.5	6.9	7.3
Approach Delay (s)	7.5	6.9	7.3
Approach LOS	A	A	A

Intersection Summary			
Delay	7.2		
Level of Service	A		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	65	35	50	52	35	57
Future Volume (vph)	65	35	50	52	35	57
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	77	42	60	62	42	68

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	119	122	110
Volume Left (vph)	77	0	42
Volume Right (vph)	42	62	0
Hadj (s)	-0.06	-0.30	0.08
Departure Headway (s)	4.3	4.0	4.4
Degree Utilization, x	0.14	0.14	0.13
Capacity (veh/h)	788	866	796
Control Delay (s)	8.1	7.6	8.1
Approach Delay (s)	8.1	7.6	8.1
Approach LOS	A	A	A

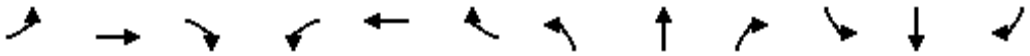
Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	42	50	26	29	58	52
Future Volume (Veh/h)	42	50	26	29	58	52
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	45	54	28	31	62	56
Pedestrians	13		2			1
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	238	58			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	238	58			72	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	94	95			96	
cM capacity (veh/h)	712	982			1519	

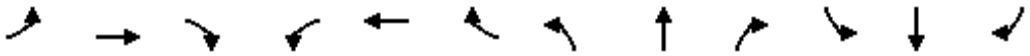
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	99	59	118
Volume Left	45	0	62
Volume Right	54	31	0
cSH	837	1700	1519
Volume to Capacity	0.12	0.03	0.04
Queue Length 95th (m)	3.0	0.0	1.0
Control Delay (s)	9.9	0.0	4.1
Lane LOS	A		A
Approach Delay (s)	9.9	0.0	4.1
Approach LOS	A		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	142	42	16	148	17	12	87	28	23	85	42
Future Volume (vph)	49	142	42	16	148	17	12	87	28	23	85	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.96	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1755			1780			1926			1772	
Flt Permitted		0.90			0.96			0.97			0.94	
Satd. Flow (perm)		1599			1723			1871			1684	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	148	44	17	154	18	12	91	29	24	89	44
RTOR Reduction (vph)	0	11	0	0	5	0	0	12	0	0	17	0
Lane Group Flow (vph)	0	232	0	0	184	0	0	121	0	0	140	0
Confl. Peds. (#/hr)	2		1	1		2	1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			35.0			26.0			26.0	
Effective Green, g (s)		35.0			35.0			26.0			26.0	
Actuated g/C Ratio		0.47			0.47			0.35			0.35	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		746			804			648			583	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.11			0.06			c0.08	
v/c Ratio		0.31			0.23			0.19			0.24	
Uniform Delay, d1		12.5			11.9			17.1			17.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.1			0.6			1.0	
Delay (s)		12.6			12.0			17.7			18.4	
Level of Service		B			B			B			B	
Approach Delay (s)		12.6			12.0			17.7			18.4	
Approach LOS		B			B			B			B	

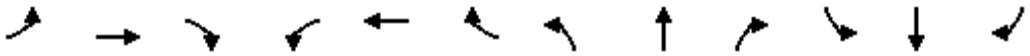
Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	104	85	114	142	26	54	93	73	18	125	20
Future Volume (Veh/h)	12	104	85	114	142	26	54	93	73	18	125	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	13	114	93	125	156	29	59	102	80	20	137	22
Pedestrians		2			1			2			1	
Lane Width (m)		3.5			3.6			3.5			3.4	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	186			209			702	624	164	740	656	174
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	186			209			702	624	164	740	656	174
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.3	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.7	4.0	3.3
p0 queue free %	99			91			73	72	91	90	61	97
cM capacity (veh/h)	1399			1371			222	359	884	206	348	873

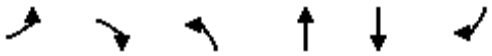
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	220	310	241	179
Volume Left	13	125	59	20
Volume Right	93	29	80	22
cSH	1399	1371	377	347
Volume to Capacity	0.01	0.09	0.64	0.52
Queue Length 95th (m)	0.2	2.3	32.4	21.4
Control Delay (s)	0.5	3.7	30.1	25.9
Lane LOS	A	A	D	D
Approach Delay (s)	0.5	3.7	30.1	25.9
Approach LOS			D	D

Intersection Summary				
Average Delay	13.8			
Intersection Capacity Utilization	59.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	140	0	63	0	488	127	70	848	0
Future Volume (vph)	0	0	0	140	0	63	0	488	127	70	848	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1671		1425		3544	1725	1752	3693	
Flt Permitted				0.76		1.00		1.00	1.00	0.45	1.00	
Satd. Flow (perm)				1332		1425		3544	1725	823	3693	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	154	0	69	0	536	140	77	932	0
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	85	0	0	0
Lane Group Flow (vph)	0	0	0	154	0	27	0	536	55	77	932	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	2%	0%	3%	4%	3%	1%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				523		559		1392	677	323	1450	
v/s Ratio Prot								0.15			c0.25	
v/s Ratio Perm				c0.12		0.02			0.03	0.09		
v/c Ratio				0.29		0.05		0.39	0.08	0.24	0.64	
Uniform Delay, d1				11.7		10.5		12.2	10.7	11.4	13.8	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				1.4		0.2		0.8	0.2	1.7	2.2	
Delay (s)				13.1		10.7		13.0	10.9	13.1	16.0	
Level of Service				B		B		B	B	B	B	
Approach Delay (s)		0.0			12.4			12.5			15.8	
Approach LOS		A			B			B			B	

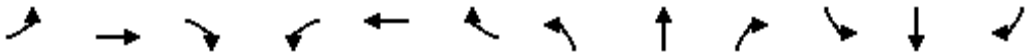
Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	14	18	156	207	68
Future Volume (Veh/h)	32	14	18	156	207	68
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	34	15	19	168	223	73
Pedestrians	1					
Lane Width (m)	3.8					
Walking Speed (m/s)	1.1					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	466	260	297			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	466	260	297			
tC, single (s)	6.4	6.2	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	94	98	98			
cM capacity (veh/h)	549	782	1241			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	49	187	296
Volume Left	34	19	0
Volume Right	15	0	73
cSH	604	1241	1700
Volume to Capacity	0.08	0.02	0.17
Queue Length 95th (m)	2.0	0.4	0.0
Control Delay (s)	11.5	0.9	0.0
Lane LOS	B	A	
Approach Delay (s)	11.5	0.9	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	146	16	10	246	24	6	76	8	26	148	40
Future Volume (vph)	17	146	16	10	246	24	6	76	8	26	148	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.99			0.97	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1783			1816			1681			1763	
Flt Permitted		0.94			0.99			0.98			0.95	
Satd. Flow (perm)		1693			1793			1644			1693	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	21	180	20	12	304	30	7	94	10	32	183	49
RTOR Reduction (vph)	0	8	0	0	7	0	0	6	0	0	17	0
Lane Group Flow (vph)	0	214	0	0	339	0	0	105	0	0	247	0
Heavy Vehicles (%)	12%	3%	0%	0%	2%	17%	0%	12%	13%	12%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		634			672			616			634	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.19			0.06			c0.15	
v/c Ratio		0.34			0.50			0.17			0.39	
Uniform Delay, d1		10.7			11.6			10.0			11.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.4			2.7			0.6			1.8	
Delay (s)		12.2			14.3			10.6			12.8	
Level of Service		B			B			B			B	
Approach Delay (s)		12.2			14.3			10.6			12.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	300	72	104	399	78	52
Future Volume (Veh/h)	300	72	104	399	78	52
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)	316	76	109	420	82	55
Pedestrians					1	
Lane Width (m)					3.3	
Walking Speed (m/s)					1.1	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			393		993	355
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			393		993	355
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			91		66	92
cM capacity (veh/h)			1176		242	693

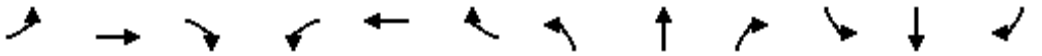
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	392	529	137
Volume Left	0	109	82
Volume Right	76	0	55
cSH	1700	1176	328
Volume to Capacity	0.23	0.09	0.42
Queue Length 95th (m)	0.0	2.3	15.1
Control Delay (s)	0.0	2.5	23.6
Lane LOS		A	C
Approach Delay (s)	0.0	2.5	23.6
Approach LOS			C

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	0	0	79	0	0	120
Future Volume (vph)	0	0	79	0	0	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	82	0	0	125

Direction, Lane #	NB 1	SB 1
Volume Total (vph)	82	125
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.00	0.02
Departure Headway (s)	4.0	4.0
Degree Utilization, x	0.09	0.14
Capacity (veh/h)	880	894
Control Delay (s)	7.4	7.6
Approach Delay (s)	7.4	7.6
Approach LOS	A	A

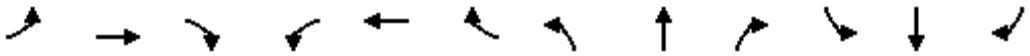
Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	1	19	14	7	0	67	5	14	91	1
Future Volume (Veh/h)	10	10	1	19	14	7	0	67	5	14	91	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	11	11	1	21	16	8	0	75	6	16	102	1
Pedestrians		6			9						1	
Lane Width (m)		3.1			3.5						4.0	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	235	230	108	228	227	88	108			90		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	235	230	108	228	227	88	108			90		
tC, single (s)	7.1	6.6	6.2	7.1	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	98	98	100	97	98	99	100			99		
cM capacity (veh/h)	687	641	947	703	646	967	1488			1505		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	23	45	81	118	1
Volume Left	11	21	0	16	0
Volume Right	1	8	6	0	1
cSH	672	715	1488	1505	1700
Volume to Capacity	0.03	0.06	0.00	0.01	0.00
Queue Length 95th (m)	0.8	1.5	0.0	0.2	0.0
Control Delay (s)	10.5	10.4	0.0	1.1	0.0
Lane LOS	B	B		A	
Approach Delay (s)	10.5	10.4	0.0	1.1	
Approach LOS	B	B			

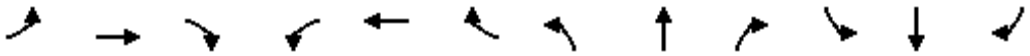
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	25.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	24	118	13	46	104	9	5	86	45	36	93	16
Future Volume (vph)	24	118	13	46	104	9	5	86	45	36	93	16
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	28	136	15	53	120	10	6	99	52	41	107	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	179	183	157	166
Volume Left (vph)	28	53	6	41
Volume Right (vph)	15	10	52	18
Hadj (s)	-0.02	0.03	-0.16	0.02
Departure Headway (s)	5.0	5.0	4.9	5.1
Degree Utilization, x	0.25	0.25	0.21	0.23
Capacity (veh/h)	667	664	662	652
Control Delay (s)	9.6	9.7	9.2	9.6
Approach Delay (s)	9.6	9.7	9.2	9.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	325	55	57	395	8	29	8	49	4	6	5
Future Volume (Veh/h)	6	325	55	57	395	8	29	8	49	4	6	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	349	59	61	425	9	31	9	53	4	6	5
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	434			408			950	946	378	1000	972	430
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	434			408			950	946	378	1000	972	430
tC, single (s)	4.1			4.1			7.1	6.6	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.1	3.3	3.5	4.0	3.3
p0 queue free %	99			95			86	96	92	98	97	99
cM capacity (veh/h)	1136			1151			221	236	673	191	240	630

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	414	495	93	15
Volume Left	6	61	31	4
Volume Right	59	9	53	5
cSH	1136	1151	362	279
Volume to Capacity	0.01	0.05	0.26	0.05
Queue Length 95th (m)	0.1	1.3	7.7	1.3
Control Delay (s)	0.2	1.5	18.4	18.7
Lane LOS	A	A	C	C
Approach Delay (s)	0.2	1.5	18.4	18.7
Approach LOS			C	C

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

APPENDIX F

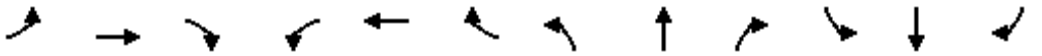
Detailed Synchro Reports for Horizon Year 2 - 2033

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	99	156	987	159	22	438
Future Volume (vph)	99	156	987	159	22	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	0.98		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.92		1.00	0.85		1.00
Flt Protected	0.98		1.00	1.00		1.00
Satd. Flow (prot)	1585		3500	1396		3246
Flt Permitted	0.98		1.00	1.00		0.88
Satd. Flow (perm)	1585		3500	1396		2852
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	106	168	1061	171	24	471
RTOR Reduction (vph)	19	0	0	58	0	0
Lane Group Flow (vph)	255	0	1061	113	0	495
Confl. Peds. (#/hr)				1	1	
Heavy Vehicles (%)	6%	9%	2%	12%	12%	7%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	15.8		24.0	24.0		24.0
Effective Green, g (s)	15.8		24.0	24.0		24.0
Actuated g/C Ratio	0.31		0.46	0.46		0.46
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	483		1621	646		1321
v/s Ratio Prot	c0.16		c0.30			
v/s Ratio Perm				0.08		0.17
v/c Ratio	0.53		0.65	0.17		0.37
Uniform Delay, d1	14.9		10.7	8.1		9.0
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	1.0		2.1	0.6		0.8
Delay (s)	15.9		12.8	8.7		9.8
Level of Service	B		B	A		A
Approach Delay (s)	15.9		12.2			9.8
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	163	23	899	138	10	503
Future Volume (vph)	163	23	899	138	10	503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.98			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1668	1597	3330			3225
Flt Permitted	0.95	1.00	1.00			0.93
Satd. Flow (perm)	1668	1597	3330			2993
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	173	24	956	147	11	535
RTOR Reduction (vph)	0	18	17	0	0	0
Lane Group Flow (vph)	173	6	1086	0	0	546
Confl. Peds. (#/hr)				2	2	
Heavy Vehicles (%)	7%	0%	5%	3%	0%	7%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	11.7	11.7	26.9			26.9
Effective Green, g (s)	11.7	11.7	26.9			26.9
Actuated g/C Ratio	0.23	0.23	0.53			0.53
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	385	369	1770			1591
v/s Ratio Prot	c0.10		c0.33			
v/s Ratio Perm		0.00				0.18
v/c Ratio	0.45	0.02	0.61			0.34
Uniform Delay, d1	16.7	15.0	8.2			6.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.0	1.6			0.6
Delay (s)	17.0	15.0	9.8			7.4
Level of Service	B	B	A			A
Approach Delay (s)	16.7		9.8			7.4
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

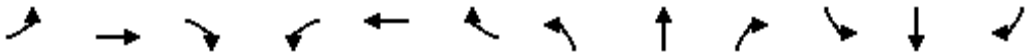


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	15	2	112	10	287	3	727	132	127	503	14
Future Volume (vph)	27	15	2	112	10	287	3	727	132	127	503	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1818			1647	1520	1685	1729	1411	1428	1701	
Flt Permitted		0.79			0.71	1.00	0.45	1.00	1.00	0.15	1.00	
Satd. Flow (perm)		1484			1219	1520	794	1729	1411	226	1701	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	17	2	124	11	319	3	808	147	141	559	16
RTOR Reduction (vph)	0	2	0	0	0	211	0	0	57	0	1	0
Lane Group Flow (vph)	0	47	0	0	135	108	3	808	90	141	574	0
Confl. Peds. (#/hr)	2		3	3		2			5	5		
Heavy Vehicles (%)	8%	7%	0%	7%	40%	7%	0%	5%	5%	18%	5%	8%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		17.7			17.7	17.7	48.2	48.2	48.2	59.1	59.1	
Effective Green, g (s)		17.7			17.7	17.7	48.2	48.2	48.2	59.1	59.1	
Actuated g/C Ratio		0.20			0.20	0.20	0.56	0.56	0.56	0.68	0.68	
Clearance Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0			5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		302			248	309	440	960	783	249	1158	
v/s Ratio Prot								c0.47		0.04	c0.34	
v/s Ratio Perm		0.03			c0.11	0.07	0.00		0.06	0.34		
v/c Ratio		0.16			0.54	0.35	0.01	0.84	0.12	0.57	0.50	
Uniform Delay, d1		28.4			30.9	29.6	8.6	16.1	9.2	12.1	6.7	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			4.2	1.4	0.0	8.9	0.3	2.9	1.5	
Delay (s)		28.9			35.2	31.0	8.6	25.0	9.5	15.1	8.2	
Level of Service		C			D	C	A	C	A	B	A	
Approach Delay (s)		28.9			32.3			22.5			9.5	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	76	139	730	59	57	546
Future Volume (vph)	76	139	730	59	57	546
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	2.8	2.8	3.8	3.8	3.7	3.7
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1645	1280	1841		1823	1830
Flt Permitted	0.95	1.00	1.00		0.27	1.00
Satd. Flow (perm)	1645	1280	1841		513	1830
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	146	768	62	60	575
RTOR Reduction (vph)	0	127	3	0	0	0
Lane Group Flow (vph)	80	19	827	0	60	575
Confl. Peds. (#/hr)				3	3	
Heavy Vehicles (%)	0%	15%	4%	7%	0%	5%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	6.8	6.8	37.1		37.1	37.1
Effective Green, g (s)	6.8	6.8	37.1		37.1	37.1
Actuated g/C Ratio	0.13	0.13	0.70		0.70	0.70
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	211	164	1291		359	1283
v/s Ratio Prot	c0.05		c0.45			0.31
v/s Ratio Perm		0.01			0.12	
v/c Ratio	0.38	0.11	0.64		0.17	0.45
Uniform Delay, d1	21.1	20.4	4.3		2.7	3.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.3	2.4		1.0	1.1
Delay (s)	22.3	20.7	6.7		3.7	4.6
Level of Service	C	C	A		A	A
Approach Delay (s)	21.3		6.7			4.5
Approach LOS	C		A			A

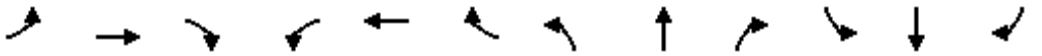
Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	4	35	0	55	2	720	23	19	589	4
Future Volume (Veh/h)	6	0	4	35	0	55	2	720	23	19	589	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	0	4	38	0	59	2	774	25	20	633	4
Pedestrians		1			1							
Lane Width (m)		4.1			3.0							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								237			199	
pX, platoon unblocked	0.73	0.73	0.88	0.73	0.73	0.67	0.88			0.67		
vC, conflicting volume	1513	1480	636	1468	1470	788	638			800		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1147	1101	518	1085	1087	433	520			451		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	99	72	100	86	100			97		
cM capacity (veh/h)	108	151	494	138	154	418	928			747		

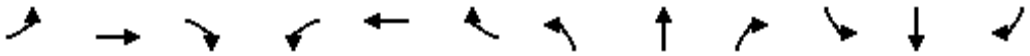
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	10	97	2	799	20	637
Volume Left	6	38	2	0	20	0
Volume Right	4	59	0	25	0	4
cSH	158	233	928	1700	747	1700
Volume to Capacity	0.06	0.42	0.00	0.47	0.03	0.37
Queue Length 95th (m)	1.5	14.6	0.0	0.0	0.6	0.0
Control Delay (s)	29.4	31.1	8.9	0.0	10.0	0.0
Lane LOS	D	D	A		A	
Approach Delay (s)	29.4	31.1	0.0		0.3	
Approach LOS	D	D				

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	51.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	25	3	42	52	70	14	592	24	40	513	65
Future Volume (vph)	35	25	3	42	52	70	14	592	24	40	513	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1607	1638	1489		1707		1745	1868	1610	1697	1908	1502
Flt Permitted	0.53	1.00	1.00		0.92		0.28	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	900	1638	1489		1592		520	1868	1610	280	1908	1502
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	27	3	46	57	76	15	643	26	43	558	71
RTOR Reduction (vph)	0	0	2	0	32	0	0	0	15	0	0	38
Lane Group Flow (vph)	38	27	1	0	147	0	15	643	11	43	558	33
Confl. Peds. (#/hr)	1		9	9		1	1		3	3		1
Heavy Vehicles (%)	6%	16%	0%	5%	0%	5%	0%	4%	0%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	29.2	29.2	29.2		21.2		35.4	34.2	34.2	41.9	37.3	37.3
Effective Green, g (s)	29.2	29.2	29.2		21.2		35.4	34.2	34.2	41.9	37.3	37.3
Actuated g/C Ratio	0.36	0.36	0.36		0.26		0.44	0.42	0.42	0.52	0.46	0.46
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	359	590	536		416		245	788	679	225	878	691
v/s Ratio Prot	c0.01	0.02					0.00	c0.34		c0.01	0.29	
v/s Ratio Perm	0.03		0.00		c0.09		0.03		0.01	0.09		0.02
v/c Ratio	0.11	0.05	0.00		0.35		0.06	0.82	0.02	0.19	0.64	0.05
Uniform Delay, d1	17.5	16.8	16.6		24.3		14.0	20.6	13.6	13.3	16.7	12.1
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.0		0.7		0.1	9.1	0.0	0.6	3.5	0.1
Delay (s)	17.7	16.9	16.6		25.0		14.1	29.8	13.7	13.8	20.2	12.2
Level of Service	B	B	B		C		B	C	B	B	C	B
Approach Delay (s)		17.3			25.0			28.8			18.9	
Approach LOS		B			C			C			B	

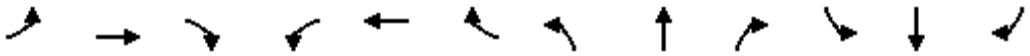
Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	17.3
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	0	4	0	660	5	2	531	0
Future Volume (Veh/h)	0	0	0	2	0	4	0	660	5	2	531	0
Sign Control		Stop			Stop			Free			Free	
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)	0	0	0	2	0	4	0	695	5	2	559	0
Pedestrians		2			4			1			2	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.81	0.81	0.77	0.81	0.81	0.70	0.77			0.70		
vC, conflicting volume	1266	1269	562	1266	1266	704	561			704		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	583	586	289	582	583	355	288			355		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	99	100	99	100			100		
cM capacity (veh/h)	340	342	584	343	343	480	932			842		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	6	0	700	2	559
Volume Left	2	0	0	2	0
Volume Right	4	0	5	0	0
cSH	423	1700	1700	842	1700
Volume to Capacity	0.01	0.00	0.41	0.00	0.33
Queue Length 95th (m)	0.3	0.0	0.0	0.1	0.0
Control Delay (s)	13.6	0.0	0.0	9.3	0.0
Lane LOS	B			A	
Approach Delay (s)	13.6	0.0		0.0	
Approach LOS	B				

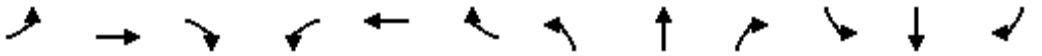
Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	45.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	8	2	0	9	0	656	6	7	509	1
Future Volume (Veh/h)	7	1	8	2	0	9	0	656	6	7	509	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	7	1	9	2	0	10	0	698	6	7	541	1
Pedestrians		2			3							
Lane Width (m)		3.7			3.5							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.76	0.76	0.78	0.76	0.76	0.65	0.78			0.65		
vC, conflicting volume	1268	1264	544	1268	1262	704	544			707		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	551	545	274	551	542	284	275			289		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	98	99	100	98	100			99		
cM capacity (veh/h)	315	338	599	333	340	496	1012			839		

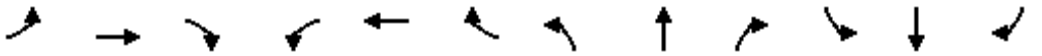
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	17	2	10	704	7	542
Volume Left	7	2	0	0	7	0
Volume Right	9	0	10	6	0	1
cSH	423	333	496	1700	839	1700
Volume to Capacity	0.04	0.01	0.02	0.41	0.01	0.32
Queue Length 95th (m)	1.0	0.1	0.5	0.0	0.2	0.0
Control Delay (s)	13.9	15.9	12.4	0.0	9.3	0.0
Lane LOS	B	C	B		A	
Approach Delay (s)	13.9	13.0		0.0	0.1	
Approach LOS	B	B				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	51.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	1	120	14	113	0	553	94	142	363	4
Future Volume (vph)	4	5	1	120	14	113	0	553	94	142	363	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0			6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.94			0.98		1.00	1.00	
Flt Protected		0.98			0.98			1.00		0.95	1.00	
Satd. Flow (prot)		1685			1880			1821		1889	1888	
Flt Permitted		0.86			0.84			1.00		0.14	1.00	
Satd. Flow (perm)		1476			1619			1821		288	1888	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	5	1	128	15	120	0	588	100	151	386	4
RTOR Reduction (vph)	0	1	0	0	51	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	9	0	0	212	0	0	680	0	151	390	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	20%	0%	5%	0%	3%	0%	3%	2%	3%	5%	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		
Actuated Green, G (s)		13.9			13.9			24.1		33.7	33.7	
Effective Green, g (s)		13.9			13.9			24.1		34.2	33.7	
Actuated g/C Ratio		0.23			0.23			0.40		0.57	0.57	
Clearance Time (s)		6.0			6.0			6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		344			377			736		342	1067	
v/s Ratio Prot								c0.37		c0.05	0.21	
v/s Ratio Perm		0.01			c0.13					0.20		
v/c Ratio		0.03			0.56			0.92		0.44	0.37	
Uniform Delay, d1		17.6			20.2			16.9		9.2	7.1	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.0			2.3			19.1		0.9	1.0	
Delay (s)		17.7			22.5			36.0		10.1	8.1	
Level of Service		B			C			D		B	A	
Approach Delay (s)		17.7			22.5			36.0			8.6	
Approach LOS		B			C			D			A	

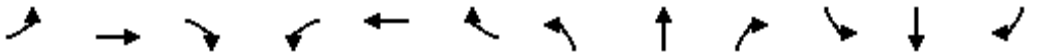
Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	3	14	1	0	3	12	601	2	0	456	22
Future Volume (Veh/h)	47	3	14	1	0	3	12	601	2	0	456	22
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	3	15	1	0	3	13	653	2	0	496	24
Pedestrians		4			3							
Lane Width (m)		3.9			3.9							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.93	0.93	0.89	0.93	0.93	0.87	0.89			0.87		
vC, conflicting volume	1194	1196	512	1196	1207	657	524			658		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	896	899	387	898	910	531	400			532		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	99	97	100	100	99	99			100		
cM capacity (veh/h)	238	255	588	231	251	479	1033			907		

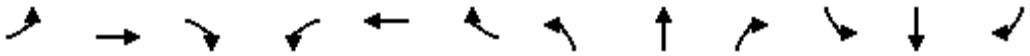
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	69	4	13	655	0	520
Volume Left	51	1	13	0	0	0
Volume Right	15	3	0	2	0	24
cSH	274	377	1033	1700	1700	1700
Volume to Capacity	0.25	0.01	0.01	0.39	0.00	0.31
Queue Length 95th (m)	7.4	0.2	0.3	0.0	0.0	0.0
Control Delay (s)	22.5	14.6	8.5	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	22.5	14.6	0.2		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	47.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	12	17	87	24	210	23	347	37	70	330	48
Future Volume (vph)	37	12	17	87	24	210	23	347	37	70	330	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91			0.91		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1660	1658			1765		1618	1806		1670	1761	
Flt Permitted	0.41	1.00			0.90		0.51	1.00		0.42	1.00	
Satd. Flow (perm)	716	1658			1605		865	1806		733	1761	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	13	18	95	26	228	25	377	40	76	359	52
RTOR Reduction (vph)	0	14	0	0	84	0	0	3	0	0	4	0
Lane Group Flow (vph)	40	17	0	0	265	0	25	414	0	76	407	0
Confl. Peds. (#/hr)	5					5	2		3	3		2
Heavy Vehicles (%)	6%	0%	12%	3%	9%	0%	9%	3%	8%	8%	5%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	18.0	18.0			18.0		39.2	35.6		45.2	39.6	
Effective Green, g (s)	18.0	18.0			18.0		41.2	35.6		46.2	39.6	
Actuated g/C Ratio	0.25	0.25			0.25		0.56	0.49		0.63	0.54	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	176	407			394		534	878		572	952	
v/s Ratio Prot		0.01					0.00	c0.23		c0.02	c0.23	
v/s Ratio Perm	0.06				c0.17		0.02			0.07		
v/c Ratio	0.23	0.04			0.67		0.05	0.47		0.13	0.43	
Uniform Delay, d1	22.0	21.0			24.9		7.1	12.5		5.6	10.0	
Progression Factor	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.1			5.3		0.0	1.8		0.1	1.4	
Delay (s)	23.1	20.8			30.3		7.1	14.3		5.7	11.4	
Level of Service	C	C			C		A	B		A	B	
Approach Delay (s)		22.1			30.3			13.9			10.5	
Approach LOS		C			C			B			B	

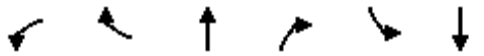
Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	0	0	0	14	210	0	0	186	4
Future Volume (Veh/h)	6	0	5	0	0	0	14	210	0	0	186	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	7	0	6	0	0	0	16	247	0	0	219	5
Pedestrians		1						1				
Lane Width (m)		4.1						3.9				
Walking Speed (m/s)		1.1						1.1				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	502	502	224	508	504	247	225			247		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	502	502	224	508	504	247	225			247		
tC, single (s)	7.3	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.7	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	100	100	100	99			100		
cM capacity (veh/h)	452	469	819	470	467	797	1354			1331		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	13	0	16	247	224
Volume Left	7	0	16	0	0
Volume Right	6	0	0	0	5
cSH	570	1700	1354	1700	1331
Volume to Capacity	0.02	0.00	0.01	0.15	0.00
Queue Length 95th (m)	0.5	0.0	0.3	0.0	0.0
Control Delay (s)	11.5	0.0	7.7	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	11.5	0.0	0.5		0.0
Approach LOS	B	A			

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	22.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	19	1	7	39	1	13
Future Volume (vph)	19	1	7	39	1	13
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	25	1	9	51	1	17

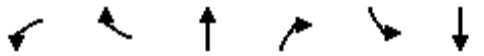
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	26	60	18
Volume Left (vph)	25	0	1
Volume Right (vph)	1	51	0
Hadj (s)	0.35	-0.47	0.01
Departure Headway (s)	4.4	3.5	4.0
Degree Utilization, x	0.03	0.06	0.02
Capacity (veh/h)	799	1013	882
Control Delay (s)	7.5	6.7	7.1
Approach Delay (s)	7.5	6.7	7.1
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	39	22	40	35	10	25
Future Volume (vph)	39	22	40	35	10	25
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	46	26	48	42	12	30

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	72	90	42
Volume Left (vph)	46	0	12
Volume Right (vph)	26	42	0
Hadj (s)	-0.03	-0.16	0.20
Departure Headway (s)	4.2	3.9	4.3
Degree Utilization, x	0.08	0.10	0.05
Capacity (veh/h)	837	884	807
Control Delay (s)	7.5	7.4	7.6
Approach Delay (s)	7.5	7.4	7.6
Approach LOS	A	A	A

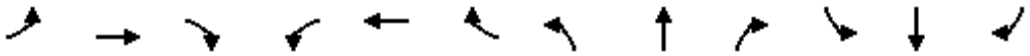
Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	26	35	23	28	22
Future Volume (Veh/h)	22	26	35	23	28	22
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	27	32	43	28	34	27
Pedestrians	9		1			4
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	162	70			80	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162	70			80	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	97	97			98	
cM capacity (veh/h)	806	963			1515	

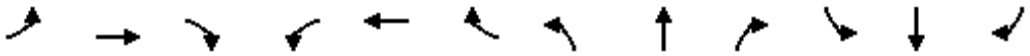
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	59	71	61
Volume Left	27	0	34
Volume Right	32	28	0
cSH	884	1700	1515
Volume to Capacity	0.07	0.04	0.02
Queue Length 95th (m)	1.6	0.0	0.5
Control Delay (s)	9.4	0.0	4.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	4.2
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		



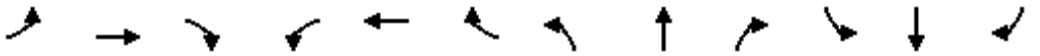
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	144	20	13	145	37	26	71	11	11	54	66
Future Volume (vph)	54	144	20	13	145	37	26	71	11	11	54	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			0.99			1.00			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.99			0.93	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1671			1643			1868			1574	
Flt Permitted		0.86			0.97			0.90			0.97	
Satd. Flow (perm)		1463			1602			1694			1533	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	67	178	25	16	179	46	32	88	14	14	67	81
RTOR Reduction (vph)	0	5	0	0	12	0	0	6	0	0	50	0
Lane Group Flow (vph)	0	265	0	0	229	0	0	128	0	0	112	0
Confl. Peds. (#/hr)	12		2	2		12	12		6	6		12
Heavy Vehicles (%)	8%	10%	5%	8%	8%	0%	8%	3%	0%	25%	10%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			35.0			22.0			22.0	
Effective Green, g (s)		35.0			35.0			22.0			22.0	
Actuated g/C Ratio		0.49			0.49			0.31			0.31	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		721			789			524			475	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.14			c0.08			0.07	
v/c Ratio		0.37			0.29			0.24			0.23	
Uniform Delay, d1		11.1			10.6			18.3			18.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.1			1.1			1.2	
Delay (s)		11.3			10.7			19.4			19.4	
Level of Service		B			B			B			B	
Approach Delay (s)		11.3			10.7			19.4			19.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



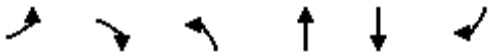
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	144	68	60	101	23	65	209	121	17	84	10
Future Volume (vph)	12	144	68	60	101	23	65	209	121	17	84	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.96			0.99	
Flt Protected		1.00			0.98			0.99			0.99	
Satd. Flow (prot)		1658			1606			1749			1675	
Flt Permitted		0.97			0.79			0.93			0.92	
Satd. Flow (perm)		1619			1288			1648			1556	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	14	171	81	71	120	27	77	249	144	20	100	12
RTOR Reduction (vph)	0	44	0	0	14	0	0	28	0	0	6	0
Lane Group Flow (vph)	0	222	0	0	204	0	0	442	0	0	126	0
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	19%	8%	5%	19%	10%	22%	13%	0%	0%	0%	8%	29%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.4			9.4			20.7			20.7	
Effective Green, g (s)		9.4			9.4			20.7			20.7	
Actuated g/C Ratio		0.24			0.24			0.53			0.53	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		389			309			872			823	
v/s Ratio Prot												
v/s Ratio Perm		0.14			c0.16			c0.27			0.08	
v/c Ratio		0.57			0.66			0.51			0.15	
Uniform Delay, d1		13.1			13.4			5.9			4.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.0			5.0			2.1			0.4	
Delay (s)		15.1			18.4			8.0			5.1	
Level of Service		B			B			A			A	
Approach Delay (s)		15.1			18.4			8.0			5.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	39.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	97	0	58	0	1020	213	49	371	0
Future Volume (vph)	0	0	0	97	0	58	0	1020	213	49	371	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1457		1358		3579	1693	1719	3553	
Flt Permitted				0.76		1.00		1.00	1.00	0.18	1.00	
Satd. Flow (perm)				1161		1358		3579	1693	329	3553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	102	0	61	0	1074	224	52	391	0
RTOR Reduction (vph)	0	0	0	0	0	35	0	0	136	0	0	0
Lane Group Flow (vph)	0	0	0	102	0	26	0	1074	88	52	391	0
Heavy Vehicles (%)	0%	0%	0%	17%	0%	7%	0%	2%	6%	5%	5%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				456		533		1406	665	129	1395	
v/s Ratio Prot								c0.30			0.11	
v/s Ratio Perm				c0.09		0.02			0.05	0.16		
v/c Ratio				0.22		0.05		0.76	0.13	0.40	0.28	
Uniform Delay, d1				11.3		10.5		14.7	10.9	12.3	11.6	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				1.1		0.2		4.0	0.4	9.1	0.5	
Delay (s)				12.4		10.7		18.7	11.3	21.4	12.1	
Level of Service				B		B		B	B	C	B	
Approach Delay (s)		0.0			11.8			17.5			13.2	
Approach LOS		A			B			B			B	

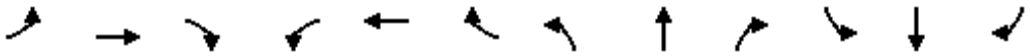
Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	17	11	142	133	25
Future Volume (Veh/h)	34	17	11	142	133	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	39	20	13	163	153	29
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	356	168	182			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	356	168	182			
tC, single (s)	6.5	6.3	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.5			
p0 queue free %	94	98	99			
cM capacity (veh/h)	627	866	1251			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	59	176	182
Volume Left	39	13	0
Volume Right	20	0	29
cSH	692	1251	1700
Volume to Capacity	0.09	0.01	0.11
Queue Length 95th (m)	2.1	0.2	0.0
Control Delay (s)	10.7	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	242	3	4	148	23	10	170	5	18	56	17
Future Volume (vph)	35	242	3	4	148	23	10	170	5	18	56	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			1.00			0.98	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1761			1532			1774			1500	
Flt Permitted		0.94			0.99			0.98			0.92	
Satd. Flow (perm)		1662			1518			1751			1396	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	40	275	3	5	168	26	11	193	6	20	64	19
RTOR Reduction (vph)	0	1	0	0	11	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	317	0	0	188	0	0	208	0	0	91	0
Heavy Vehicles (%)	3%	6%	34%	50%	20%	27%	0%	7%	0%	28%	20%	24%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		623			569			656			523	
v/s Ratio Prot												
v/s Ratio Perm		c0.19			0.12			c0.12			0.07	
v/c Ratio		0.51			0.33			0.32			0.17	
Uniform Delay, d1		11.6			10.7			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.0			1.5			1.3			0.7	
Delay (s)		14.5			12.2			11.9			10.8	
Level of Service		B			B			B			B	
Approach Delay (s)		14.5			12.2			11.9			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	262	50	62	243	119	122
Future Volume (Veh/h)	262	50	62	243	119	122
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)	276	53	65	256	125	128
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			329		688	302
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			329		688	302
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			95		67	82
cM capacity (veh/h)			1208		380	726

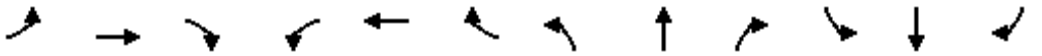
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	329	321	253
Volume Left	0	65	125
Volume Right	53	0	128
cSH	1700	1208	500
Volume to Capacity	0.19	0.05	0.51
Queue Length 95th (m)	0.0	1.3	21.4
Control Delay (s)	0.0	2.1	19.3
Lane LOS		A	C
Approach Delay (s)	0.0	2.1	19.3
Approach LOS			C

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	0	0	72	0	0	65
Future Volume (vph)	0	0	72	0	0	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	78	0	0	71

Direction, Lane #	NB 1	SB 1
Volume Total (vph)	78	71
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.10	0.08
Departure Headway (s)	4.1	4.1
Degree Utilization, x	0.09	0.08
Capacity (veh/h)	870	880
Control Delay (s)	7.5	7.4
Approach Delay (s)	7.5	7.4
Approach LOS	A	A

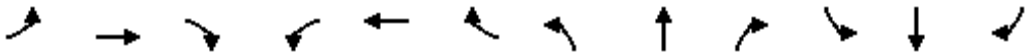
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	59	0	4	22	9	0	55	3	4	39	1
Future Volume (Veh/h)	16	59	0	4	22	9	0	55	3	4	39	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	20	74	0	5	28	11	0	69	4	5	49	1
Pedestrians		6			3			1				
Lane Width (m)		3.1			3.5			3.6				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	161	141	56	171	139	74	55			76		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	161	141	56	171	139	74	55			76		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	97	90	100	99	96	99	100			100		
cM capacity (veh/h)	752	746	1010	728	747	958	1555			1532		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	94	44	73	54	1
Volume Left	20	5	0	5	0
Volume Right	0	11	4	0	1
cSH	747	788	1555	1532	1700
Volume to Capacity	0.13	0.06	0.00	0.00	0.00
Queue Length 95th (m)	3.3	1.3	0.0	0.1	0.0
Control Delay (s)	10.5	9.8	0.0	0.7	0.0
Lane LOS	B	A		A	
Approach Delay (s)	10.5	9.8	0.0	0.7	
Approach LOS	B	A			

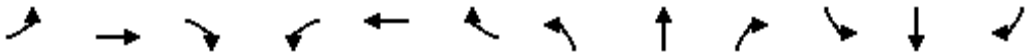
Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	81	14	53	124	27	19	114	42	13	130	14
Future Volume (vph)	15	81	14	53	124	27	19	114	42	13	130	14
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	19	104	18	68	159	35	24	146	54	17	167	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	141	262	224	202
Volume Left (vph)	19	68	24	17
Volume Right (vph)	18	35	54	18
Hadj (s)	0.03	0.07	0.04	0.07
Departure Headway (s)	5.6	5.4	5.4	5.5
Degree Utilization, x	0.22	0.39	0.34	0.31
Capacity (veh/h)	580	619	606	602
Control Delay (s)	10.1	11.9	11.2	10.9
Approach Delay (s)	10.1	11.9	11.2	10.9
Approach LOS	B	B	B	B

Intersection Summary				
Delay	11.2			
Level of Service	B			
Intersection Capacity Utilization	38.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	284	42	109	412	2	42	3	74	9	3	6
Future Volume (Veh/h)	3	284	42	109	412	2	42	3	74	9	3	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	4	374	55	143	542	3	55	4	97	12	4	8
Pedestrians		13						10			1	
Lane Width (m)		3.2						3.2			4.3	
Walking Speed (m/s)		1.1						1.1			1.1	
Percent Blockage		1						1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	546			439			1272	1252	412	1339	1278	558
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	546			439			1272	1252	412	1339	1278	558
tC, single (s)	4.1			4.2			7.1	6.5	6.3	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.4	3.5	4.0	3.5
p0 queue free %	100			87			55	97	84	88	97	98
cM capacity (veh/h)	1032			1075			123	149	620	96	144	496

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	433	688	156	24
Volume Left	4	143	55	12
Volume Right	55	3	97	8
cSH	1032	1075	247	142
Volume to Capacity	0.00	0.13	0.63	0.17
Queue Length 95th (m)	0.1	3.5	29.3	4.4
Control Delay (s)	0.1	3.2	41.7	35.4
Lane LOS	A	A	E	E
Approach Delay (s)	0.1	3.2	41.7	35.4
Approach LOS			E	E

Intersection Summary				
Average Delay	7.4			
Intersection Capacity Utilization	63.6%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	177	45	659	156	117	1072
Future Volume (vph)	177	45	659	156	117	1072
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frt	0.97		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	1664		3433	1581		3428
Flt Permitted	0.96		1.00	1.00		0.77
Satd. Flow (perm)	1664		3433	1581		2646
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	190	48	709	168	126	1153
RTOR Reduction (vph)	19	0	0	84	0	0
Lane Group Flow (vph)	219	0	709	84	0	1279
Heavy Vehicles (%)	2%	26%	4%	1%	4%	1%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	15.4		24.9	24.9		24.9
Effective Green, g (s)	15.4		24.9	24.9		24.9
Actuated g/C Ratio	0.29		0.48	0.48		0.48
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	489		1634	752		1259
v/s Ratio Prot	c0.13		0.21			
v/s Ratio Perm				0.05		c0.48
v/c Ratio	0.45		0.43	0.11		1.02
Uniform Delay, d1	15.0		9.0	7.6		13.7
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.7		0.8	0.3		29.4
Delay (s)	15.6		9.9	7.9		43.1
Level of Service	B		A	A		D
Approach Delay (s)	15.6		9.5			43.1
Approach LOS	B		A			D

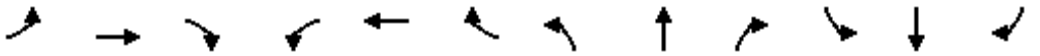
Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	216	22	728	206	34	1064
Future Volume (vph)	216	22	728	206	34	1064
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	0.97			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1750	1452	3373			3376
Flt Permitted	0.95	1.00	1.00			0.90
Satd. Flow (perm)	1750	1452	3373			3041
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	223	23	751	212	35	1097
RTOR Reduction (vph)	0	18	36	0	0	0
Lane Group Flow (vph)	223	5	927	0	0	1132
Heavy Vehicles (%)	2%	10%	3%	0%	3%	2%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	11.7	11.7	25.8			25.8
Effective Green, g (s)	11.7	11.7	25.8			25.8
Actuated g/C Ratio	0.24	0.24	0.52			0.52
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	413	343	1758			1585
v/s Ratio Prot	c0.13		0.27			
v/s Ratio Perm		0.00				c0.37
v/c Ratio	0.54	0.02	0.53			0.71
Uniform Delay, d1	16.5	14.5	7.8			9.0
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.7	0.0	1.1			2.8
Delay (s)	17.2	14.5	9.0			11.8
Level of Service	B	B	A			B
Approach Delay (s)	17.0		9.0			11.8
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	49.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

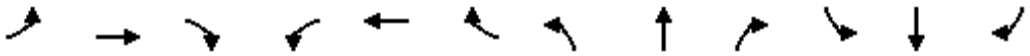


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	14	4	216	26	173	6	740	197	252	1036	22
Future Volume (vph)	33	14	4	216	26	173	6	740	197	252	1036	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1812			1789	1545	1685	1798	1455	1604	1767	
Flt Permitted		0.67			0.71	1.00	0.11	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1253			1331	1545	195	1798	1455	229	1767	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	34	14	4	223	27	178	6	763	203	260	1068	23
RTOR Reduction (vph)	0	3	0	0	0	97	0	0	86	0	1	0
Lane Group Flow (vph)	0	49	0	0	250	81	6	763	117	260	1090	0
Confl. Peds. (#/hr)	4		4	4		4	1		4	4		1
Heavy Vehicles (%)	7%	8%	0%	1%	0%	5%	0%	1%	2%	5%	1%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		20.0			20.0	20.0	45.1	45.1	45.1	59.1	59.1	
Effective Green, g (s)		20.0			20.0	20.0	45.1	45.1	45.1	59.1	59.1	
Actuated g/C Ratio		0.22			0.22	0.22	0.51	0.51	0.51	0.66	0.66	
Clearance Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0			5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		281			298	346	98	910	736	306	1172	
v/s Ratio Prot								0.42		0.10	c0.62	
v/s Ratio Perm		0.04			c0.19	0.05	0.03		0.08	0.47		
v/c Ratio		0.17			0.84	0.23	0.06	0.84	0.16	0.85	0.93	
Uniform Delay, d1		27.9			33.0	28.3	11.2	18.9	11.8	17.6	13.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.6			20.1	0.7	1.2	9.1	0.5	19.3	14.1	
Delay (s)		28.5			53.1	29.0	12.4	28.0	12.3	36.9	27.3	
Level of Service		C			D	C	B	C	B	D	C	
Approach Delay (s)		28.5			43.1			24.6			29.1	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	89.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	111.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	91	106	789	123	137	1048
Future Volume (vph)	91	106	789	123	137	1048
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	2.8	2.8	3.8	3.8	3.7	3.7
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.97	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1645	1433	1881		1820	1902
Flt Permitted	0.95	1.00	1.00		0.22	1.00
Satd. Flow (perm)	1645	1433	1881		430	1902
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	97	113	839	131	146	1115
RTOR Reduction (vph)	0	100	5	0	0	0
Lane Group Flow (vph)	97	13	965	0	146	1115
Confl. Peds. (#/hr)		3		9	9	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.4	8.4	57.3		57.3	57.3
Effective Green, g (s)	8.4	8.4	57.3		57.3	57.3
Actuated g/C Ratio	0.11	0.11	0.77		0.77	0.77
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	184	161	1442		329	1458
v/s Ratio Prot	c0.06		0.51			c0.59
v/s Ratio Perm		0.01			0.34	
v/c Ratio	0.53	0.08	0.67		0.44	0.76
Uniform Delay, d1	31.3	29.7	4.2		3.1	4.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.7	0.2	2.5		4.3	3.9
Delay (s)	34.0	29.9	6.6		7.4	8.8
Level of Service	C	C	A		A	A
Approach Delay (s)	31.8		6.6			8.6
Approach LOS	C		A			A

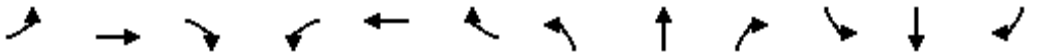
Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	0	22	28	0	37	9	800	53	31	1054	23
Future Volume (Veh/h)	14	0	22	28	0	37	9	800	53	31	1054	23
Sign Control		Stop			Stop			Free			Free	
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)	15	0	23	29	0	39	9	842	56	33	1109	24
Pedestrians					2							
Lane Width (m)					3.0							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								237			199	
pX, platoon unblocked	0.47	0.47	0.28	0.47	0.47	0.63	0.28			0.63		
vC, conflicting volume	2086	2105	1121	2088	2089	872	1133			900		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	970	1010	151	974	976	503	193			547		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	100	91	69	100	89	98			95		
cM capacity (veh/h)	92	104	253	93	109	360	391			649		

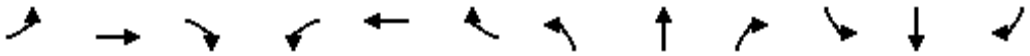
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	38	68	9	898	33	1133
Volume Left	15	29	9	0	33	0
Volume Right	23	39	0	56	0	24
cSH	150	162	391	1700	649	1700
Volume to Capacity	0.25	0.42	0.02	0.53	0.05	0.67
Queue Length 95th (m)	7.3	14.2	0.5	0.0	1.2	0.0
Control Delay (s)	37.1	42.5	14.4	0.0	10.8	0.0
Lane LOS	E	E	B		B	
Approach Delay (s)	37.1	42.5	0.1		0.3	
Approach LOS	E	E				

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	68.7%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	52	27	61	62	76	13	736	57	71	900	80
Future Volume (vph)	91	52	27	61	62	76	13	736	57	71	900	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.98		1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1694	1900	1496		1742		1616	1923	1561	1765	1965	1555
Flt Permitted	0.46	1.00	1.00		0.88		0.07	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	812	1900	1496		1560		125	1923	1561	223	1965	1555
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	57	29	66	67	83	14	800	62	77	978	87
RTOR Reduction (vph)	0	0	20	0	21	0	0	0	30	0	0	39
Lane Group Flow (vph)	99	57	9	0	195	0	14	800	32	77	978	48
Confl. Peds. (#/hr)	13		5	5		13	3		16	16		3
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	8%	1%	0%	0%	1%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	31.4	31.4	31.4		22.0		56.9	54.5	54.5	65.0	58.6	58.6
Effective Green, g (s)	31.4	31.4	31.4		22.0		56.9	54.5	54.5	65.0	58.6	58.6
Actuated g/C Ratio	0.30	0.30	0.30		0.21		0.54	0.52	0.52	0.61	0.55	0.55
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	286	564	444		324		101	991	804	236	1089	862
v/s Ratio Prot	c0.02	0.03					0.00	0.42		c0.02	c0.50	
v/s Ratio Perm	0.09		0.01		c0.13		0.07		0.02	0.18		0.03
v/c Ratio	0.35	0.10	0.02		0.60		0.14	0.81	0.04	0.33	0.90	0.06
Uniform Delay, d1	28.8	26.9	26.3		37.9		22.6	21.2	12.7	16.3	20.9	10.8
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.1	0.0		3.6		0.9	7.0	0.1	1.1	11.6	0.1
Delay (s)	29.8	27.0	26.3		41.5		23.4	28.3	12.8	17.4	32.5	11.0
Level of Service	C	C	C		D		C	C	B	B	C	B
Approach Delay (s)		28.4			41.5			27.1			29.9	
Approach LOS		C			D			C			C	

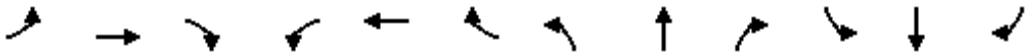
Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	105.7	Sum of lost time (s)	17.3
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	0	7	0	799	10	10	975	0
Future Volume (Veh/h)	0	0	0	2	0	7	0	799	10	10	975	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	2	0	8	0	868	11	11	1060	0
Pedestrians		4			9			2			6	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.70	0.70	0.50	0.70	0.70	0.61	0.50			0.61		
vC, conflicting volume	1968	1974	1066	1966	1968	888	1064			888		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	914	923	640	912	915	497	636			496		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	100	98	100			98		
cM capacity (veh/h)	171	186	241	175	188	347	483			653		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	10	0	879	11	1060
Volume Left	2	0	0	11	0
Volume Right	8	0	11	0	0
cSH	290	1700	1700	653	1700
Volume to Capacity	0.03	0.00	0.52	0.02	0.62
Queue Length 95th (m)	0.8	0.0	0.0	0.4	0.0
Control Delay (s)	17.9	0.0	0.0	10.6	0.0
Lane LOS	C			B	
Approach Delay (s)	17.9	0.0		0.1	
Approach LOS	C				

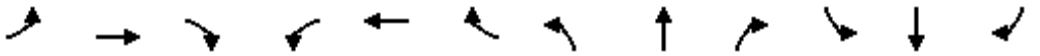
Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	63.1%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2	12	4	0	10	0	784	5	8	963	0
Future Volume (Veh/h)	7	2	12	4	0	10	0	784	5	8	963	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	8	2	13	4	0	11	0	843	5	9	1035	0
Pedestrians		5			10						2	
Lane Width (m)		3.7			3.5						4.2	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.68	0.68	0.48	0.68	0.68	0.61	0.48			0.61		
vC, conflicting volume	1916	1916	1040	1922	1914	858	1040			858		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	808	807	539	817	803	442	539			443		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	99	95	98	100	97	100			99		
cM capacity (veh/h)	192	209	260	184	210	372	495			679		

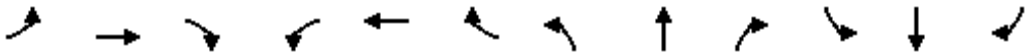
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	23	4	11	848	9	1035
Volume Left	8	4	0	0	9	0
Volume Right	13	0	11	5	0	0
cSH	227	184	372	1700	679	1700
Volume to Capacity	0.10	0.02	0.03	0.50	0.01	0.61
Queue Length 95th (m)	2.5	0.5	0.7	0.0	0.3	0.0
Control Delay (s)	22.6	25.0	15.0	0.0	10.4	0.0
Lane LOS	C	D	B		B	
Approach Delay (s)	22.6	17.6		0.0	0.1	
Approach LOS	C	C				

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	64.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	6	151	8	134	4	653	110	194	787	8
Future Volume (vph)	19	34	6	151	8	134	4	653	110	194	787	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0		6.5	6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.94		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1833			1948		1900	1844		1945	1961	
Flt Permitted		0.85			0.81		0.26	1.00		0.12	1.00	
Satd. Flow (perm)		1575			1609		528	1844		242	1961	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	36	6	161	9	143	4	695	117	206	837	9
RTOR Reduction (vph)	0	5	0	0	35	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	57	0	0	278	0	4	806	0	206	846	0
Confl. Peds. (#/hr)	2					2	6		11	11		6
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%	0%	1%	3%	0%	1%	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		
Actuated Green, G (s)		19.3			19.3		43.3	43.3		55.1	55.1	
Effective Green, g (s)		19.3			19.3		43.3	43.3		55.6	55.1	
Actuated g/C Ratio		0.22			0.22		0.50	0.50		0.64	0.64	
Clearance Time (s)		6.0			6.0		6.5	6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Grp Cap (vph)		351			359		264	924		329	1250	
v/s Ratio Prot								c0.44		0.06	c0.43	
v/s Ratio Perm		0.04			c0.17		0.01			0.34		
v/c Ratio		0.16			0.77		0.02	0.87		0.63	0.68	
Uniform Delay, d1		27.0			31.5		10.8	19.1		14.1	10.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			10.6		0.1	11.1		3.7	3.0	
Delay (s)		27.3			42.1		10.9	30.2		17.8	12.9	
Level of Service		C			D		B	C		B	B	
Approach Delay (s)		27.3			42.1			30.1			13.9	
Approach LOS		C			D			C			B	

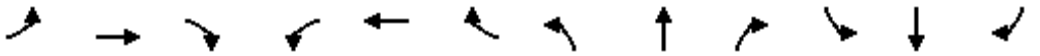
Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	86.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1	20	6	1	2	19	705	5	6	858	70
Future Volume (Veh/h)	37	1	20	6	1	2	19	705	5	6	858	70
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	1	22	7	1	2	21	766	5	7	933	76
Pedestrians		6			11			1				
Lane Width (m)		3.9			3.9			4.0				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.80	0.80	0.69	0.80	0.80	0.77	0.69			0.77		
vC, conflicting volume	1802	1815	978	1792	1850	780	1015			782		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1220	1237	740	1208	1281	559	794			563		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	64	99	92	94	99	100	96			99		
cM capacity (veh/h)	113	134	286	112	126	403	571			772		

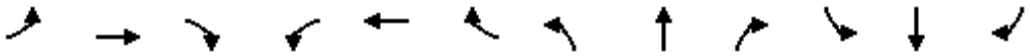
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	63	10	21	771	7	1009
Volume Left	40	7	21	0	7	0
Volume Right	22	2	0	5	0	76
cSH	143	133	571	1700	772	1700
Volume to Capacity	0.44	0.08	0.04	0.45	0.01	0.59
Queue Length 95th (m)	14.9	1.8	0.9	0.0	0.2	0.0
Control Delay (s)	48.4	34.3	11.5	0.0	9.7	0.0
Lane LOS	E	D	B		A	
Approach Delay (s)	48.4	34.3	0.3		0.1	
Approach LOS	E	D				

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	60.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	67	46	87	41	130	33	468	97	222	490	126
Future Volume (vph)	123	67	46	87	41	130	33	468	97	222	490	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			0.98		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94			0.93		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1728	1806			1819		1649	1823		1750	1798	
Flt Permitted	0.49	1.00			0.84		0.36	1.00		0.27	1.00	
Satd. Flow (perm)	890	1806			1557		631	1823		493	1798	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	127	69	47	90	42	134	34	482	100	229	505	130
RTOR Reduction (vph)	0	31	0	0	47	0	0	7	0	0	7	0
Lane Group Flow (vph)	127	85	0	0	219	0	34	575	0	229	628	0
Confl. Peds. (#/hr)	14		4	4		14	2		15	15		2
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	7%	1%	0%	3%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.6	16.6			16.6		39.3	35.6		48.7	43.0	
Effective Green, g (s)	16.6	16.6			16.6		41.3	35.6		49.7	43.0	
Actuated g/C Ratio	0.22	0.22			0.22		0.55	0.47		0.66	0.57	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	196	398			343		409	861		527	1026	
v/s Ratio Prot		0.05					0.01	c0.32		c0.07	0.35	
v/s Ratio Perm	c0.14				0.14		0.04			0.22		
v/c Ratio	0.65	0.21			0.64		0.08	0.67		0.43	0.61	
Uniform Delay, d1	26.7	24.0			26.6		8.0	15.3		7.1	10.7	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.8	0.5			4.8		0.1	4.1		0.6	2.7	
Delay (s)	35.5	24.5			31.5		8.1	19.4		7.6	13.4	
Level of Service	D	C			C		A	B		A	B	
Approach Delay (s)		30.2			31.5			18.8			11.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	11.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	40	0	0	0	17	241	0	0	309	3
Future Volume (Veh/h)	9	0	40	0	0	0	17	241	0	0	309	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	0	43	0	0	0	18	259	0	0	332	3
Pedestrians					2							
Lane Width (m)					4.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	628	630	334	674	632	261	335			261		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	628	630	334	674	632	261	335			261		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	94	100	100	100	99			100		
cM capacity (veh/h)	393	394	713	344	393	781	1236			1312		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	53	0	18	259	335
Volume Left	10	0	18	0	0
Volume Right	43	0	0	0	3
cSH	618	1700	1236	1700	1312
Volume to Capacity	0.09	0.00	0.01	0.15	0.00
Queue Length 95th (m)	2.1	0.0	0.3	0.0	0.0
Control Delay (s)	11.4	0.0	8.0	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	11.4	0.0	0.5		0.0
Approach LOS	B	A			

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	26.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	41	6	15	43	6	23
Future Volume (vph)	41	6	15	43	6	23
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	52	8	19	54	8	29

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	60	73	37
Volume Left (vph)	52	0	8
Volume Right (vph)	8	54	0
Hadj (s)	0.09	-0.44	0.04
Departure Headway (s)	4.2	3.6	4.1
Degree Utilization, x	0.07	0.07	0.04
Capacity (veh/h)	829	963	850
Control Delay (s)	7.5	6.9	7.3
Approach Delay (s)	7.5	6.9	7.3
Approach LOS	A	A	A

Intersection Summary			
Delay	7.2		
Level of Service	A		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	65	35	50	52	35	57
Future Volume (vph)	65	35	50	52	35	57
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	77	42	60	62	42	68

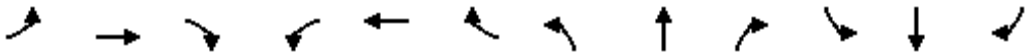
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	119	122	110
Volume Left (vph)	77	0	42
Volume Right (vph)	42	62	0
Hadj (s)	-0.06	-0.30	0.08
Departure Headway (s)	4.3	4.0	4.4
Degree Utilization, x	0.14	0.14	0.13
Capacity (veh/h)	788	866	796
Control Delay (s)	8.1	7.6	8.1
Approach Delay (s)	8.1	7.6	8.1
Approach LOS	A	A	A

Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	42	50	26	29	58	52
Future Volume (Veh/h)	42	50	26	29	58	52
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	45	54	28	31	62	56
Pedestrians	13		2			1
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	238	58			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	238	58			72	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	94	95			96	
cM capacity (veh/h)	712	982			1519	

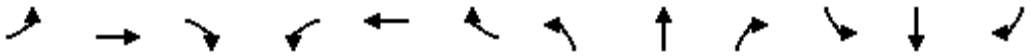
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	99	59	118
Volume Left	45	0	62
Volume Right	54	31	0
cSH	837	1700	1519
Volume to Capacity	0.12	0.03	0.04
Queue Length 95th (m)	3.0	0.0	1.0
Control Delay (s)	9.9	0.0	4.1
Lane LOS	A		A
Approach Delay (s)	9.9	0.0	4.1
Approach LOS	A		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	195	42	16	165	22	12	87	28	29	85	42
Future Volume (vph)	49	195	42	16	165	22	12	87	28	29	85	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.96	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1768			1777			1926			1773	
Flt Permitted		0.91			0.96			0.97			0.93	
Satd. Flow (perm)		1628			1718			1870			1661	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	203	44	17	172	23	12	91	29	30	89	44
RTOR Reduction (vph)	0	9	0	0	6	0	0	12	0	0	16	0
Lane Group Flow (vph)	0	289	0	0	206	0	0	121	0	0	147	0
Confl. Peds. (#/hr)	2		1	1		2	1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			35.0			26.0			26.0	
Effective Green, g (s)		35.0			35.0			26.0			26.0	
Actuated g/C Ratio		0.47			0.47			0.35			0.35	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		759			801			648			575	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.12			0.06			c0.09	
v/c Ratio		0.38			0.26			0.19			0.26	
Uniform Delay, d1		13.0			12.1			17.1			17.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.1			0.6			1.1	
Delay (s)		13.1			12.2			17.7			18.6	
Level of Service		B			B			B			B	
Approach Delay (s)		13.1			12.2			17.7			18.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

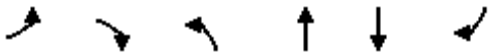


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	114	135	167	150	26	69	160	110	17	216	20
Future Volume (vph)	12	114	135	167	150	26	69	160	110	17	216	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.99			0.96			0.99	
Flt Protected		1.00			0.98			0.99			1.00	
Satd. Flow (prot)		1709			1820			1741			1807	
Flt Permitted		0.98			0.72			0.88			0.97	
Satd. Flow (perm)		1672			1343			1553			1750	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	13	125	148	184	165	29	76	176	121	19	237	22
RTOR Reduction (vph)	0	92	0	0	7	0	0	37	0	0	6	0
Lane Group Flow (vph)	0	194	0	0	371	0	0	336	0	0	272	0
Confl. Peds. (#/hr)	1		2	2		1	2		1	1		2
Heavy Vehicles (%)	0%	2%	0%	0%	0%	8%	0%	3%	0%	17%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.1			15.1			18.1			18.1	
Effective Green, g (s)		15.1			15.1			18.1			18.1	
Actuated g/C Ratio		0.36			0.36			0.43			0.43	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		598			480			666			750	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.28			c0.22			0.16	
v/c Ratio		0.32			0.77			0.51			0.36	
Uniform Delay, d1		9.8			12.0			8.8			8.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.3			7.6			2.7			1.4	
Delay (s)		10.2			19.6			11.5			9.5	
Level of Service		B			B			B			A	
Approach Delay (s)		10.2			19.6			11.5			9.5	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	42.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	196	0	63	0	570	154	70	1013	0
Future Volume (vph)	0	0	0	196	0	63	0	570	154	70	1013	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1671		1425		3544	1725	1752	3693	
Flt Permitted				0.76		1.00		1.00	1.00	0.38	1.00	
Satd. Flow (perm)				1332		1425		3544	1725	708	3693	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	215	0	69	0	626	169	77	1113	0
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	103	0	0	0
Lane Group Flow (vph)	0	0	0	215	0	27	0	626	66	77	1113	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	2%	0%	3%	4%	3%	1%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				523		559		1392	677	278	1450	
v/s Ratio Prot								0.18			c0.30	
v/s Ratio Perm				c0.16		0.02			0.04	0.11		
v/c Ratio				0.41		0.05		0.45	0.10	0.28	0.77	
Uniform Delay, d1				12.3		10.5		12.5	10.7	11.6	14.8	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				2.4		0.2		1.1	0.3	2.5	4.0	
Delay (s)				14.7		10.7		13.6	11.0	14.0	18.7	
Level of Service				B		B		B	B	B	B	
Approach Delay (s)		0.0			13.7			13.0			18.4	
Approach LOS		A			B			B			B	

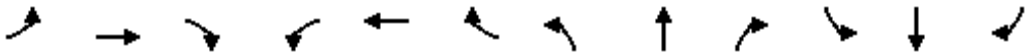
Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	14	18	182	228	68
Future Volume (Veh/h)	32	14	18	182	228	68
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	34	15	19	196	245	73
Pedestrians	1					
Lane Width (m)	3.8					
Walking Speed (m/s)	1.1					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	516	282	319			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	516	282	319			
tC, single (s)	6.4	6.2	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	93	98	98			
cM capacity (veh/h)	514	760	1218			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	49	215	318
Volume Left	34	19	0
Volume Right	15	0	73
cSH	570	1218	1700
Volume to Capacity	0.09	0.02	0.19
Queue Length 95th (m)	2.1	0.4	0.0
Control Delay (s)	11.9	0.8	0.0
Lane LOS	B	A	
Approach Delay (s)	11.9	0.8	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	191	16	10	309	24	6	76	8	26	148	40
Future Volume (vph)	17	191	16	10	309	24	6	76	8	26	148	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.99			0.97	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1791			1824			1681			1763	
Flt Permitted		0.95			0.99			0.98			0.95	
Satd. Flow (perm)		1706			1803			1644			1693	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	21	236	20	12	381	30	7	94	10	32	183	49
RTOR Reduction (vph)	0	6	0	0	6	0	0	6	0	0	17	0
Lane Group Flow (vph)	0	271	0	0	417	0	0	105	0	0	247	0
Heavy Vehicles (%)	12%	3%	0%	0%	2%	17%	0%	12%	13%	12%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		639			676			616			634	
v/s Ratio Prot												
v/s Ratio Perm		0.16			c0.23			0.06			c0.15	
v/c Ratio		0.42			0.62			0.17			0.39	
Uniform Delay, d1		11.2			12.2			10.0			11.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.1			4.2			0.6			1.8	
Delay (s)		13.2			16.4			10.6			12.8	
Level of Service		B			B			B			B	
Approach Delay (s)		13.2			16.4			10.6			12.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	342	106	160	430	94	93
Future Volume (Veh/h)	342	106	160	430	94	93
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)	360	112	168	453	99	98
Pedestrians					1	
Lane Width (m)					3.3	
Walking Speed (m/s)					1.1	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			473		1206	417
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			473		1206	417
tC, single (s)			4.1		6.5	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			85		41	85
cM capacity (veh/h)			1099		168	640

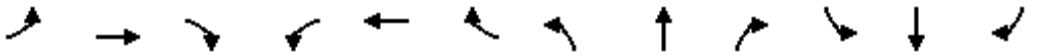
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	472	621	197
Volume Left	0	168	99
Volume Right	112	0	98
cSH	1700	1099	266
Volume to Capacity	0.28	0.15	0.74
Queue Length 95th (m)	0.0	4.1	40.3
Control Delay (s)	0.0	3.7	49.2
Lane LOS		A	E
Approach Delay (s)	0.0	3.7	49.2
Approach LOS			E

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	0	0	79	0	0	120
Future Volume (vph)	0	0	79	0	0	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	82	0	0	125

Direction, Lane #	NB 1	SB 1
Volume Total (vph)	82	125
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.00	0.02
Departure Headway (s)	4.0	4.0
Degree Utilization, x	0.09	0.14
Capacity (veh/h)	880	894
Control Delay (s)	7.4	7.6
Approach Delay (s)	7.4	7.6
Approach LOS	A	A

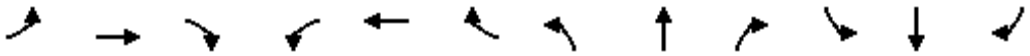
Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	41	1	19	65	7	0	67	5	14	91	1
Future Volume (Veh/h)	10	41	1	19	65	7	0	67	5	14	91	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	11	46	1	21	73	8	0	75	6	16	102	1
Pedestrians		6			9						1	
Lane Width (m)		3.1			3.5						4.0	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	264	230	108	245	227	88	108			90		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	264	230	108	245	227	88	108			90		
tC, single (s)	7.1	6.6	6.2	7.1	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	98	93	100	97	89	99	100			99		
cM capacity (veh/h)	613	641	947	656	646	967	1488			1505		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	58	102	81	118	1
Volume Left	11	21	0	16	0
Volume Right	1	8	6	0	1
cSH	639	666	1488	1505	1700
Volume to Capacity	0.09	0.15	0.00	0.01	0.00
Queue Length 95th (m)	2.3	4.1	0.0	0.2	0.0
Control Delay (s)	11.2	11.4	0.0	1.1	0.0
Lane LOS	B	B		A	
Approach Delay (s)	11.2	11.4	0.0	1.1	
Approach LOS	B	B			

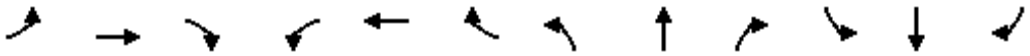
Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	26.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	24	115	13	52	101	12	5	86	50	36	93	16
Future Volume (vph)	24	115	13	52	101	12	5	86	50	36	93	16
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	28	132	15	60	116	14	6	99	57	41	107	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	175	190	162	166
Volume Left (vph)	28	60	6	41
Volume Right (vph)	15	14	57	18
Hadj (s)	-0.02	0.02	-0.17	0.02
Departure Headway (s)	5.0	5.0	4.9	5.1
Degree Utilization, x	0.24	0.26	0.22	0.23
Capacity (veh/h)	662	664	672	649
Control Delay (s)	9.6	9.8	9.3	9.6
Approach Delay (s)	9.6	9.8	9.3	9.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	42.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	397	55	57	451	8	39	8	52	4	6	5
Future Volume (Veh/h)	6	397	55	57	451	8	39	8	52	4	6	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	427	59	61	485	9	42	9	56	4	6	5
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	494			486			1088	1084	456	1140	1110	490
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	494			486			1088	1084	456	1140	1110	490
tC, single (s)	4.1			4.1			7.1	6.6	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.1	3.3	3.5	4.0	3.3
p0 queue free %	99			94			76	95	91	97	97	99
cM capacity (veh/h)	1080			1077			177	194	608	150	198	583

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	492	555	107	15
Volume Left	6	61	42	4
Volume Right	59	9	56	5
cSH	1080	1077	285	229
Volume to Capacity	0.01	0.06	0.38	0.07
Queue Length 95th (m)	0.1	1.4	12.8	1.6
Control Delay (s)	0.2	1.5	25.1	21.8
Lane LOS	A	A	D	C
Approach Delay (s)	0.2	1.5	25.1	21.8
Approach LOS			D	C

Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	71.0%	ICU Level of Service	C	
Analysis Period (min)	15			

APPENDIX G

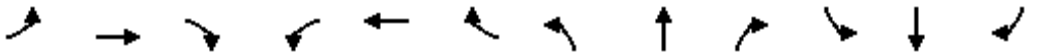
Detailed Synchro Reports for Horizon Year 3 - 2040

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	111	156	1187	194	22	504
Future Volume (vph)	111	156	1187	194	22	504
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	0.98		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.92		1.00	0.85		1.00
Flt Protected	0.98		1.00	1.00		1.00
Satd. Flow (prot)	1591		3500	1396		3248
Flt Permitted	0.98		1.00	1.00		0.85
Satd. Flow (perm)	1591		3500	1396		2766
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	119	168	1276	209	24	542
RTOR Reduction (vph)	9	0	0	60	0	0
Lane Group Flow (vph)	278	0	1276	149	0	566
Confl. Peds. (#/hr)				1	1	
Heavy Vehicles (%)	6%	9%	2%	12%	12%	7%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	16.2		23.7	23.7		23.7
Effective Green, g (s)	16.2		23.7	23.7		23.7
Actuated g/C Ratio	0.31		0.46	0.46		0.46
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	496		1598	637		1263
v/s Ratio Prot	c0.17		c0.36			
v/s Ratio Perm				0.11		0.20
v/c Ratio	0.56		0.80	0.23		0.45
Uniform Delay, d1	14.9		12.1	8.6		9.6
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	1.5		4.3	0.9		1.2
Delay (s)	16.3		16.3	9.4		10.8
Level of Service	B		B	A		B
Approach Delay (s)	16.3		15.4			10.8
Approach LOS	B		B			B

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	51.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	186	23	1119	181	10	584
Future Volume (vph)	186	23	1119	181	10	584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.98			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1668	1597	3327			3225
Flt Permitted	0.95	1.00	1.00			0.92
Satd. Flow (perm)	1668	1597	3327			2973
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	198	24	1190	193	11	621
RTOR Reduction (vph)	0	13	18	0	0	0
Lane Group Flow (vph)	198	11	1365	0	0	632
Confl. Peds. (#/hr)				2	2	
Heavy Vehicles (%)	7%	0%	5%	3%	0%	7%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	11.7	11.7	26.3			26.3
Effective Green, g (s)	11.7	11.7	26.3			26.3
Actuated g/C Ratio	0.23	0.23	0.53			0.53
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	390	373	1750			1563
v/s Ratio Prot	c0.12		c0.41			
v/s Ratio Perm		0.01				0.21
v/c Ratio	0.51	0.03	0.78			0.40
Uniform Delay, d1	16.6	14.8	9.5			7.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.4	0.0	3.5			0.8
Delay (s)	17.0	14.8	13.0			7.9
Level of Service	B	B	B			A
Approach Delay (s)	16.8		13.0			7.9
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

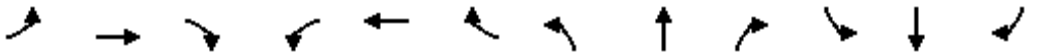


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	15	2	121	10	383	3	895	141	151	588	14
Future Volume (vph)	27	15	2	121	10	383	3	895	141	151	588	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1817		1675	1357	1520	1685	1729	1409	1428	1702	
Flt Permitted		0.85		0.73	1.00	1.00	0.41	1.00	1.00	0.07	1.00	
Satd. Flow (perm)		1586		1278	1357	1520	728	1729	1409	98	1702	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	17	2	134	11	426	3	994	157	168	653	16
RTOR Reduction (vph)	0	2	0	0	0	184	0	0	46	0	1	0
Lane Group Flow (vph)	0	47	0	134	11	242	3	994	111	168	668	0
Confl. Peds. (#/hr)	2		3	3		2			5	5		
Heavy Vehicles (%)	8%	7%	0%	7%	40%	7%	0%	5%	5%	18%	5%	8%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		19.6		19.6	19.6	19.6	57.4	57.4	57.4	70.4	70.4	
Effective Green, g (s)		19.6		19.6	19.6	19.6	57.4	57.4	57.4	70.4	70.4	
Actuated g/C Ratio		0.20		0.20	0.20	0.20	0.57	0.57	0.57	0.70	0.70	
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		310		250	265	297	417	992	808	188	1198	
v/s Ratio Prot					0.01			c0.57		c0.08	0.39	
v/s Ratio Perm		0.03		0.10		c0.16	0.00		0.08	0.55		
v/c Ratio		0.15		0.54	0.04	0.81	0.01	1.00	0.14	0.89	0.56	
Uniform Delay, d1		33.3		36.1	32.6	38.5	9.1	21.3	9.9	31.1	7.2	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5		4.0	0.1	17.4	0.0	29.1	0.4	37.3	1.9	
Delay (s)		33.8		40.1	32.7	55.9	9.1	50.4	10.2	68.3	9.1	
Level of Service		C		D	C	E	A	D	B	E	A	
Approach Delay (s)		33.8			51.7			44.8			21.0	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

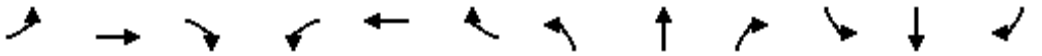
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	80	139	906	75	57	638
Future Volume (vph)	80	139	906	75	57	638
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	2.8	2.8	3.8	3.8	3.7	3.7
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1645	1280	1841		1824	1830
Flt Permitted	0.95	1.00	1.00		0.16	1.00
Satd. Flow (perm)	1645	1280	1841		299	1830
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	146	954	79	60	672
RTOR Reduction (vph)	0	93	3	0	0	0
Lane Group Flow (vph)	84	53	1030	0	60	672
Confl. Peds. (#/hr)				3	3	
Heavy Vehicles (%)	0%	15%	4%	7%	0%	5%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	7.2	7.2	37.1		37.1	37.1
Effective Green, g (s)	7.2	7.2	37.1		37.1	37.1
Actuated g/C Ratio	0.14	0.14	0.70		0.70	0.70
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	222	172	1281		208	1273
v/s Ratio Prot	c0.05		c0.56			0.37
v/s Ratio Perm		0.04			0.20	
v/c Ratio	0.38	0.31	0.80		0.29	0.53
Uniform Delay, d1	21.0	20.8	5.6		3.1	3.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	1.0	5.4		3.5	1.6
Delay (s)	22.1	21.8	11.0		6.6	5.5
Level of Service	C	C	B		A	A
Approach Delay (s)	21.9		11.0			5.6
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	53.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



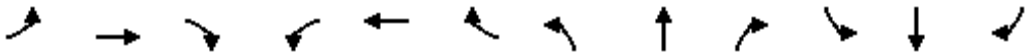
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	0	4	35	0	55	2	913	23	19	684	4
Future Volume (vph)	6	0	4	35	0	55	2	913	23	19	684	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.1	4.1	4.1	3.0	3.0	3.0	4.3	3.9	3.9	4.3	3.7	3.7
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1842			1596		1945	1855		1945	1826	
Flt Permitted		0.86			0.87		0.32	1.00		0.17	1.00	
Satd. Flow (perm)		1623			1412		650	1855		343	1826	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	6	0	4	38	0	59	2	982	25	20	735	4
RTOR Reduction (vph)	0	9	0	0	35	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	62	0	2	1006	0	20	739	0
Confl. Peds. (#/hr)							1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	20%	0%	5%	25%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		5.2			5.2		30.8	30.8		30.8	30.8	
Effective Green, g (s)		5.2			5.2		30.8	30.8		30.8	30.8	
Actuated g/C Ratio		0.12			0.12		0.68	0.68		0.68	0.68	
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		187			163		444	1269		234	1249	
v/s Ratio Prot								c0.54			0.40	
v/s Ratio Perm		0.00			c0.04		0.00			0.06		
v/c Ratio		0.01			0.38		0.00	0.79		0.09	0.59	
Uniform Delay, d1		17.6			18.4		2.2	4.9		2.4	3.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			1.5		0.0	5.1		0.7	2.1	
Delay (s)		17.6			19.9		2.3	10.0		3.1	5.8	
Level of Service		B			B		A	B		A	A	
Approach Delay (s)		17.6			19.9			10.0			5.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	25	3	43	52	70	14	773	25	40	599	65
Future Volume (vph)	35	25	3	43	52	70	14	773	25	40	599	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1607	1638	1489		1707		1745	1868	1610	1697	1908	1502
Flt Permitted	0.53	1.00	1.00		0.92		0.20	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	901	1638	1489		1590		362	1868	1610	192	1908	1502
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	27	3	47	57	76	15	840	27	43	651	71
RTOR Reduction (vph)	0	0	2	0	31	0	0	0	16	0	0	38
Lane Group Flow (vph)	38	27	1	0	149	0	15	840	11	43	651	33
Confl. Peds. (#/hr)	1		9	9		1	1		3	3		1
Heavy Vehicles (%)	6%	16%	0%	5%	0%	5%	0%	4%	0%	4%	4%	4%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	29.1	29.1	29.1		21.2		35.3	34.1	34.1	41.8	37.2	37.2
Effective Green, g (s)	29.1	29.1	29.1		21.2		35.3	34.1	34.1	41.8	37.2	37.2
Actuated g/C Ratio	0.36	0.36	0.36		0.26		0.44	0.42	0.42	0.52	0.46	0.46
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	358	589	536		417		178	788	679	185	878	691
v/s Ratio Prot	c0.01	0.02					0.00	c0.45		c0.01	0.34	
v/s Ratio Perm	0.03		0.00		c0.09		0.04		0.01	0.11		0.02
v/c Ratio	0.11	0.05	0.00		0.36		0.08	1.07	0.02	0.23	0.74	0.05
Uniform Delay, d1	17.5	16.8	16.6		24.3		15.0	23.3	13.6	16.6	17.9	12.0
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.0		0.7		0.3	51.1	0.0	0.9	5.6	0.1
Delay (s)	17.7	16.9	16.6		25.0		15.2	74.5	13.6	17.5	23.5	12.2
Level of Service	B	B	B		C		B	E	B	B	C	B
Approach Delay (s)		17.3			25.0			71.6			22.1	
Approach LOS		B			C			E			C	

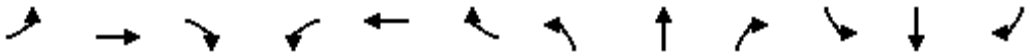
Intersection Summary			
HCM 2000 Control Delay	45.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	0	4	0	847	5	2	620	0
Future Volume (Veh/h)	0	0	0	2	0	4	0	847	5	2	620	0
Sign Control		Stop			Stop			Free			Free	
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)	0	0	0	2	0	4	0	892	5	2	653	0
Pedestrians		2			4			1			2	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.70	0.70	0.71	0.70	0.70	0.56	0.71			0.56		
vC, conflicting volume	1557	1560	656	1556	1558	900	655			901		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	666	670	317	665	667	432	316			433		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	99	100	99	100			100		
cM capacity (veh/h)	260	266	519	263	268	351	838			637		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	6	0	897	2	653
Volume Left	2	0	0	2	0
Volume Right	4	0	5	0	0
cSH	315	1700	1700	637	1700
Volume to Capacity	0.02	0.00	0.53	0.00	0.38
Queue Length 95th (m)	0.4	0.0	0.0	0.1	0.0
Control Delay (s)	16.6	0.0	0.0	10.7	0.0
Lane LOS	C			B	
Approach Delay (s)	16.6	0.0		0.0	
Approach LOS	C				

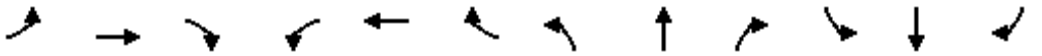
Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	55.5%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1	8	2	0	9	0	843	6	7	596	1
Future Volume (Veh/h)	7	1	8	2	0	9	0	843	6	7	596	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	7	1	9	2	0	10	0	897	6	7	634	1
Pedestrians		2			3							
Lane Width (m)		3.7			3.5							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.68	0.68	0.71	0.68	0.68	0.54	0.71			0.54		
vC, conflicting volume	1560	1556	636	1560	1554	903	637			906		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	639	633	289	639	629	387	289			393		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	98	99	100	97	100			99		
cM capacity (veh/h)	242	268	537	257	269	356	914			630		

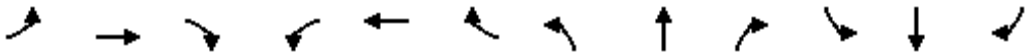
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	17	2	10	903	7	635
Volume Left	7	2	0	0	7	0
Volume Right	9	0	10	6	0	1
cSH	344	257	356	1700	630	1700
Volume to Capacity	0.05	0.01	0.03	0.53	0.01	0.37
Queue Length 95th (m)	1.2	0.2	0.7	0.0	0.3	0.0
Control Delay (s)	16.0	19.1	15.4	0.0	10.8	0.0
Lane LOS	C	C	C		B	
Approach Delay (s)	16.0	16.0		0.0	0.1	
Approach LOS	C	C				

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	61.4%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	1	139	14	140	0	714	110	164	428	4
Future Volume (vph)	4	5	1	139	14	140	0	714	110	164	428	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0			6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.94			0.98		1.00	1.00	
Flt Protected		0.98			0.98			1.00		0.95	1.00	
Satd. Flow (prot)		1685			1874			1825		1889	1888	
Flt Permitted		0.90			0.84			1.00		0.08	1.00	
Satd. Flow (perm)		1541			1619			1825		169	1888	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	4	5	1	148	15	149	0	760	117	174	455	4
RTOR Reduction (vph)	0	1	0	0	38	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	9	0	0	274	0	0	871	0	174	459	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	20%	0%	5%	0%	3%	0%	3%	2%	3%	5%	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		
Actuated Green, G (s)		19.0			19.0			43.6		55.1	55.1	
Effective Green, g (s)		19.0			19.0			43.6		55.6	55.1	
Actuated g/C Ratio		0.22			0.22			0.51		0.65	0.64	
Clearance Time (s)		6.0			6.0			6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0			4.0		3.0	4.0	
Lane Grp Cap (vph)		340			357			924		278	1208	
v/s Ratio Prot								c0.48		c0.06	0.24	
v/s Ratio Perm		0.01			c0.17					0.34		
v/c Ratio		0.03			0.77			0.94		0.63	0.38	
Uniform Delay, d1		26.3			31.5			20.1		16.5	7.4	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		0.0			10.1			18.6		4.4	0.9	
Delay (s)		26.3			41.5			38.7		20.9	8.3	
Level of Service		C			D			D		C	A	
Approach Delay (s)		26.3			41.5			38.7			11.7	
Approach LOS		C			D			D			B	

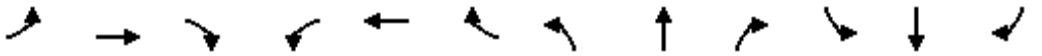
Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	3	13	1	0	3	12	773	2	0	534	26
Future Volume (Veh/h)	52	3	13	1	0	3	12	773	2	0	534	26
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	3	14	1	0	3	13	840	2	0	580	28
Pedestrians		4			3							
Lane Width (m)		3.9			3.9							
Walking Speed (m/s)		1.1			1.1							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.88	0.88	0.88	0.88	0.88	0.82	0.88			0.82		
vC, conflicting volume	1467	1469	598	1466	1482	844	612			845		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1154	1157	474	1153	1172	701	490			702		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	62	98	97	99	100	99	99			100		
cM capacity (veh/h)	150	171	521	146	167	362	949			740		

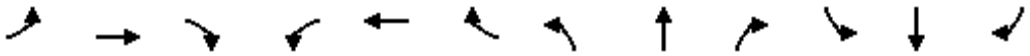
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	74	4	13	842	0	608
Volume Left	57	1	13	0	0	0
Volume Right	14	3	0	2	0	28
cSH	175	264	949	1700	1700	1700
Volume to Capacity	0.42	0.02	0.01	0.50	0.00	0.36
Queue Length 95th (m)	14.5	0.3	0.3	0.0	0.0	0.0
Control Delay (s)	40.0	18.8	8.8	0.0	0.0	0.0
Lane LOS	E	C	A			
Approach Delay (s)	40.0	18.8	0.1		0.0	
Approach LOS	E	C				

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	57.3%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	12	17	137	24	344	23	378	46	108	362	48
Future Volume (vph)	37	12	17	137	24	344	23	378	46	108	362	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00			0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91			0.91		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1661	1658			1760		1618	1800		1670	1763	
Flt Permitted	0.36	1.00			0.90		0.43	1.00		0.33	1.00	
Satd. Flow (perm)	623	1658			1601		733	1800		584	1763	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	13	18	149	26	374	25	411	50	117	393	52
RTOR Reduction (vph)	0	12	0	0	83	0	0	4	0	0	4	0
Lane Group Flow (vph)	40	19	0	0	466	0	25	457	0	117	441	0
Confl. Peds. (#/hr)	5					5	2		3	3		2
Heavy Vehicles (%)	6%	0%	12%	3%	9%	0%	9%	3%	8%	8%	5%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.1	28.1			28.1		39.1	35.4		45.1	39.4	
Effective Green, g (s)	28.1	28.1			28.1		41.1	35.4		46.1	39.4	
Actuated g/C Ratio	0.34	0.34			0.34		0.49	0.43		0.55	0.47	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	210	559			540		412	765		437	834	
v/s Ratio Prot		0.01					0.00	c0.25		c0.03	0.25	
v/s Ratio Perm	0.06				c0.29		0.03			0.12		
v/c Ratio	0.19	0.03			0.86		0.06	0.60		0.27	0.53	
Uniform Delay, d1	19.5	18.5			25.7		11.0	18.4		10.0	15.4	
Progression Factor	1.01	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.0			14.1		0.1	3.4		0.3	2.4	
Delay (s)	20.4	18.6			39.9		11.1	21.8		10.3	17.8	
Level of Service	C	B			D		B	C		B	B	
Approach Delay (s)		19.6			39.9			21.3			16.2	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	83.2	Sum of lost time (s)	11.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	0	0	0	14	237	0	0	252	4
Future Volume (Veh/h)	6	0	5	0	0	0	14	237	0	0	252	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	7	0	6	0	0	0	16	279	0	0	296	5
Pedestrians		1						1				
Lane Width (m)		4.1						3.9				
Walking Speed (m/s)		1.1						1.1				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	610	610	300	616	613	279	302			279		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	610	610	300	616	613	279	302			279		
tC, single (s)	7.3	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.7	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	99	100	100	100	99			100		
cM capacity (veh/h)	381	406	742	397	405	765	1269			1295		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	13	0	16	279	301
Volume Left	7	0	16	0	0
Volume Right	6	0	0	0	5
cSH	491	1700	1269	1700	1295
Volume to Capacity	0.03	0.00	0.01	0.16	0.00
Queue Length 95th (m)	0.6	0.0	0.3	0.0	0.0
Control Delay (s)	12.5	0.0	7.9	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	12.5	0.0	0.4		0.0
Approach LOS	B	A			

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	23.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	19	1	7	39	1	13
Future Volume (vph)	19	1	7	39	1	13
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	25	1	9	51	1	17

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	26	60	18
Volume Left (vph)	25	0	1
Volume Right (vph)	1	51	0
Hadj (s)	0.35	-0.47	0.01
Departure Headway (s)	4.4	3.5	4.0
Degree Utilization, x	0.03	0.06	0.02
Capacity (veh/h)	799	1013	882
Control Delay (s)	7.5	6.7	7.1
Approach Delay (s)	7.5	6.7	7.1
Approach LOS	A	A	A

Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	39	22	40	35	10	25
Future Volume (vph)	39	22	40	35	10	25
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	46	26	48	42	12	30

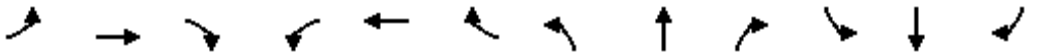
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	72	90	42
Volume Left (vph)	46	0	12
Volume Right (vph)	26	42	0
Hadj (s)	-0.03	-0.16	0.20
Departure Headway (s)	4.2	3.9	4.3
Degree Utilization, x	0.08	0.10	0.05
Capacity (veh/h)	837	884	807
Control Delay (s)	7.5	7.4	7.6
Approach Delay (s)	7.5	7.4	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	26	35	23	28	22
Future Volume (Veh/h)	22	26	35	23	28	22
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	27	32	43	28	34	27
Pedestrians	9		1			4
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	162	70			80	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162	70			80	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	97	97			98	
cM capacity (veh/h)	806	963			1515	

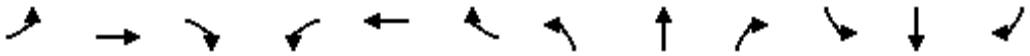
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	59	71	61
Volume Left	27	0	34
Volume Right	32	28	0
cSH	884	1700	1515
Volume to Capacity	0.07	0.04	0.02
Queue Length 95th (m)	1.6	0.0	0.5
Control Delay (s)	9.4	0.0	4.2
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	4.2
Approach LOS	A		

Intersection Summary			
Average Delay		4.2	
Intersection Capacity Utilization		20.6%	ICU Level of Service
Analysis Period (min)		15	



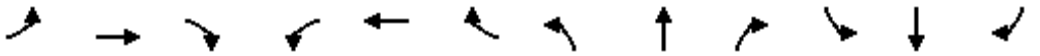
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	146	48	13	129	20	80	174	11	7	63	66
Future Volume (vph)	54	146	48	13	129	20	80	174	11	7	63	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1654			1653			1871			1589	
Flt Permitted		0.89			0.96			0.85			0.97	
Satd. Flow (perm)		1486			1600			1622			1550	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	67	180	59	16	159	25	99	215	14	9	78	81
RTOR Reduction (vph)	0	12	0	0	7	0	0	2	0	0	47	0
Lane Group Flow (vph)	0	294	0	0	193	0	0	326	0	0	121	0
Confl. Peds. (#/hr)	12		2	2		12	12		6	6		12
Heavy Vehicles (%)	8%	10%	5%	8%	8%	0%	8%	3%	0%	25%	10%	7%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			35.0			22.0			22.0	
Effective Green, g (s)		35.0			35.0			22.0			22.0	
Actuated g/C Ratio		0.49			0.49			0.31			0.31	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		732			788			502			480	
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.12			c0.20			0.08	
v/c Ratio		0.40			0.24			0.65			0.25	
Uniform Delay, d1		11.4			10.4			21.2			18.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.1			6.4			1.3	
Delay (s)		11.5			10.4			27.5			19.6	
Level of Service		B			B			C			B	
Approach Delay (s)		11.5			10.4			27.5			19.6	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



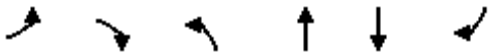
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	160	53	95	118	23	13	259	193	17	124	11
Future Volume (vph)	12	160	53	95	118	23	13	259	193	17	124	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.99			0.94			0.99	
Flt Protected		1.00			0.98			1.00			0.99	
Satd. Flow (prot)		1674			1601			1765			1684	
Flt Permitted		0.97			0.75			0.99			0.93	
Satd. Flow (perm)		1634			1233			1753			1577	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	14	190	63	113	140	27	15	308	230	20	148	13
RTOR Reduction (vph)	0	30	0	0	10	0	0	47	0	0	5	0
Lane Group Flow (vph)	0	237	0	0	270	0	0	506	0	0	176	0
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	19%	8%	5%	19%	10%	22%	13%	0%	0%	0%	8%	29%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		10.8			10.8			20.3			20.3	
Effective Green, g (s)		10.8			10.8			20.3			20.3	
Actuated g/C Ratio		0.27			0.27			0.51			0.51	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		440			332			887			798	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.22			c0.29			0.11	
v/c Ratio		0.54			0.81			0.57			0.22	
Uniform Delay, d1		12.5			13.7			6.9			5.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.3			14.0			2.7			0.6	
Delay (s)		13.8			27.7			9.5			6.1	
Level of Service		B			C			A			A	
Approach Delay (s)		13.8			27.7			9.5			6.1	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	40.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	113	0	58	0	1182	263	49	418	0
Future Volume (vph)	0	0	0	113	0	58	0	1182	263	49	418	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1457		1358		3579	1693	1719	3553	
Flt Permitted				0.76		1.00		1.00	1.00	0.18	1.00	
Satd. Flow (perm)				1161		1358		3579	1693	329	3553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	119	0	61	0	1244	277	52	440	0
RTOR Reduction (vph)	0	0	0	0	0	35	0	0	168	0	0	0
Lane Group Flow (vph)	0	0	0	119	0	26	0	1244	109	52	440	0
Heavy Vehicles (%)	0%	0%	0%	17%	0%	7%	0%	2%	6%	5%	5%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				456		533		1406	665	129	1395	
v/s Ratio Prot								c0.35			0.12	
v/s Ratio Perm				c0.10		0.02			0.06	0.16		
v/c Ratio				0.26		0.05		0.88	0.16	0.40	0.32	
Uniform Delay, d1				11.5		10.5		15.8	11.0	12.3	11.8	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				1.4		0.2		8.5	0.5	9.1	0.6	
Delay (s)				12.9		10.7		24.3	11.6	21.4	12.4	
Level of Service				B		B		C	B	C	B	
Approach Delay (s)		0.0			12.1			22.0			13.3	
Approach LOS		A			B			C			B	

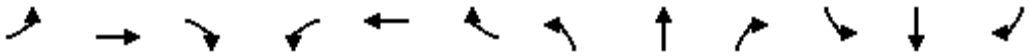
Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	17	11	161	168	25
Future Volume (Veh/h)	34	17	11	161	168	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	39	20	13	185	193	29
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	418	208	222			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	418	208	222			
tC, single (s)	6.5	6.3	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.5			
p0 queue free %	93	98	99			
cM capacity (veh/h)	577	823	1208			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	59	198	222
Volume Left	39	13	0
Volume Right	20	0	29
cSH	642	1208	1700
Volume to Capacity	0.09	0.01	0.13
Queue Length 95th (m)	2.3	0.2	0.0
Control Delay (s)	11.2	0.6	0.0
Lane LOS	B	A	
Approach Delay (s)	11.2	0.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	329	3	4	201	23	10	170	5	18	56	17
Future Volume (vph)	35	329	3	4	201	23	10	170	5	18	56	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			1.00			0.98	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1764			1544			1774			1500	
Flt Permitted		0.94			0.99			0.98			0.92	
Satd. Flow (perm)		1674			1530			1751			1396	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	40	374	3	5	228	26	11	193	6	20	64	19
RTOR Reduction (vph)	0	1	0	0	8	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	416	0	0	251	0	0	208	0	0	91	0
Heavy Vehicles (%)	3%	6%	34%	50%	20%	27%	0%	7%	0%	28%	20%	24%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		627			573			656			523	
v/s Ratio Prot												
v/s Ratio Perm		c0.25			0.16			c0.12			0.07	
v/c Ratio		0.66			0.44			0.32			0.17	
Uniform Delay, d1		12.5			11.2			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		5.5			2.4			1.3			0.7	
Delay (s)		18.0			13.6			11.9			10.8	
Level of Service		B			B			B			B	
Approach Delay (s)		18.0			13.6			11.9			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	285	62	91	285	105	186
Future Volume (vph)	285	62	91	285	105	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.2	3.2	3.3	3.3
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frt	0.98			1.00	0.91	
Flt Protected	1.00			0.99	0.98	
Satd. Flow (prot)	1692			1729	1530	
Flt Permitted	1.00			0.79	0.98	
Satd. Flow (perm)	1692			1376	1530	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	300	65	96	300	111	196
RTOR Reduction (vph)	18	0	0	0	113	0
Lane Group Flow (vph)	347	0	0	396	194	0
Heavy Vehicles (%)	4%	15%	6%	3%	9%	7%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	16.2			16.2	18.7	
Effective Green, g (s)	16.2			16.2	18.7	
Actuated g/C Ratio	0.37			0.37	0.43	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	624			507	651	
v/s Ratio Prot	0.21				c0.13	
v/s Ratio Perm				c0.29		
v/c Ratio	0.56			0.78	0.30	
Uniform Delay, d1	11.0			12.3	8.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.1			7.7	1.2	
Delay (s)	12.1			19.9	9.5	
Level of Service	B			B	A	
Approach Delay (s)	12.1			19.9	9.5	
Approach LOS	B			B	A	

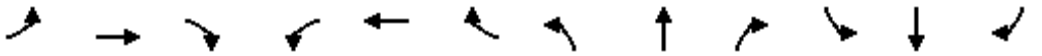
Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	43.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	0	0	72	0	0	65
Future Volume (vph)	0	0	72	0	0	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	78	0	0	71

Direction, Lane #	NB 1	SB 1
Volume Total (vph)	78	71
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.10	0.08
Departure Headway (s)	4.1	4.1
Degree Utilization, x	0.09	0.08
Capacity (veh/h)	870	880
Control Delay (s)	7.5	7.4
Approach Delay (s)	7.5	7.4
Approach LOS	A	A

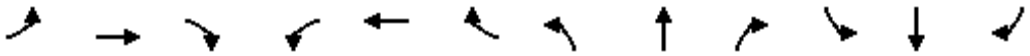
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	63	0	4	26	9	0	55	3	4	39	1
Future Volume (Veh/h)	16	63	0	4	26	9	0	55	3	4	39	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	20	79	0	5	32	11	0	69	4	5	49	1
Pedestrians		6			3			1				
Lane Width (m)		3.1			3.5			3.6				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	163	141	56	174	139	74	55			76		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	163	141	56	174	139	74	55			76		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	97	89	100	99	96	99	100			100		
cM capacity (veh/h)	746	746	1010	721	747	958	1555			1532		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	99	48	73	54	1
Volume Left	20	5	0	5	0
Volume Right	0	11	4	0	1
cSH	746	784	1555	1532	1700
Volume to Capacity	0.13	0.06	0.00	0.00	0.00
Queue Length 95th (m)	3.5	1.5	0.0	0.1	0.0
Control Delay (s)	10.6	9.9	0.0	0.7	0.0
Lane LOS	B	A		A	
Approach Delay (s)	10.6	9.9	0.0	0.7	
Approach LOS	B	A			

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	22.8%	ICU Level of Service		A
Analysis Period (min)	15			



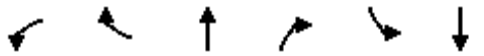
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	82	14	58	125	27	19	185	57	14	130	14
Future Volume (vph)	15	82	14	58	125	27	19	185	57	14	130	14
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	19	105	18	74	160	35	24	237	73	18	167	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	142	269	334	203
Volume Left (vph)	19	74	24	18
Volume Right (vph)	18	35	73	18
Hadj (s)	0.03	0.08	0.05	0.07
Departure Headway (s)	6.0	5.8	5.6	5.8
Degree Utilization, x	0.24	0.43	0.52	0.33
Capacity (veh/h)	524	569	605	561
Control Delay (s)	10.9	13.2	14.4	11.6
Approach Delay (s)	10.9	13.2	14.4	11.6
Approach LOS	B	B	B	B

Intersection Summary				
Delay	12.9			
Level of Service	B			
Intersection Capacity Utilization	43.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	319	42	110	447	2	123	3	94	9	3	6
Future Volume (vph)	3	319	42	110	447	2	123	3	94	9	3	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.4	3.4	3.4	3.2	3.2	3.2	4.3	4.3	4.3
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.98			1.00			0.94			0.95	
Flt Protected		1.00			0.99			0.97			0.98	
Satd. Flow (prot)		1658			1697			1581			1779	
Flt Permitted		1.00			0.83			0.81			0.85	
Satd. Flow (perm)		1652			1415			1321			1544	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	4	420	55	145	588	3	162	4	124	12	4	8
RTOR Reduction (vph)	0	7	0	0	0	0	0	37	0	0	6	0
Lane Group Flow (vph)	0	472	0	0	736	0	0	253	0	0	18	0
Confl. Peds. (#/hr)	1		10	10		1	13					13
Heavy Vehicles (%)	0%	7%	10%	9%	8%	0%	0%	0%	9%	0%	0%	17%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.3			40.3			20.7			20.7	
Effective Green, g (s)		40.3			40.3			20.7			20.7	
Actuated g/C Ratio		0.58			0.58			0.30			0.30	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		951			814			390			456	
v/s Ratio Prot												
v/s Ratio Perm		0.29			c0.52			c0.19			0.01	
v/c Ratio		0.50			0.90			0.65			0.04	
Uniform Delay, d1		8.8			13.1			21.5			17.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.4			13.3			8.1			0.2	
Delay (s)		9.2			26.5			29.6			17.7	
Level of Service		A			C			C			B	
Approach Delay (s)		9.2			26.5			29.6			17.7	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	213	45	780	177	117	1286
Future Volume (vph)	213	45	780	177	117	1286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.6	3.6	3.5	3.5	3.2	3.3
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95	1.00		0.95
Frt	0.98		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	1679		3433	1581		3432
Flt Permitted	0.96		1.00	1.00		0.75
Satd. Flow (perm)	1679		3433	1581		2572
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	229	48	839	190	126	1383
RTOR Reduction (vph)	9	0	0	54	0	0
Lane Group Flow (vph)	268	0	839	136	0	1509
Heavy Vehicles (%)	2%	26%	4%	1%	4%	1%
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	3		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	18.6		56.9	56.9		56.9
Effective Green, g (s)	18.6		56.9	56.9		56.9
Actuated g/C Ratio	0.21		0.65	0.65		0.65
Clearance Time (s)	6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0		0.2	0.2		0.2
Lane Grp Cap (vph)	356		2232	1028		1672
v/s Ratio Prot	c0.16		0.24			
v/s Ratio Perm				0.09		c0.59
v/c Ratio	0.75		0.38	0.13		0.90
Uniform Delay, d1	32.3		7.1	5.9		13.0
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	8.8		0.5	0.3		8.4
Delay (s)	41.1		7.6	6.1		21.3
Level of Service	D		A	A		C
Approach Delay (s)	41.1		7.3			21.3
Approach LOS	D		A			C

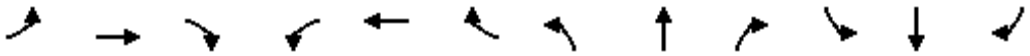
Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	263	22	871	227	34	1306
Future Volume (vph)	263	22	871	227	34	1306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	4.8	3.2	3.2
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	0.97			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1750	1452	3379			3377
Flt Permitted	0.95	1.00	1.00			0.89
Satd. Flow (perm)	1750	1452	3379			3026
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	23	898	234	35	1346
RTOR Reduction (vph)	0	16	36	0	0	0
Lane Group Flow (vph)	271	7	1096	0	0	1381
Heavy Vehicles (%)	2%	10%	3%	0%	3%	2%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	15.1	15.1	24.1			24.1
Effective Green, g (s)	15.1	15.1	24.1			24.1
Actuated g/C Ratio	0.29	0.29	0.47			0.47
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	0.2	0.2	0.2			0.2
Lane Grp Cap (vph)	516	428	1590			1424
v/s Ratio Prot	c0.15		0.32			
v/s Ratio Perm		0.00				c0.46
v/c Ratio	0.53	0.02	0.69			0.97
Uniform Delay, d1	15.1	12.8	10.6			13.2
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.4	0.0	2.5			17.7
Delay (s)	15.5	12.8	13.1			30.9
Level of Service	B	B	B			C
Approach Delay (s)	15.3		13.1			30.9
Approach LOS	B		B			C

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

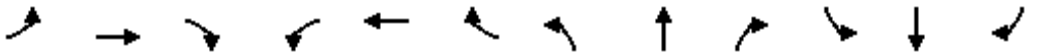


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	14	4	284	26	324	6	763	214	327	1159	22
Future Volume (vph)	33	14	4	284	26	324	6	763	214	327	1159	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	3.6	3.6	3.8	3.0	3.2	3.1	3.0	3.1	3.1
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1809		1772	1900	1545	1685	1798	1455	1604	1768	
Flt Permitted		0.83		0.72	1.00	1.00	0.10	1.00	1.00	0.09	1.00	
Satd. Flow (perm)		1558		1349	1900	1545	176	1798	1455	153	1768	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	34	14	4	293	27	334	6	787	221	337	1195	23
RTOR Reduction (vph)	0	3	0	0	0	256	0	0	92	0	1	0
Lane Group Flow (vph)	0	49	0	293	27	78	6	787	129	337	1217	0
Confl. Peds. (#/hr)	4		4	4		4	1		4	4		1
Heavy Vehicles (%)	7%	8%	0%	1%	0%	5%	0%	1%	2%	5%	1%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		21.0		21.0	21.0	21.0	40.2	40.2	40.2	59.0	59.0	
Effective Green, g (s)		21.0		21.0	21.0	21.0	40.2	40.2	40.2	59.0	59.0	
Actuated g/C Ratio		0.23		0.23	0.23	0.23	0.45	0.45	0.45	0.66	0.66	
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		363		314	443	360	78	803	649	338	1159	
v/s Ratio Prot					0.01			0.44		0.16	c0.69	
v/s Ratio Perm		0.03		c0.22		0.05	0.03		0.09	0.49		
v/c Ratio		0.13		0.93	0.06	0.22	0.08	0.98	0.20	1.00	1.05	
Uniform Delay, d1		27.3		33.8	26.8	27.9	14.3	24.5	15.1	28.3	15.5	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4		34.6	0.1	0.6	1.9	27.3	0.7	47.8	40.7	
Delay (s)		27.7		68.4	27.0	28.5	16.2	51.8	15.8	76.1	56.2	
Level of Service		C		E	C	C	B	D	B	E	E	
Approach Delay (s)		27.7			46.3			43.7			60.5	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	52.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	121.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

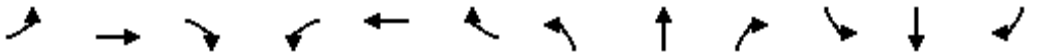
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	110	107	920	128	137	1279
Future Volume (vph)	110	107	920	128	137	1279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	2.8	2.8	3.8	3.8	3.7	3.7
Total Lost time (s)	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1645	1433	1885		1825	1902
Flt Permitted	0.95	1.00	1.00		0.14	1.00
Satd. Flow (perm)	1645	1433	1885		267	1902
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	117	114	979	136	146	1361
RTOR Reduction (vph)	0	98	5	0	0	0
Lane Group Flow (vph)	117	16	1110	0	146	1361
Confl. Peds. (#/hr)		3		9	9	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	10.7	10.7	56.7		56.7	56.7
Effective Green, g (s)	10.7	10.7	56.7		56.7	56.7
Actuated g/C Ratio	0.14	0.14	0.74		0.74	0.74
Clearance Time (s)	4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	230	200	1398		198	1411
v/s Ratio Prot	c0.07		0.59			c0.72
v/s Ratio Perm		0.01			0.55	
v/c Ratio	0.51	0.08	0.79		0.74	0.96
Uniform Delay, d1	30.4	28.6	6.2		5.6	8.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.8	0.2	4.7		21.6	16.9
Delay (s)	32.2	28.7	10.9		27.2	25.8
Level of Service	C	C	B		C	C
Approach Delay (s)	30.5		10.9			25.9
Approach LOS	C		B			C

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	76.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



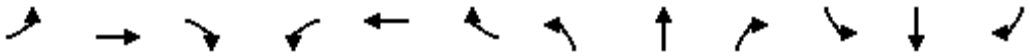
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	22	28	0	37	9	995	53	31	1324	23
Future Volume (vph)	14	0	22	28	0	37	9	995	53	31	1324	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.1	4.1	4.1	3.0	3.0	3.0	4.3	3.9	3.9	4.3	3.7	3.7
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1806			1602		1945	1928		1945	1898	
Flt Permitted		0.86			0.87		0.07	1.00		0.21	1.00	
Satd. Flow (perm)		1588			1427		146	1928		422	1898	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	0	23	29	0	39	9	1047	56	33	1394	24
RTOR Reduction (vph)	0	21	0	0	36	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	17	0	0	32	0	9	1102	0	33	1418	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.9			6.9		84.1	84.1		84.1	84.1	
Effective Green, g (s)		6.9			6.9		84.1	84.1		84.1	84.1	
Actuated g/C Ratio		0.07			0.07		0.84	0.84		0.84	0.84	
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		109			98		122	1621		354	1596	
v/s Ratio Prot								0.57			c0.75	
v/s Ratio Perm		0.01			c0.02		0.06			0.08		
v/c Ratio		0.15			0.32		0.07	0.68		0.09	0.89	
Uniform Delay, d1		43.8			44.3		1.3	3.0		1.4	5.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			1.9		1.2	2.3		0.5	7.8	
Delay (s)		44.4			46.2		2.5	5.3		1.9	12.8	
Level of Service		D			D		A	A		A	B	
Approach Delay (s)		44.4			46.2			5.2			12.5	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	52	27	61	62	76	13	863	62	71	1133	80
Future Volume (vph)	91	52	27	61	62	76	13	863	62	71	1133	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.1	3.6	3.2	3.7	3.7	3.7	3.3	3.8	3.8	3.4	4.0	3.5
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		0.98		1.00	1.00	0.93	1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1694	1900	1490		1734		1616	1923	1543	1765	1965	1551
Flt Permitted	0.40	1.00	1.00		0.88		0.05	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	709	1900	1490		1543		81	1923	1543	200	1965	1551
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	57	29	66	67	83	14	938	67	77	1232	87
RTOR Reduction (vph)	0	0	22	0	16	0	0	0	27	0	0	28
Lane Group Flow (vph)	99	57	7	0	200	0	14	938	40	77	1232	59
Confl. Peds. (#/hr)	13		5	5		13	3		16	16		3
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	8%	1%	0%	0%	1%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	33.8	33.8	33.8		22.8		86.5	84.0	84.0	96.1	89.6	89.6
Effective Green, g (s)	33.8	33.8	33.8		22.8		86.5	84.0	84.0	96.1	89.6	89.6
Actuated g/C Ratio	0.24	0.24	0.24		0.16		0.62	0.60	0.60	0.69	0.64	0.64
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0	5.0	3.0	4.3	4.3
Vehicle Extension (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	221	461	361		252		77	1160	931	232	1264	998
v/s Ratio Prot	c0.02	0.03					0.00	0.49		c0.02	c0.63	
v/s Ratio Perm	0.09		0.00		c0.13		0.11		0.03	0.21		0.04
v/c Ratio	0.45	0.12	0.02		0.79		0.18	0.81	0.04	0.33	0.97	0.06
Uniform Delay, d1	43.8	41.1	40.1		55.9		33.2	21.4	11.2	20.9	23.7	9.2
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.2	0.0		16.5		1.6	6.1	0.1	1.2	19.9	0.1
Delay (s)	45.8	41.3	40.1		72.5		34.8	27.5	11.3	22.0	43.7	9.3
Level of Service	D	D	D		E		C	C	B	C	D	A
Approach Delay (s)		43.5			72.5			26.5			40.3	
Approach LOS		D			E			C			D	

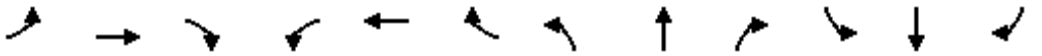
Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	139.2	Sum of lost time (s)	17.3
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	2	0	7	0	936	10	10	1214	0
Future Volume (Veh/h)	0	0	0	2	0	7	0	936	10	10	1214	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	2	0	8	0	1017	11	11	1320	0
Pedestrians		4			9			2			6	
Lane Width (m)		0.0			2.8			4.2			4.2	
Walking Speed (m/s)		1.1			1.1			1.1			1.1	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								275			82	
pX, platoon unblocked	0.60	0.60	0.36	0.60	0.60	0.53	0.36			0.53		
vC, conflicting volume	2377	2383	1326	2376	2378	1038	1324			1037		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1187	1197	1022	1184	1188	622	1016			621		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	98	100	97	100			98		
cM capacity (veh/h)	94	109	105	98	111	255	251			507		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	10	0	1028	11	1320
Volume Left	2	0	0	11	0
Volume Right	8	0	11	0	0
cSH	193	1700	1700	507	1700
Volume to Capacity	0.05	0.00	0.60	0.02	0.78
Queue Length 95th (m)	1.2	0.0	0.0	0.5	0.0
Control Delay (s)	24.7	0.0	0.0	12.3	0.0
Lane LOS	C			B	
Approach Delay (s)	24.7	0.0		0.1	
Approach LOS	C				

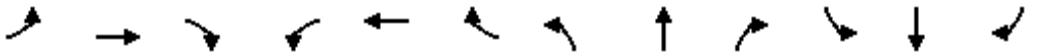
Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	75.7%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2	12	4	0	10	0	871	5	8	1201	0
Future Volume (Veh/h)	7	2	12	4	0	10	0	871	5	8	1201	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	8	2	13	4	0	11	0	937	5	9	1291	0
Pedestrians		5			10						2	
Lane Width (m)		3.7			3.5						4.2	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								147			210	
pX, platoon unblocked	0.62	0.62	0.37	0.62	0.62	0.50	0.37			0.50		
vC, conflicting volume	2266	2266	1296	2272	2264	952	1296			952		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	937	937	950	947	933	413	950			414		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	99	89	97	100	97	100			98		
cM capacity (veh/h)	143	160	117	128	161	321	270			578		

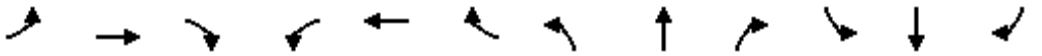
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	23	4	11	942	9	1291
Volume Left	8	4	0	0	9	0
Volume Right	13	0	11	5	0	0
cSH	128	128	321	1700	578	1700
Volume to Capacity	0.18	0.03	0.03	0.55	0.02	0.76
Queue Length 95th (m)	4.7	0.7	0.8	0.0	0.4	0.0
Control Delay (s)	39.1	34.0	16.6	0.0	11.3	0.0
Lane LOS	E	D	C		B	
Approach Delay (s)	39.1	21.2		0.0	0.1	
Approach LOS	E	C				

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	77.5%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	6	124	8	155	4	768	134	255	926	8
Future Volume (vph)	19	34	6	124	8	155	4	768	134	255	926	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	4.8	4.8	4.8	4.1	3.7	3.7	4.3	4.0	4.0
Total Lost time (s)		6.0			6.0		6.5	6.5		2.5	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.93		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1833			1928		1902	1841		1945	1962	
Flt Permitted		0.82			0.83		0.19	1.00		0.07	1.00	
Satd. Flow (perm)		1522			1638		372	1841		149	1962	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	36	6	132	9	165	4	817	143	271	985	9
RTOR Reduction (vph)	0	4	0	0	44	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	58	0	0	262	0	4	954	0	271	994	0
Confl. Peds. (#/hr)	2					2	6		11	11		6
Heavy Vehicles (%)	0%	3%	0%	0%	0%	0%	0%	1%	3%	0%	1%	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		
Actuated Green, G (s)		19.7			19.7		51.3	51.3		65.1	65.1	
Effective Green, g (s)		19.7			19.7		51.3	51.3		65.6	65.1	
Actuated g/C Ratio		0.20			0.20		0.53	0.53		0.68	0.67	
Clearance Time (s)		6.0			6.0		6.5	6.5		3.0	6.0	
Vehicle Extension (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Grp Cap (vph)		309			333		197	975		301	1319	
v/s Ratio Prot								c0.52		c0.10	0.51	
v/s Ratio Perm		0.04			c0.16		0.01			0.51		
v/c Ratio		0.19			0.79		0.02	0.98		0.90	0.75	
Uniform Delay, d1		31.9			36.6		10.8	22.2		30.0	10.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			12.3		0.2	24.1		28.0	4.0	
Delay (s)		32.3			48.8		11.0	46.3		58.0	14.5	
Level of Service		C			D		B	D		E	B	
Approach Delay (s)		32.3			48.8			46.1			23.8	
Approach LOS		C			D			D			C	

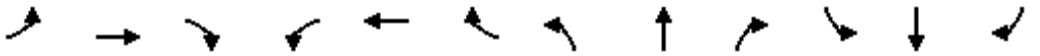
Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	96.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1	21	6	1	2	18	762	5	6	963	74
Future Volume (Veh/h)	22	1	21	6	1	2	18	762	5	6	963	74
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	1	23	7	1	2	20	828	5	7	1047	80
Pedestrians		6			11			1				
Lane Width (m)		3.9			3.9			4.0				
Walking Speed (m/s)		1.1			1.1			1.1				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								187			117	
pX, platoon unblocked	0.73	0.73	0.57	0.73	0.73	0.68	0.57			0.68		
vC, conflicting volume	1978	1991	1094	1967	2028	842	1133			844		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1168	1186	791	1153	1237	531	859			535		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	78	99	90	93	99	99	96			99		
cM capacity (veh/h)	111	130	223	107	121	371	450			701		

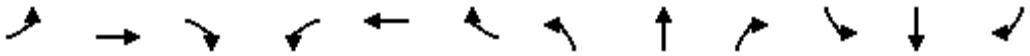
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	48	10	20	833	7	1127
Volume Left	24	7	20	0	7	0
Volume Right	23	2	0	5	0	80
cSH	147	127	450	1700	701	1700
Volume to Capacity	0.33	0.08	0.04	0.49	0.01	0.66
Queue Length 95th (m)	10.0	1.9	1.1	0.0	0.2	0.0
Control Delay (s)	41.1	35.8	13.4	0.0	10.2	0.0
Lane LOS	E	E	B		B	
Approach Delay (s)	41.1	35.8	0.3		0.1	
Approach LOS	E	E				

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	65.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	67	46	114	41	204	33	515	132	350	541	126
Future Volume (vph)	123	67	46	114	41	204	33	515	132	350	541	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.4	3.8	3.8	4.2	4.2	4.2	3.4	3.6	3.6	3.6	3.5	3.5
Total Lost time (s)	5.0	5.0			5.0		1.0	5.0		1.0	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			0.98		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94			0.92		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1731	1805			1797		1649	1811		1752	1803	
Flt Permitted	0.42	1.00			0.85		0.28	1.00		0.14	1.00	
Satd. Flow (perm)	772	1805			1550		487	1811		253	1803	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	127	69	47	118	42	210	34	531	136	361	558	130
RTOR Reduction (vph)	0	29	0	0	56	0	0	9	0	0	7	0
Lane Group Flow (vph)	127	87	0	0	314	0	34	658	0	361	681	0
Confl. Peds. (#/hr)	14		4	4		14	2		15	15		2
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	7%	1%	0%	3%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.4	22.4			22.4		40.9	35.2		51.7	44.0	
Effective Green, g (s)	22.4	22.4			22.4		42.9	35.2		52.7	44.0	
Actuated g/C Ratio	0.27	0.27			0.27		0.51	0.42		0.63	0.52	
Clearance Time (s)	5.0	5.0			5.0		2.0	5.0		2.0	5.0	
Vehicle Extension (s)	4.5	4.5			4.5		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	205	480			412		340	757		434	943	
v/s Ratio Prot		0.05					0.01	c0.36		c0.15	0.38	
v/s Ratio Perm	0.16				c0.20		0.04			0.37		
v/c Ratio	0.62	0.18			0.76		0.10	0.87		0.83	0.72	
Uniform Delay, d1	27.1	23.8			28.4		11.1	22.3		19.1	15.4	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.0	0.3			9.0		0.1	12.9		12.8	4.8	
Delay (s)	34.1	24.1			37.4		11.2	35.3		31.9	20.2	
Level of Service	C	C			D		B	D		C	C	
Approach Delay (s)		29.3			37.4			34.1			24.2	
Approach LOS		C			D			C			C	

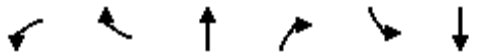
Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	84.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	40	0	0	0	17	299	0	0	367	3
Future Volume (Veh/h)	9	0	40	0	0	0	17	299	0	0	367	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	0	43	0	0	0	18	322	0	0	395	3
Pedestrians					2							
Lane Width (m)					4.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	754	756	396	800	758	324	398			324		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	754	756	396	800	758	324	398			324		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	93	100	100	100	98			100		
cM capacity (veh/h)	323	333	657	281	333	720	1172			1244		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	53	0	18	322	398
Volume Left	10	0	18	0	0
Volume Right	43	0	0	0	3
cSH	550	1700	1172	1700	1244
Volume to Capacity	0.10	0.00	0.02	0.19	0.00
Queue Length 95th (m)	2.4	0.0	0.4	0.0	0.0
Control Delay (s)	12.2	0.0	8.1	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s)	12.2	0.0	0.4		0.0
Approach LOS	B	A			

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	29.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	41	6	15	43	6	23
Future Volume (vph)	41	6	15	43	6	23
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	52	8	19	54	8	29

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	60	73	37
Volume Left (vph)	52	0	8
Volume Right (vph)	8	54	0
Hadj (s)	0.09	-0.44	0.04
Departure Headway (s)	4.2	3.6	4.1
Degree Utilization, x	0.07	0.07	0.04
Capacity (veh/h)	829	963	850
Control Delay (s)	7.5	6.9	7.3
Approach Delay (s)	7.5	6.9	7.3
Approach LOS	A	A	A

Intersection Summary			
Delay	7.2		
Level of Service	A		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	65	35	50	52	35	57
Future Volume (vph)	65	35	50	52	35	57
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	77	42	60	62	42	68

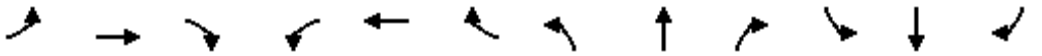
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	119	122	110
Volume Left (vph)	77	0	42
Volume Right (vph)	42	62	0
Hadj (s)	-0.06	-0.30	0.08
Departure Headway (s)	4.3	4.0	4.4
Degree Utilization, x	0.14	0.14	0.13
Capacity (veh/h)	788	866	796
Control Delay (s)	8.1	7.6	8.1
Approach Delay (s)	8.1	7.6	8.1
Approach LOS	A	A	A

Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	42	50	26	29	58	52
Future Volume (Veh/h)	42	50	26	29	58	52
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	45	54	28	31	62	56
Pedestrians	13		2			1
Lane Width (m)	4.2		3.5			3.7
Walking Speed (m/s)	1.1		1.1			1.1
Percent Blockage	1		0			0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	238	58			72	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	238	58			72	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	94	95			96	
cM capacity (veh/h)	712	982			1519	

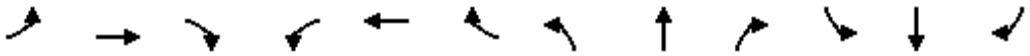
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	99	59	118
Volume Left	45	0	62
Volume Right	54	31	0
cSH	837	1700	1519
Volume to Capacity	0.12	0.03	0.04
Queue Length 95th (m)	3.0	0.0	1.0
Control Delay (s)	9.9	0.0	4.1
Lane LOS	A		A
Approach Delay (s)	9.9	0.0	4.1
Approach LOS	A		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	177	135	16	168	7	42	156	28	20	114	42
Future Volume (vph)	49	177	135	16	168	7	42	156	28	20	114	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.2	3.2	3.2	4.1	4.1	4.1	3.6	3.6	3.6
Total Lost time (s)		7.0			7.0			7.0			7.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			1.00			0.98			0.97	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1720			1798			1948			1783	
Flt Permitted		0.93			0.95			0.91			0.95	
Satd. Flow (perm)		1613			1723			1785			1697	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	51	184	141	17	175	7	44	162	29	21	119	44
RTOR Reduction (vph)	0	29	0	0	2	0	0	6	0	0	14	0
Lane Group Flow (vph)	0	347	0	0	197	0	0	230	0	0	170	0
Confl. Peds. (#/hr)	2		1	1		2	1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		35.0			35.0			26.0			26.0	
Effective Green, g (s)		35.0			35.0			26.0			26.0	
Actuated g/C Ratio		0.47			0.47			0.35			0.35	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		0.2			0.2			3.0			3.0	
Lane Grp Cap (vph)		752			804			618			588	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.11			c0.13			0.10	
v/c Ratio		0.46			0.25			0.37			0.29	
Uniform Delay, d1		13.6			12.0			18.4			17.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.1			1.7			1.2	
Delay (s)		13.8			12.1			20.1			19.0	
Level of Service		B			B			C			B	
Approach Delay (s)		13.8			12.1			20.1			19.0	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

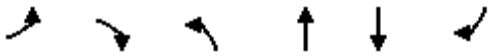


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	135	88	247	172	26	37	197	171	17	325	20
Future Volume (vph)	12	135	88	247	172	26	37	197	171	17	325	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.99			0.94			0.99	
Flt Protected		1.00			0.97			1.00			1.00	
Satd. Flow (prot)		1744			1821			1723			1822	
Flt Permitted		0.97			0.72			0.94			0.97	
Satd. Flow (perm)		1696			1345			1624			1774	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	13	148	97	271	189	29	41	216	188	19	357	22
RTOR Reduction (vph)	0	49	0	0	5	0	0	58	0	0	5	0
Lane Group Flow (vph)	0	209	0	0	484	0	0	387	0	0	393	0
Confl. Peds. (#/hr)	1		2	2		1	2		1	1		2
Heavy Vehicles (%)	0%	2%	0%	0%	0%	8%	0%	3%	0%	17%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.5			17.5			18.0			18.0	
Effective Green, g (s)		17.5			17.5			18.0			18.0	
Actuated g/C Ratio		0.39			0.39			0.40			0.40	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		666			528			656			717	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.36			c0.24			0.22	
v/c Ratio		0.31			0.92			0.59			0.55	
Uniform Delay, d1		9.3			12.8			10.4			10.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.3			20.7			3.9			3.0	
Delay (s)		9.6			33.5			14.2			13.1	
Level of Service		A			C			B			B	
Approach Delay (s)		9.6			33.5			14.2			13.1	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	248	0	63	0	656	186	70	1178	0
Future Volume (vph)	0	0	0	248	0	63	0	656	186	70	1178	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.0	4.0	4.0	3.1	2.7	2.7	3.4	3.7	4.6	3.6	3.9	3.9
Total Lost time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor				1.00		1.00		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1671		1425		3544	1725	1752	3693	
Flt Permitted				0.76		1.00		1.00	1.00	0.32	1.00	
Satd. Flow (perm)				1332		1425		3544	1725	599	3693	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	273	0	69	0	721	204	77	1295	0
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	124	0	0	0
Lane Group Flow (vph)	0	0	0	273	0	27	0	721	80	77	1295	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	2%	0%	3%	4%	3%	1%	0%
Turn Type				Perm		Perm		NA	Perm	Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Effective Green, g (s)				22.0		22.0		22.0	22.0	22.0	22.0	
Actuated g/C Ratio				0.39		0.39		0.39	0.39	0.39	0.39	
Clearance Time (s)				6.0		6.0		6.0	6.0	6.0	6.0	
Lane Grp Cap (vph)				523		559		1392	677	235	1450	
v/s Ratio Prot								0.20			c0.35	
v/s Ratio Perm				c0.20		0.02			0.05	0.13		
v/c Ratio				0.52		0.05		0.52	0.12	0.33	0.89	
Uniform Delay, d1				13.0		10.5		13.0	10.8	11.8	15.9	
Progression Factor				1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2				3.7		0.2		1.4	0.4	3.7	8.8	
Delay (s)				16.7		10.7		14.3	11.2	15.5	24.7	
Level of Service				B		B		B	B	B	C	
Approach Delay (s)		0.0			15.5			13.6			24.2	
Approach LOS		A			B			B			C	

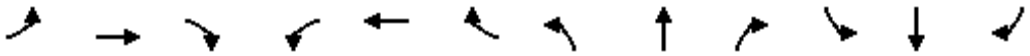
Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	14	18	225	272	68
Future Volume (Veh/h)	32	14	18	225	272	68
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	34	15	19	242	292	73
Pedestrians	1					
Lane Width (m)	3.8					
Walking Speed (m/s)	1.1					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	610	330	366			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	610	330	366			
tC, single (s)	6.4	6.2	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	93	98	98			
cM capacity (veh/h)	453	716	1170			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	49	261	365
Volume Left	34	19	0
Volume Right	15	0	73
cSH	511	1170	1700
Volume to Capacity	0.10	0.02	0.21
Queue Length 95th (m)	2.4	0.4	0.0
Control Delay (s)	12.8	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	12.8	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	272	16	10	415	24	6	76	8	26	148	40
Future Volume (vph)	17	272	16	10	415	24	6	76	8	26	148	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.99			0.97	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1800			1833			1681			1763	
Flt Permitted		0.96			0.99			0.98			0.95	
Satd. Flow (perm)		1732			1812			1644			1693	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	21	336	20	12	512	30	7	94	10	32	183	49
RTOR Reduction (vph)	0	4	0	0	4	0	0	6	0	0	17	0
Lane Group Flow (vph)	0	373	0	0	550	0	0	105	0	0	247	0
Heavy Vehicles (%)	12%	3%	0%	0%	2%	17%	0%	12%	13%	12%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.38			0.38			0.38			0.38	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		649			679			616			634	
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.30			0.06			c0.15	
v/c Ratio		0.57			0.81			0.17			0.39	
Uniform Delay, d1		11.9			13.5			10.0			11.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.7			10.1			0.6			1.8	
Delay (s)		15.6			23.5			10.6			12.8	
Level of Service		B			C			B			B	
Approach Delay (s)		15.6			23.5			10.6			12.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	394	147	228	472	96	138
Future Volume (vph)	394	147	228	472	96	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.2	3.2	3.3	3.3
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.99			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.92	
Flt Protected	1.00			0.98	0.98	
Satd. Flow (prot)	1734			1728	1617	
Flt Permitted	1.00			0.61	0.98	
Satd. Flow (perm)	1734			1068	1617	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	415	155	240	497	101	145
RTOR Reduction (vph)	15	0	0	0	57	0
Lane Group Flow (vph)	555	0	0	737	189	0
Confl. Peds. (#/hr)		1	1			
Heavy Vehicles (%)	2%	0%	0%	5%	6%	0%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	65.5			65.5	15.5	
Effective Green, g (s)	65.5			65.5	15.5	
Actuated g/C Ratio	0.73			0.73	0.17	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	1261			777	278	
v/s Ratio Prot	0.32				c0.12	
v/s Ratio Perm				c0.69		
v/c Ratio	0.44			0.95	0.68	
Uniform Delay, d1	4.9			10.8	34.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.1			21.9	12.6	
Delay (s)	6.0			32.7	47.5	
Level of Service	A			C	D	
Approach Delay (s)	6.0			32.7	47.5	
Approach LOS	A			C	D	

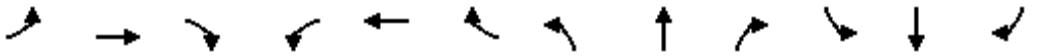
Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	0	0	79	0	0	120
Future Volume (vph)	0	0	79	0	0	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	82	0	0	125

Direction, Lane #	NB 1	SB 1
Volume Total (vph)	82	125
Volume Left (vph)	0	0
Volume Right (vph)	0	0
Hadj (s)	0.00	0.02
Departure Headway (s)	4.0	4.0
Degree Utilization, x	0.09	0.14
Capacity (veh/h)	880	894
Control Delay (s)	7.4	7.6
Approach Delay (s)	7.4	7.6
Approach LOS	A	A

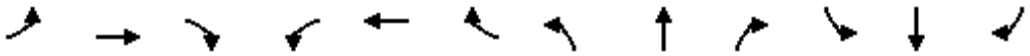
Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	43	1	19	68	7	0	67	5	14	91	1
Future Volume (Veh/h)	10	43	1	19	68	7	0	67	5	14	91	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	11	48	1	21	76	8	0	75	6	16	102	1
Pedestrians		6			9						1	
Lane Width (m)		3.1			3.5						4.0	
Walking Speed (m/s)		1.1			1.1						1.1	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	265	230	108	246	227	88	108			90		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	265	230	108	246	227	88	108			90		
tC, single (s)	7.1	6.6	6.2	7.1	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	98	93	100	97	88	99	100			99		
cM capacity (veh/h)	610	641	947	653	646	967	1488			1505		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	60	105	81	118	1
Volume Left	11	21	0	16	0
Volume Right	1	8	6	0	1
cSH	638	664	1488	1505	1700
Volume to Capacity	0.09	0.16	0.00	0.01	0.00
Queue Length 95th (m)	2.4	4.2	0.0	0.2	0.0
Control Delay (s)	11.2	11.4	0.0	1.1	0.0
Lane LOS	B	B		A	
Approach Delay (s)	11.2	11.4	0.0	1.1	
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	26.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	24	120	13	72	101	18	5	126	64	36	93	16
Future Volume (vph)	24	120	13	72	101	18	5	126	64	36	93	16
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	28	138	15	83	116	21	6	145	74	41	107	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	181	220	225	166
Volume Left (vph)	28	83	6	41
Volume Right (vph)	15	21	74	18
Hadj (s)	-0.02	0.02	-0.16	0.02
Departure Headway (s)	5.3	5.3	5.1	5.4
Degree Utilization, x	0.27	0.32	0.32	0.25
Capacity (veh/h)	622	632	643	611
Control Delay (s)	10.2	10.7	10.5	10.1
Approach Delay (s)	10.2	10.7	10.5	10.1
Approach LOS	B	B	B	B

Intersection Summary				
Delay	10.4			
Level of Service	B			
Intersection Capacity Utilization	50.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	484	55	57	483	8	69	8	58	4	6	5
Future Volume (vph)	6	484	55	57	483	8	69	8	58	4	6	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.4	3.4	3.4	3.2	3.2	3.2	4.3	4.3	4.3
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			1.00			0.94			0.95	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		1755			1748			1622			1930	
Flt Permitted		0.99			0.91			0.86			0.95	
Satd. Flow (perm)		1747			1597			1435			1865	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	6	520	59	61	519	9	74	9	62	4	6	5
RTOR Reduction (vph)	0	8	0	0	1	0	0	38	0	0	3	0
Lane Group Flow (vph)	0	577	0	0	588	0	0	107	0	0	12	0
Heavy Vehicles (%)	0%	2%	2%	2%	6%	0%	4%	13%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.4			27.4			23.6			23.6	
Effective Green, g (s)		27.4			27.4			23.6			23.6	
Actuated g/C Ratio		0.46			0.46			0.39			0.39	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		797			729			564			733	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.37			c0.07			0.01	
v/c Ratio		0.72			0.81			0.19			0.02	
Uniform Delay, d1		13.2			14.0			11.9			11.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.3			6.5			0.7			0.0	
Delay (s)		16.5			20.5			12.7			11.2	
Level of Service		B			C			B			B	
Approach Delay (s)		16.5			20.5			12.7			11.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX H

Proposed AT Network Infrastructure from Mobycon

Proposed Cycling Route	From	To	Existing Characteristics	Posted Speed Limit [km/h]	Min Peak Hour Volume	Max Peak Hour Volume	Existing AADT / VPD	Required Treatment	CWATS Proposed	Mobycon / TY Lin Proposed Infrastructure
Texas Road	Front Road North	Concession Road 2 North	Residential (large lot) Collector Road 1 Lane per direction Existing at-grade MUP (paved shoulder) and part of CWATS network	50	47	159	1,988	Seperated bikeway	Keep existing	MUP on north and south side to be upgraded from painted shoulder to MUP facility (min 3.0m with buffer).
William Street	Front Road North	Girard Street	Urban residential/industrial Local Road 1 lane per direction	40	n/a	n/a	n/a	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5 Recommend reviewing heavy vehicle network noting intermodal facility to the south.
Girard Street	William Street	Duff Avenue	Urban residential Local Road 1 lane per direction	40	n/a	n/a	n/a	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Alma Street	Laird Avenue	Sandwich Street	Urban residential Local Road 1 lane per direction Existing signed bike route	40?	27	54	675	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Alma Street	Sandwich Street	Fryer Street	Urban residential Arterial Road 1 lane per direction Designated heavy vehicle route Existing two-way MUP according to CWATS (no evidence on Google Maps/Streetview)	50	153	310	3,875	Seperated bikeway	Keep existing	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6.
Alma Street	Fryer Street	Meloche Road	Rural residential Rural cross-section 1 lane per direction Existing paved shoulders/painted MUPs	50	186	355	4,438	Seperated bikeway	Two-way MUP	MUP on south side with a min. width of 3.0 m and 0.3m buffer.
Richmond Street	Dalhousie Street	Sandwich Street	Urban downtown Collector Road 1 lane per direction	50?	45	170	2,125	Seperated bikeway	n/a	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6
Richmond Street	Sandwich Street	Fryer Street	Urban residential Collector Road 1 lane per direction	50? (40 through school zone)	75	188	2,350	Seperated bikeway	n/a	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6
Richmond Street	Fryer Street	Simcoe Street	Suburban residential Local Road 1 lane per direction	40?	n/a	n/a	n/a	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Simcoe Street	Sandwich Street	Victoria Street	Urban residential Arterial Road 1 lane per direction Designated heavy vehicle route	40?	105	168	2,100	Seperated bikeway	n/a	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6
Simcoe Street	Victoria Street	Meloche Road	Rural residential Arterial Road 1 lane per direction Designated heavy vehicle route Existing paved shoulders/painted MUPs	40-50	59	153	1,913	Seperated bikeway	Keep existing	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6
Pickering Street	Dalhousie Street	Sandwich Street	Suburban commercial Local Road 1 lane per direction with auxilliary left-turn lanes	50?	48	236	2,950	Seperated bikeway	n/a	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6
Lowes Side Road	Dalhousie Street	Sandwich Street	Suburban residential Collector Road 1 lane per direction	40?	n/a	n/a	n/a	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Lowes Side Road	Sandwich Street	Fryer Street	Rural residential Local Road 1 lane per direction	50	n/a	n/a	n/a	Seperated bikeway	n/a	MUP on north side (min 3.0 m operating and 0.3m buffer). See OTM Book 18 Table 4.5 and 4.6
Lowes Side Road	Fryer Street	Meloche Road	Rural Local Road 1 lane per direction	50	n/a	n/a	n/a	Designated operating space	n/a	Paved shoulders prior to development, to be upgraded with introduction of new housing development - preferably MUP or cycletrack + sidewalk. MUP min. width of 3.0m with 0.3m buffer (see OTM Book Table 4.5)
Dalhousie Street	Lowes Side Road	Pickering Street	Suburban residential Collector Road 1 lane per direction Existing signed bike route	50	11	94	1,175	Shared or deignated operating space	Keep existing	Bike boulevard with traffic calming, advisory bike lanes, or bike lanes (pending AADT)
Dalhousie Street	Pickering Street	Gore Street	Urban residential/commercial Collector Road 1 lane per direction Existing signed bike route	50	43	111	1,388	Shared or deignated operating space	Keep existing	Advisory bike lanes with no centreline (pending AADT). See OTM Book 18 Figure 4.55.
Dalhousie Street	Gore Street	Fort Malden Drive	Urban downtown Collector Road 1 lane per direction Existing signed bike route	50?	8	133	1,663	Shared operating space	Keep existing	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5

Fort Malden Drive	Dalhousie Street	Laird Avenue	Urban residential Local Road 1 lane per direction Existing signed bike route	40?	n/a	n/a	n/a	Shared operating space	Keep existing	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Laird Avenue	Fort Malden Drive	Alma Street	Suburban residential Local Road 1 lane per direction (median divided) Existing signed bike route	50	n/a	n/a	n/a	Designated operating space	Keep existing	Bike lanes pending AADT (see OTM Book 18 Figure 4.55) or bike boulevard treatment
Sandwich Street	Lowes Side Road	McCurdy Drive	Rural commercial Arterial Road 1 lane per direction Designated heavy vehicle route Existing bike lane	50	82	484	6,050	Designated operating space	Keep existing	Buffered paved shoulders with a desired minimum width of 1.5 m (see OTM Book 18 Table 4.11)
Sandwich Street	McCurdy Drive	Park Street	Suburban commercial Arterial Road 1 lane per direction with continuous centre turn lane Designated heavy vehicle route	50	303	581	7,263	Seperated bikeway	Bike lane	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6
Sandwich Street	Park Street	William Street	Urban commercial Arterial Road 1 lane per direction with continuous centre turn lane Designated heavy vehicle route	50	284	688	8,600	Seperated bikeway	Bike lane and separated bike lane north of Alma	Unidirectional Cycle tracks (min 1.5 m operating width with 0.3m buffer). See OTM Book 18 Table 4.3 and 4.6
Balaclava Street	Richmond Street	Alma Street	Urban to suburban residential Local Road 1 lane per direction	40?	n/a	n/a	n/a	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Victoria Street	Simcoe Street	Richmond Street	Urban residential Collector Road 1 lane per direction	40-50	n/a	n/a	n/a	Designated operating space	n/a	Bike lanes (pending AADT volumes). Recommendation for advisory bicycle lane minimum widths to be 1.5m (see OTM Book 18 Table 4.10) with traffic calming to 30km/h.
Victoria Street	Richmond Street	Alma Street	Suburban residential Collector Road 1 lane per direction	40-50	n/a	n/a	n/a	Shared or deignated operating space	n/a	Bike boulevard with traffic calming or bike lanes (pending AADT). Traffic calming for mixed space and/or bike lanes should target 30km/h as best practice.
Hamilton Drive	Victoria Street	Amherstburg Public School	Suburban residential Local Road 1 lane per direction	40	n/a	n/a	n/a	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Fryer Street	Lowes Side Road	Crownridge Boulevard	Rural residential Arterial Road 1 lane per direction	50	n/a	n/a	n/a	Designated operating space	n/a	Buffered paved shoulders with a desired minimum width of 1.5 m (see OTM Book 18 Table 4.11)
Fryer Street	Crownridge Boulevard	Pickering Street	Rural residential Arterial Road 1 lane per direction	40-50	n/a	n/a	n/a	Seperated bikeway	n/a	MUP on west side (min 3.0 m)
Fryer Street	Pickering Street	Simcoe Street	Urban residential Arterial Road 1 lane per direction	40	87	143	1,788	Seperated bikeway	n/a	MUP on east side (min 3.0 m) or cycle tracks (min 1.5 m)
Fryer Street	Simcoe Street	Alma Street	Urban residential Arterial Road 1 lane per direction Existing two-way MUP according to CWATS (no evidence on Google Maps/Streetview)	40	84	190	2,375	Seperated bikeway	Keep existing	Buffered paved shoulders with a desired minimum width of 1.5 m (see OTM Book 18 Table 4.11) or cycle tracks with mininum width of 1.5m.
Kentucky Avenue	Richmond Street	Alma Street	Suburban residential Local Road 1 lane per direction	40?	n/a	n/a	n/a	Shared operating space	n/a	Bike boulevard with traffic calming (getting vehicle speeds down to 30km/h + maximum 1500-3000 vpd); see OTM Book 18 Figure 5.5
Meloche Road	Lowes Side Road	Bruno Casanova Way	Rural Arterial Road 1 lane per direction Existing bike lane and two-way MUP according to CWATS (Google Maps shows paved shoulder with	50	n/a	n/a	n/a	Designated operating space	Keep existing	Either maintain paved shoulders with a desired minimum width of 1.5 m (see OTM Book 18 Table 4.11) or continue MUP from Libro Centre (Bruno Casanova Way) south towards Lowes Side Road as a continuous function.
Meloche Road	Bruno Casanova Way	Simcoe Street	Rural Arterial Road 1 lane per direction Existing bike lanes and MUP on east side	50	42	112	1,400	Seperated bikeway	Keep existing	Maintain existing MUP on east side
Meloche Road	Simcoe Street	Alma Street	Rural residential Arterial Road 1 lane per direction Designated heavy vehicle route Existing bike lanes (and MUP according to CWATS)	60	44	85	1,063	Seperated bikeway	Keep existing	Formalize MUP on west side min. width of 3.0 m, desired width of 4.5m. Buffer to reduce impacts from HV route desgination.

APPENDIX I

Costing and Phasing Breakdown

Simcoe and Meloche

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	MCEA Review
Active Transportation	**Crosswalks**	Simcoe Street at Meloche Road (North Leg)	m2		12	2.75	$ 30.00	$ 990.00	TYLin	
		Simcoe Street at Meloche Road (South Leg)	m2		18	2.75	$ 30.00	$ 1,485.00	TYLin	
		Simcoe Street at Meloche Road (West Leg)	m2		11	2.75	$ 30.00	$ 907.50	TYLin	
		Simcoe Street at Meloche Road (East Leg)	m2		10	2.75	$ 30.00	$ 825.00	TYLin	
	Subtotal (Crosswalks)							**$ 4,207.50**		
	SUBTOTAL (ACTIVE TRANSPORTATION)							**$ 4,207.50**		
Traffic Controls, Intersections & Pavement Design	**Stop Signs**	Meloche Street at Simcoe Street	ea	2			$ 350.00	$ 700.00		
	Subtotal (Stop Signs)							**$ 700.00**		
	Concrete Median (Meloche at Simcoe)	Meloche Street at Simcoe Street	m2	1	80	1	$ 90.00	$ 7,200.00		
	Subtotal (Intersection Control Studies)							**$ 7,200.00**		
	New Signalization (Traffic Signal)	Meloche Street at Simcoe Street	Lump Sum	1			$ 300,000.00	$ 300,000.00		
	Subtotal (New Signalization)							**$ 300,000.00**		
	SUBTOTAL (TRAFFIC)							**$ 307,900.00**		
Traffic Calming Measures	**Curb Bumpout**	Simcoe Street at Meloche Street - northeast corner	ea	1			$ 20,000.00	$ 20,000.00		
		Simcoe Street at Meloche Street - northwest corner	ea	1			$ 20,000.00	$ 20,000.00	https://safety.fhwa.dot.gov	(19a) Construction of localized operational improvements at specific locations, and construction of intersections and roundabouts. • Project must be within an existing right-of-way • For projects that require property acquisition, refer to project
		Simcoe Street at Meloche Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00	/saferjourney1/Library/cou	
		Simcoe Street at Meloche Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00	ntermeasures/23.htm#:~:te	
	Subtotal (Curb Bumpout)							**$ 80,000.00**		
	SUBTOTAL (TRAFFIC CALMING MEASURES)							**$ 80,000.00**		
	TOTAL							**$ 392,107.50**		

Murray Street Option 1

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Traffic Calming Measures	**Curb Bumpout**	Murray Street at Dalhousie Street - northeast corner	ea	1			$ 20,000.00	$ 20,000.00			(19a) Construction of localized operational improvements at specific locations, and construction of intersections and roundabouts. • Project must be within an existing right-of-way • For projects that require property acquisition, refer to project description 33 to determine project schedule
		Murray Street at Ramsay Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Murray Street at Ramsay Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
	Subtotal (Curb Bumpout)							**$ 60,000.00**			
	Raised Intersections	Dalhousie Street at Murray Street	ea	1			$ 50,000.00	$ 50,000.00			
	Subtotal (Raised Intersections)							**$ 50,000.00**			
											EXEMPT from EA (as all these work are within existing ROW)
	SUBTOTAL (TRAFFIC CALMING MEASURES)							**$ 110,000.00**			
	TOTAL							**$ 110,000.00**			

Murray Street Option 2

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Active Transportation	**Concrete Sidewalk Widening**	Murray Street between Dalhousie Street and Ramsay Street (North Sidewalk)	m2		85	1.20	$ 90.00	$ 9,180.00	TYLin		Same as above
		Murray Street between Dalhousie Street and Ramsay Street (South Sidewalk)	m2		85	1.20	$ 90.00	$ 9,180.00	TYLin		
	Subtotal (Sidewalk Widening)							**$ 18,360.00**			
	SUBTOTAL (ACTIVE TRANSPORTATION)							**$ 18,360.00**			
Traffic Calming Measures	**Raised Intersections**	Dalhousie Street at Murray Street	ea	1			$ 50,000.00	$ 50,000.00			(19a) Construction of localized operational improvements at specific locations, and construction of intersections and roundabouts. • Project must be within an existing right-of-way
	Subtotal (Raised Intersections)							**$ 50,000.00**			
	SUBTOTAL (TRAFFIC CALMING MEASURES)							**$ 50,000.00**			
	TOTAL							**$ 68,360.00**			

Murray Street Option 3

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Active Transportation	**Concrete Sidewalk Construction**	Murray Street between Dalhousie Street and Ramsay Street (Middle)	m2		85	3	$ 90.00	$ 22,950.00	TYLin		
	Subtotal (Sidewalk Construction)							**$ 22,950.00**			
	Concrete Sidewalk Widening	Murray Street between Dalhousie Street and Ramsay Street (North Sidewalk)	m2		85	1.20	$ 90.00	$ 9,180.00	TYLin		Same as above
		Murray Street between Dalhousie Street and Ramsay Street (South Sidewalk)	m2		85	1.20	$ 90.00	$ 9,180.00	TYLin		
	Subtotal (Sidewalk Widening)							**$ 18,360.00**			
	SUBTOTAL (ACTIVE TRANSPORTATION)							**$ 41,310.00**			
Traffic Calming Measures	**Raised Intersections**	Dalhousie Street at Murray Street	ea	1			$ 50,000.00	$ 50,000.00			(19a) Construction of localized operational improvements at specific locations, and construction of intersections and roundabouts. • Project must be within an existing right-of-way
	Subtotal (Raised Intersections)							**$ 50,000.00**			
	SUBTOTAL (TRAFFIC CALMING MEASURES)							**$ 50,000.00**			
	TOTAL							**$ 91,310.00**			

Short Term Phasing (1-5 Years)

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Active Transportation	Concrete Sidewalk Construction	Wolfe and Murray Street (next to the park)	m2		230	2.1	$ 90.00	$ 43,470.00	TYLin		(25a) Construction or removal of sidewalks or multi-purpose paths or cycling facilities within existing or protected rights-of-way is **EXEMPT from EA**
		Hamilton Drive North Side towards Amherstburg Public School	m2		130	2.1	$ 90.00	$ 24,570.00	TYLin		
		Pickering Street South Side	m2		790	2.1	$ 90.00	$ 149,310.00	TYLin		(25b) Construction of sidewalks, MUPs or cycling facilities including water crossings outside existing ROW and/or in a utility or rail corridor is **EXEMPT from EA is it costs less than $4.1M. Greater than that will require Schedule B EA and greater than $12M will require Schedule C EA**
		Around Austin "Toddy" Jones Park	m2		328	2.1	$ 90.00	$ 61,992.00	TYLin		
		Victoria Street East Side from Simcoe Street to the Park's Parking Lot	m2		227	2.1	$ 90.00	$ 42,903.00	TYLin		
		Murray Street between Dalhousie Street and Ramsay Street (Middle)	m2		85	3	$ 90.00	$ 22,950.00	TYLin		
	Subtotal (Sidewalk Construction)							**$ 345,195.00**			
	Concrete Sidewalk Widening	Dalhousie Street between North Street and Rankin Avenue (West Sidewalk)	m2		110	1.3	$ 90.00	$ 12,870.00	TYLin		
		Dalhousie Street between North Street and Rankin Avenue (East Sidewalk)	m2		110	1.1	$ 90.00	$ 10,890.00	TYLin		
		Dalhousie Street between Rankin Avenue Richmond Street (West Sidewalk)	m2		115	1.70	$ 90.00	$ 17,595.00	TYLin		
		Dalhousie Street between Rankin Avenue Richmond Street (East Sidewalk)	m2		115	1.80	$ 90.00	$ 18,630.00	TYLin		
		Dalhousie Street between Murray Street and Richmond Street (West Sidewalk)	m2		75	1.80	$ 90.00	$ 12,150.00	TYLin		
		Dalhousie Street between Murray Street and Richmond Street (East Sidewalk)	m2		75	1.40	$ 90.00	$ 9,450.00	TYLin		
		Dalhousie Street between Murray Street and Gore Street (West Sidewalk)	m2		120	0.40	$ 90.00	$ 4,320.00	TYLin		
		Dalhousie Street between Murray Street and Gore Street (East Sidewalk)	m2		120	0.40	$ 90.00	$ 4,320.00	TYLin		
		Murray Street between Dalhousie Street and Ramsay Street (North Sidewalk)	m2		85	1.50	$ 90.00	$ 11,475.00	TYLin		
		Murray Street between Dalhousie Street and Ramsay Street (South Sidewalk)	m2		85	1.50	$ 90.00	$ 11,475.00	TYLin		
		North Street (South Sidewalk)	m2		275	1.10	$ 90.00	$ 27,225.00	TYLin		
		Rankin Avenue (North Sidewalk)	m2		275	0.90	$ 90.00	$ 22,275.00	TYLin		
		Rankin Avenue (South Sidewalk)	m2		275	1.20	$ 90.00	$ 29,700.00	TYLin		Same as above
		Richmond Street (North Sidewalk)	m2		260	1.00	$ 90.00	$ 23,400.00	TYLin		
		Richmond Street (South Sidewalk)	m2		152	1.30	$ 90.00	$ 17,784.00	TYLin		
		Gore Street (North Sidewalk)	m2		235	0.30	$ 90.00	$ 6,345.00	TYLin		
		Gore Street (South Sidewalk)	m2		235	0.30	$ 90.00	$ 6,345.00	TYLin		
		Ramsay Street (West Sidewalk) - From Richmond Street to Murray Street	m2		73	0.60	$ 90.00	$ 3,942.00	TYLin		
		Ramsay Street (East Sidewalk) - From Richmond Street to Murray Street	m2		73	0.90	$ 90.00	$ 5,913.00	TYLin		
		Ramsay Street (West Sidewalk) - From Murray Street to Gore Street	m2		118	0.60	$ 90.00	$ 6,372.00	TYLin		
		Ramsay Street (East Sidewalk) - From Murray Street to Gore Street	m2		118	0.90	$ 90.00	$ 9,558.00	TYLin		
		Bathrust Street (West Sidewalk) - From Richmond Street to Murray Street	m2		65	0.70	$ 90.00	$ 4,095.00	TYLin		
		Bathrust Street (East Sidewalk) - From Richmond Street to Murray Street	m2		70	0.70	$ 90.00	$ 4,410.00	TYLin		
		Bathrust Street (West Sidewalk) - From Murray Street to Gore Street	m2		115	0.70	$ 90.00	$ 7,245.00	TYLin		
		Bathrust Street (East Sidewalk) - From Murray Street to Gore Street	m2		115	0.70	$ 90.00	$ 7,245.00	TYLin		
	Subtotal (Sidewalk Widening)							**$ 295,029.00**			
	Crosswalks	Victoria Street South at Hamilton Drive (North Leg)	m2		9	2.75	$ 30.00	$ 754.88	TYLin		
		Victoria Street South at Hamilton Drive (West Leg)	m2		9	2.75	$ 30.00	$ 721.88	TYLin		
		Wilkison Court at Hamilton Drive (North Leg)	m2		9	2.75	$ 30.00	$ 771.38	TYLin		
		Dalhousie Street at Richmond Street (North Leg)	m2		8	2.75	$ 30.00	$ 618.75	TYLin		
		Dalhousie Street at Richmond Street (South Leg)	m2		7	2.75	$ 30.00	$ 589.88	TYLin		
		Dalhousie Street at Richmond Street (East Leg)	m2		14	2.75	$ 30.00	$ 1,134.38	TYLin		
		Richmond Street (mid-block crossing in front of the Service Ontario)	m2		12	2.75	$ 30.00	$ 990.00	TYLin		
											EXEMPT
		Dalhousie Street at North Street (North Leg)	m2		13	2.75	$ 30.00	$ 1,051.88	TYLin		
		Dalhousie Street at North Street (South Leg)	m2		10	2.75	$ 30.00	$ 837.38	TYLin		
		Fort Malden Drive at Dalhousie Street (East Leg)	m2		9	2.75	$ 30.00	$ 742.50	TYLin		
		Simcoe Street at Meloche Road (North Leg)	m2		12	2.75	$ 30.00	$ 990.00	TYLin		
		Simcoe Street at Meloche Road (South Leg)	m2		18	2.75	$ 30.00	$ 1,485.00	TYLin		
		Simcoe Street at Meloche Road (West Leg)	m2		11	2.75	$ 30.00	$ 907.50	TYLin		
		Simcoe Street at Meloche Road (East Leg)	m2		10	2.75	$ 30.00	$ 825.00	TYLin		
	Subtotal (Crosswalks)							**$ 12,420.38**			
	Painted Bike Lanes (not including the CWATS routes)										(25a) Construction or removal of sidewalks or multi-purpose paths or cycling facilities within existing or protected rights-of-way is **EXEMPT from EA**
							$ 500.00	$ -	Mobycon		
		Fryer Street from Simcoe Street to Lowes Side Road	m		1300		$ 500.00	$ 650,000.00	Mobycon		(25b) Construction of sidewalks, MUPs or cycling facilities including water crossings outside existing ROW and/or in a utility or rail corridor is EXEMPT from EA is it costs less than $4.1M. Greater than that will require Schedule B EA and greater than $12M will require Schedule C EA
		Pickering Drive from Dalhousie Street to Sandwich Street	m		355		$ 500.00	$ 177,500.00	Mobycon		
		Simcoe Street from Sandwich Street to Fryer Street	m		785		$ 500.00	$ 392,500.00	Mobycon		
		Richmond Street from Dalhousie Street to Simcoe Street	m		3000		$ 500.00	$ 1,500,000.00	Mobycon		
		Hamilton Drive From Victoria Street South to Amherstburg Public School	m		140		$ 500.00	$ 70,000.00	Mobycon		
		Girard Street from William Street to Stella Maris School	m		110		$ 500.00	$ 55,000.00	Mobycon		
	Subtotal (Painted Bike Lanes)							**$ 2,845,000.00**			
	Protected Bike Lanes		m				$ 2,000.00	$ -			(21) Reconstruction where the reconstructed road or other linear paved facilities (e.g. HOV lanes) will be for the same purpose, use, capacity and at the same location (e.g. addition or reduction of cycling lanes/facilities, parking lanes, or continuous centre turn lanes – no change to the number of motor vehicle lanes) is **EXEMPT from EA**
			m				$ 2,000.00	$ -			
			m				$ 2,000.00	$ -			
			m				$ 2,000.00	$ -			
	Subtotal (Protected Bike Lanes)							**$ -**			
	Bike Repair Stations		ea								
	Subtotal (Bike Repair Stations)							**$ -**			
	SUBTOTAL (ACTIVE TRANSPORTATION)							**$ 3,497,644.38**			
	Concrete Bus Pad										
		Alma Street at Sandwich Street	m2	1	15	3	$ 85.00	$ 3,825.00			
		Alma Street at Balaclava Street South	m2	1	15	3	$ 85.00	$ 3,825.00			
		Richmond Street at Victoria Street South	m2	1	15	3	$ 85.00	$ 3,825.00			
		Richmond Street at Boardwalk Avenue	m2	1	15	3	$ 85.00	$ 3,825.00			
		Richmond Street at Illinois Street	m2	1	15	3	$ 85.00	$ 3,825.00			
		Richmond Street at Bratt Drive	m2	1	15	3	$ 85.00	$ 3,825.00			
		Simcoe Street at Richmond Street	m2	2	15	3	$ 85.00	$ 7,650.00			
		Simcoe Street at Victoria Street South	m2	1	15	3	$ 85.00	$ 3,825.00			
		Simcoe Street at Sandwich Street South	m2	1	15	3	$ 85.00	$ 3,825.00			
	Subtotal (Bus Pad)							**$ 38,250.00**			
	Bus Shelter										
		Alma Street at Sandwich Street	ea	1			$ 30,000.00	$ 30,000.00			
		Richmond Street at Victoria Street South	ea	1			$ 30,000.00	$ 30,000.00			

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Transit		Simcoe Street at Victoria Street South	ea	1			$ 30,000.00	$ 30,000.00			
	Subtotal (Bus Shelter)							**$ 90,000.00**			
	Bike Rack	Meloche Road at Alma Street	ea	1			$ 696.00	$ 696.00			
		Richmond Street at Jack Purdie Park	ea	1			$ 696.00	$ 696.00			
		Victoria Street at Richmond Street	ea	1			$ 696.00	$ 696.00			
		Fryer Street at Simcoe Street	ea	1			$ 696.00	$ 696.00			
		Libro Credit Union Centre	ea	1			$ 696.00	$ 696.00			
		Lowes Sideroad at Meloche Road	ea	1			$ 696.00	$ 696.00			
		Lowes Sideroad at Fryer Street	ea	1			$ 696.00	$ 696.00			
		Sandwich Street at McCurdy Drive	ea	1			$ 696.00	$ 696.00			
		Sandwich Street at Simcoe Street	ea	1			$ 696.00	$ 696.00			
		Sandwich Street at Richmond Street	ea	1			$ 696.00	$ 696.00			Not Applicable
		Dalhausie Street at Richmond Street	ea	1			$ 696.00	$ 696.00			
		Bill Wigle Park	ea	1			$ 696.00	$ 696.00			
		Amherstburg Public School	ea	1			$ 696.00	$ 696.00			
		Fort Malden National Historic Site	ea	1			$ 696.00	$ 696.00			
		Playground at Briar Ridge Avenue	ea	1			$ 696.00	$ 696.00			
		Gore Street at Ramsay Street	ea	1			$ 696.00	$ 696.00			
		Centennial Park	ea	1			$ 696.00	$ 696.00			
	Subtotal (Bike Rack)							**$ 11,832.00**			
	Wayfinding Signage (New sign + Pole)										
							$ 455.00	$ -	https://manteca-ca.granicus.com/MetaViewer.php		
	Subtotal (Wayfinding Signage)							**$ -**			
	Bike Share Station (only the station (only infrastruction) and with bike fleet (assuming 5 bikes per station)	Meloche Road at Alma Street	ea	5			$ 5,000.00	$ 25,000.00			
		Richmond Street at Jack Purdie Park	ea	5			$ 5,000.00	$ 25,000.00			
		Victoria Street at Richmond Street	ea	5			$ 5,000.00	$ 25,000.00			
		Fryer Street at Simcoe Street	ea	5			$ 5,000.00	$ 25,000.00			
		Libro Credit Union Centre	ea	5			$ 5,000.00	$ 25,000.00			
		Lowes Sideroad at Meloche Road	ea	5			$ 5,000.00	$ 25,000.00			
		Lowes Sideroad at Fryer Street	ea	5			$ 5,000.00	$ 25,000.00			
		Sandwich Street at McCurdy Drive	ea	5			$ 5,000.00	$ 25,000.00			
		Sandwich Street at Simcoe Street	ea	5			$ 5,000.00	$ 25,000.00			
		Sandwich Street at Richmond Street	ea	5			$ 5,000.00	$ 25,000.00			
		Dalhausie Street at Richmond Street	ea	5			$ 5,000.00	$ 25,000.00			
		Bill Wigle Park	ea	5			$ 5,000.00	$ 25,000.00			
	Subtotal (Bike Shared Station)							**$ 300,000.00**			
	E-Bike Charging Station		ea				$ 1,500.00		https://www.sarisinfrastructure.com/product/ebike		
	Subtotal (E-Bike Charging Station)							$ -			
	Digital Signs										
	Subtotal (Digital Signs)							$ -			
	Transit Hub										**EXEMPT** unless:
											Schedule B EA if (4b) Construction of localized operational improvements at specific locations (i.e. stopping lanes, access lanes, turning lanes, queue jump lanes, and roadway access ramps etc) with the potential for some adverse environmental effects.
	Subtotal (Transit Hub)							$ -			
	SUBTOTAL (TRANSIT)							**$ 440,082.00**			
Traffic Controls, Intersections & Pavement Design	**New Signalization (Traffic Signal)**	Sandwich Street at Fort Street	Lump Sum	1			$ 300,000.00	$ 300,000.00			
	Subtotal (New Signalization)							**$ 300,000.00**			
	Stop Signs	Meloche Street at Simcoe Street	ea	2			$ 350.00	$ 700.00			
	Subtotal (Stop Signs)							**$ 700.00**			
	Intersection Control Studies										
			ea				$ 35,000.00	$ -			
	Subtotal (Intersection Control Studies)							**$ -**			
	Concrete Median (Meloche at Simcoe)										
		Meloche Street at Simcoe Street	m2	1	80	1	$ 90.00	$ 7,200.00			
	Subtotal (Concrete Median)							**$ 7,200.00**			
	Reconstruction for Heavy Vehicles										
	Subtotal (Heavy Vehicles)							$ -			
	Pavement Markings										
	Subtotal (Pavement Markings)							$ -			
	SUBTOTAL (TRAFFIC)							**$ 307,900.00**			
	Curb Bumpout	North Street at Dalhousie Street - northeast corner	ea	1			$ 20,000.00	$ 20,000.00	https://safety.fhwa.dot.gov/saferjourney1/Library/countermeasures/23.htm#:~:text=Curb%20extensions%20cost%20from%20%242%2C000,on%20design%20and%20site%20conditions		
		North Street at Dalhousie Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Rankin Avenue at Dalhousie Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Rankin Avenue at Sandwich Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Dalhousie Street - northeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Dalhousie Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Ramsay Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Ramsay Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Bathurst Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Bathurst Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Sandwich Street - northwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Richmond Street at Sandwich Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
							$ 20,000.00	$ -			
							$ 20,000.00	$ -			
							$ 20,000.00	$ -			
		Murray Street at Bathurst Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Murray Street at Bathurst Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Murray Street at Sandwich Street - northwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Gore Street at Dalhousie Street - northeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Gore Street at Ramsay Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Gore Street at Ramsay Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Gore Street at Bathurst Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Gore Street at Bathurst Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Traffic Calming Measures		Gore Street at Sandwich Street - northwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Simcoe Street at Meloche Street - northeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Simcoe Street at Meloche Street - northwest corner	ea	1			$ 20,000.00	$ 20,000.00			
		Simcoe Street at Meloche Street - southeast corner	ea	1			$ 20,000.00	$ 20,000.00			
		Simcoe Street at Meloche Street - southwest corner	ea	1			$ 20,000.00	$ 20,000.00			
	Subtotal (Curb Bumpout)							**$ 500,000.00**			
	Mini Roundabout										(19a) Construction of localized operational improvements at specific locations, and construction of intersections and roundabouts. • Project must be within an existing right-of-way • For projects that require property acquisition, refer to project description 33 to determine project schedule
	Subtotal (Mini Roundabout)							$ -			
	Lane Separators										**EXEMPT from EA (as all these work are within existing ROW)**
	Subtotal (Lane Separators)							$ -			**If roundabout needs new ROW and property aquisition to build, then EA is required based on $3M threshold, as per:** **(33) Reconstruction or widening where the reconstructed road or other linear paved facilities (e.g. HOV lanes) will not be for the same purpose, use, capacity or at the same location (e.g. additional motor vehicle lanes, continuous centre turn lane that requires property, i.e. not at the same location)**
	Traffic Calming Signs (Slow Speed Zones Signs)										
	Subtotal (Slow Speed Zones Signs)							$ -			
	Traffic Calming Gateways	Laird Avenue South at Fort Malden Drive	ea	1			$ 70,000.00	$ 70,000.00			
		Laird Avenue South at North Street	ea	1			$ 70,000.00	$ 70,000.00			
		Dalhousie Street at Rankin Avenue	ea	1			$ 70,000.00	$ 70,000.00			
		Ranking Avenue (mid-block)	ea	1			$ 70,000.00	$ 70,000.00			
		Richmond Street (mid-block) between Sandwich Street and Bathurst Street	ea	1			$ 70,000.00	$ 70,000.00			
		Murray Street (mid-block) between Sandwich Street and Bathurst Street	ea	1			$ 70,000.00	$ 70,000.00			
		Gore Street (mid-block) between Sandwich Street and Bathurst Street	ea	1			$ 70,000.00	$ 70,000.00			
		Dalhousie Street (mid-block) between Gore Street and Park Street	ea	1			$ 70,000.00	$ 70,000.00			
		Park Street (mid-block) between Dalhousie Street and Ramsay Street	ea	1			$ 70,000.00	$ 70,000.00			
		Simcoe Street between Sandwich Street and Bathrust Street	ea	1			$ 70,000.00	$ 70,000.00			
		Fryer Street between Richmond Street and Simcoe Street	ea	1			$ 70,000.00	$ 70,000.00			
	Subtotal (Traffic Calming Gateways Speed Tables)							**$ 770,000.00**			
	Raised Intersections	Fryer Street at Simcoe Street	ea	1			$ 50,000.00	$ 50,000.00			
		Dalhousie Street at Richmond Street	ea	1			$ 50,000.00	$ 50,000.00			
		Dalhousie Street at Murray Street	ea	1			$ 50,000.00	$ 50,000.00			
		Dalhousie Street at Gore Street	ea	1			$ 50,000.00	$ 50,000.00			
	Subtotal (Raised Intersections)							**$ 200,000.00**			
	Planters										
	Subtotal (Planters)							$ -			
	Speed Control Devices (Speed Bumps, Chicanes, Speed Cushions, Speed Display)										
	Subtotal (Speed Control Devices)							$ -			
	SUBTOTAL (TRAFFIC CALMING MEASURES)							**$ 1,470,000.00**			
Parking & Placemaking	**Parking Lane Markings**										
	Subtotal (Parking Lane Markings)							$ -			
	EV Charging Stations	Alma Street at Sandwich Street	ea	1			$ 10,000.00	$ 10,000.00			On-Street parking being within existing ROW is **EXEMPT from EA**
		Fryer Street at Richmond Street	ea	1			$ 10,000.00	$ 10,000.00			
		Fryer Street at Lowes Sideroad	ea	1			$ 10,000.00	$ 10,000.00			New parking lots on undistrubed lots may need an EA depending on cost and archeological assessment of the land and more.
		Richmond Street at Jack Purdie Park	ea	1			$ 10,000.00	$ 10,000.00			
	Subtotal (EV Charging Stations)							**$ 40,000.00**			
	Trees										
	Subtotal (Trees)							$ -			
	SUBTOTAL (PARKING AND PLACE MAKING)							**$ 40,000.00**			
TDM Programs	**Educational Programs**										
	Subtotal (Educational Programs)							$ -			
	Travel Surveys										
	Subtotal (Travel Surveys)							$ -			
	Charge for Vehicle Parking										
	Subtotal (Charge for Vehicle Parking)							$ -			
	Bike-to-work Week										
	Subtotal (Bike-to-work Week)							$ -			
	SUBTOTAL (TDM PROGRAMS)							$ -			Not Applicable
Standards & Guidelines	**Engineering Design Manual (Typical Cross-sections, Detailed Design Standards)**		ea					$ -			
	Subtotal (Engineering Design Manual)							$ -			
	Bicycle Parking Guideline										
	Subtotal (Bicycle Parking Guideline)							$ -			
	Adopt Traffic Calming Policy										
	Subtotal (Adopt Traffic Calming Policy)							$ -			
	Adopt TDM Policy										
	Subtotal (Adopt TDM Policy)							$ -			
	SUBTOTAL (STANDARDS AND GUIDELINES)							$ -			
	TOTAL							**$ 5,755,626.38**			

Medium Term Phasing (5-10 Years)

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Active Transportation	Concrete Sidewalk Construction	Victoria Street West Side from Richmond Street to St. Arnaud Street	m2		500	2.1	$ 90.00	$ 94,500.00	TYLin		(25a) Construction or removal of sidewalks or multi-purpose paths or cycling facilities within existing or protected rights-of-way is **EXEMPT from EA** (25b) Construction of sidewalks, MUPs or cycling facilities including water crossings outside existing ROW and/or in a utility or rail corridor is **EXEMPT from EA is it costs less than $4.1M. Greater than that will require Schedule B EA and greater than $12M will require Schedule C EA**
	Subtotal (Sidewalk Construction)							**$ 94,500.00**			
	Concrete Sidewalk Widening										
	Subtotal (Sidewalk Widening)							$ -			
	Crosswalks	North Street at Laird Avenue South (West Leg)	m2		11	2.75	$ 30.00	$ 932.25	TYLin		**EXEMPT**
		North Street at Laird Avenue South (North Leg)	m2		17	2.75	$ 30.00	$ 1,361.25	TYLin		
		North Street at Laird Avenue South (East Leg)	m2		11	2.75	$ 30.00	$ 907.50	TYLin		
		Laird Avenue South at Fort Malden Drive (South Leg)	m2		14	2.75	$ 30.00	$ 1,155.00	TYLin		
		Laird Avenue South at Fort Malden Drive (North Leg)	m2		9	2.75	$ 30.00	$ 742.50	TYLin		
		Laird Avenue South at Fort Malden National Historic Site Entrance (South Leg)	m2		9	2.75	$ 30.00	$ 742.50	TYLin		
	Subtotal (Crosswalks)							**$ 5,841.00**			
	Painted Bike Lanes (not including the CWATS routes)	Lowes Side Road (From Dalhousie to Meloche Road)	m		2310		$ 500.00	$ 1,155,000.00	Mobycon		(25a) Construction or removal of sidewalks or multi-purpose paths or cycling facilities within existing or protected rights-of-way is **EXEMPT from EA** (25b) Construction of sidewalks, MUPs or cycling facilities including water crossings outside existing ROW and/or in a utility or rail corridor is EXEMPT from EA is it costs less than $4.1M. Greater than that will require Schedule B EA and greater than $12M will require Schedule C EA
		Victoria Street South from Alma Street to Simcoe Street	m		1180		$ 500.00	$ 590,000.00	Mobycon		
		Balaclava Street South from Richmond Street to Alma Street	m		750		$ 500.00	$ 375,000.00	Mobycon		
		Kentucky Avenue	m		400		$ 500.00	$ 200,000.00	Mobycon		
		William Street from Sandwich Street North to Girard Street	m		410		$ 500.00	$ 205,000.00	Mobycon		
		Front Road South From County Road 20 to Park Avenue	m		1110		$ 500.00	$ 555,000.00	Mobycon		
		Erie Avenue From McLeod Avenue to cul-de-sac	m		780		$ 500.00	$ 390,000.00	Mobycon		
		Trail from Erie Avenue (cul-de-sac) to Willow Beach Road	m		960		$ 500.00	$ 480,000.00	Mobycon		
		Willow Beach Road from cul-de-sac to Concession Road 3	m		565		$ 500.00	$ 282,500.00	Mobycon		
		Concession Road 3 from Willow Beach Road to County Road 20	m		2140		$ 500.00	$ 1,070,000.00	Mobycon		
	Subtotal (Painted Bike Lanes)							**$ 5,302,500.00**			
	Protected Bike Lanes		m				$ 2,000.00	$ -			(21) Reconstruction where the reconstructed road or other linear paved facilities (e.g. HOV lanes) will be for the same purpose, use, capacity and at the same location (e.g. addition or reduction of cycling lanes/facilities, parking lanes, or continuous centre turn lanes – no change to the number of motor vehicle lanes) is **EXEMPT from EA**
			m				$ 2,000.00	$ -			
			m				$ 2,000.00	$ -			
			m				$ 2,000.00	$ -			
	Subtotal (Protected Bike Lanes)							$ -			
	Bike Repair Stations		ea				$ 3,500.00	$ -	Used Todd's source for unit cost. Previously Mat four		**EXEMPT**
	Subtotal (Bike Repair Stations)							$ -			
	SUBTOTAL (ACTIVE TRANSPORTATION)							**$ 5,402,841.00**			
	Concrete Bus Pad	Sandwich Street South at William Street	m2	2	15	3	$ 85.00	$ 7,650.00			
		Sandwich Street South at Brunner Avenue	m2	2	15	3	$ 85.00	$ 7,650.00			
		Victoria Street South at Alma Street	m2	1	15	3	$ 85.00	$ 3,825.00			
		Victoria Street South at Hamilton Drive	m2	1	15	3	$ 85.00	$ 3,825.00			
		Sandwich Street South at Simcoe Street	m2	1	15	3	$ 85.00	$ 3,825.00			
		Sandwich Street South at Pickering Street	m2	2	15	3	$ 85.00	$ 7,650.00			
		Sandwich Street South at Amherstburg Wastewater Treatment Plant (West Side)	m2	1	15	3	$ 85.00	$ 3,825.00			
		Sandwich Street South Opposite Malden Hill Drive	m2	1	15	3	$ 85.00	$ 3,825.00			
		Lowes Side Road at Sandwich Street	m2	1	15	3	$ 85.00	$ 3,825.00			

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Transit	*Subtotal (Bus Pad)*							**$ 45,900.00**			
	Bus Shelter	Sandwich Street South at Alma Street	ea	1			$ 30,000.00	$ 30,000.00	Miway - Mississauga		
		Sandwich Street South at Pickering Street	ea	2			$ 30,000.00	$ 60,000.00			
		Victoria Street South at Hamilton Drive	ea	1			$ 30,000.00	$ 30,000.00			
		Sandwich Street South at Simcoe Street	ea	1			$ 30,000.00	$ 30,000.00			
		Lowes Side Road at Sandwich Street	ea	1			$ 30,000.00	$ 30,000.00			
		Libro Credit Union Centre	ea	1			$ 30,000.00	$ 30,000.00			
	Subtotal (Bus Shelter)							**$ 210,000.00**			
	Bike Rack										Not Applicable
	Subtotal (Bike Rack)							$ -			
	Wayfinding Signage (New sign + Pole)						$ 455.00	$ -	https://manteca-ca.granicus.com/MetaViewer.php?		
	Subtotal (Wayfinding Signage)							$ -			
	Bike Share Station (only the station (only infrastruction) and with bike fleet (assuming 5 bikes per station)										
	Subtotal (Bike Shared Station)							$ -			
	E-Bike Charging Station										
	Subtotal (E-Bike Charging Station)							$ -			
	Digital Signs										
	Subtotal (Digital Signs)							$ -			
	Transit Hub	no price for this - recommend specific study and design									**EXEMPT** unless: Schedule B EA if (4b) Construction of localized operational improvements at specific locations (i.e. stopping lanes, access lanes, turning lanes, queue jump lanes, and roadway access ramps etc) with the potential for some adverse environmental effects.
	Subtotal (Transit Hub)							$ -			
	SUBTOTAL (TRANSIT)							**$ 255,900.00**			
Traffic Controls, Intersections & Pavement Design	New Signalization (Traffic Signal)	Meloche Street at Simcoe Street	Lump Sum	1			$ 300,000.00	$ 300,000.00			
	Subtotal (New Signalization)							**$ 300,000.00**			
	Stop Signs										
	Subtotal (Stop Signs)							$ -			
	Intersection Control Studies		ea				$ 35,000.00	$ -			
	Subtotal (Intersection Control Studies)							$ -			
	Concrete Median (Meloche at Simcoe)							$ -			
	Subtotal (Concrete Median)							$ -			
	Reconstruction for Heavy Vehicles										
	Subtotal (Heavy Vehicles)							$ -			
	Pavement Markings										
	Subtotal (Pavement Markings)							$ -			
	SUBTOTAL (TRAFFIC)							**$ 300,000.00**			
	Curb Bumpout										

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Traffic Calming Measures											
	Subtotal (Curb Bumpout)							$ -			
	Mini Roundabout	Murray Street at King Street	Lump Sum	1			$ 250,000.00	$ 250,000.00	https://nacto.org/docs/usdg/fhwa-mini-roundabout		
		Murray Street at Brock Street	Lump Sum	1			$ 250,000.00	$ 250,000.00			
		Gore Street at King Street	Lump Sum	1			$ 250,000.00	$ 250,000.00			
		Gore Street at Brock Street	Lump Sum	1			$ 250,000.00	$ 250,000.00			
	Subtotal (Mini Roundabout)							**$ 1,000,000.00**			
	Lane Separators										(19a) Construction of localized operational improvements at specific locations, and construction of intersections and roundabouts. • Project must be within an existing right-of-way • For projects that require property acquisition, refer to project description 33 to determine project schedule
	Subtotal (Lane Separators)							$ -			
	Traffic Calming Signs (Slow Speed Zones Signs)										**EXEMPT from EA (as all these work are within existing ROW)**
	Subtotal (Slow Speed Zones Signs)							$ -			**If roundabout needs new ROW and property aquisition to build, then EA is required based on $3M threshold, as per:** **(33) Reconstruction or widening where the reconstructed road or other linear paved facilities (e.g. HOV lanes) will not be for the same purpose, use, capacity or at the same location (e.g. additional motor vehicle lanes, continuous centre turn lane that requires property, i.e. not at the same location)**
	Traffic Calming Gateways										
	Subtotal (Traffic Calming Gateways Speed Tables)							$ -			
	Raised Intersections										
	Subtotal (Raised Intersections)							$ -			
	Planters										
	Subtotal (Planters)							$ -			
	Speed Control Devices (Speed Bumps, Chicanes, Speed Cushions, Speed Display)										
	Subtotal (Speed Control Devices)							$ -			
	SUBTOTAL (TRAFFIC CALMING MEASURES)							**$ 1,000,000.00**			
Parking & Placemaking	Parking Lane Markings										
	Subtotal (Parking Lane Markings)							$ -			
	EV Charging Stations										On-Street parking being within existing ROW is **EXEMPT from EA** New parking lots on undistrubed lots may need an EA depending on cost and archeological assessment of the land and more.
	Subtotal (EV Charging Stations)							$ -			
	Trees										
	Subtotal (Trees)							$ -			
	SUBTOTAL (PARKING AND PLACE MAKING)							$ -			
TDM Programs	Educational Programs										
	Subtotal (Educational Programs)							$ -			
	Travel Surveys										
	Subtotal (Travel Surveys)							$ -			
	Charge for Vehicle Parking										
	Subtotal (Charge for Vehicle Parking)							$ -			
	Bike-to-work Week										
	Subtotal (Bike-to-work Week)							$ -			
	SUBTOTAL (TDM PROGRAMS)							$ -			
Standards & Guidelines	Engineering Design Manual (Typical Cross-sections, Detailed Design Standards)										
	Subtotal (Engineering Design Manual)							$ -			
	Bicycle Parking Guideline										
	Subtotal (Bicycle Parking Guideline)							$ -			
	Adopt Traffic Calming Policy										
	Subtotal (Adept Traffic Calming Policy)							$ -			
	Adopt TDM Policy										
	Subtotal (Adopt TDM Policy)							$ -			
	SUBTOTAL (STANDARDS AND GUIDELINES)							$ -			
	TOTAL							**$ 6,958,741.00**			

Long Term Phasing (10+ Years)

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Active Transportation	**Concrete Sidewalk Construction**										
	Subtotal (Sidewalk Construction)							$ -			
	Concrete Sidewalk Widening										
	Subtotal (Sidewalk Widening)							$ -			
	Crosswalks										
	Subtotal (Crosswalks)							$ -			
	Painted Bike Lanes (not including the CWATS routes)						$ 500.00	$ -	Mobycon		(25a) Construction or removal of sidewalks or multi-purpose paths or cycling facilities within existing or protected rights-of-way is **EXEMPT from EA** (25b) Construction of sidewalks, MUPs or cycling facilities including water crossings outside existing ROW and/or in a utility or rail corridor is EXEMPT from EA is it costs less than $4.1M. Greater than that will require Schedule B EA and greater than $12M will require Schedule C EA
		Simcoe Street East of Meloche Road	m		?						
	Subtotal (Painted Bike Lanes)							$ -			
	Protected Bike Lanes										
	Subtotal (Protected Bike Lanes)							$ -			
	Bike Repair Stations										
	Subtotal (Bike Repair Stations)							$ -			
	Protected Intersection						$ 1,000,000.00	$ -			(19a) Construction of localized operational improvements at specific locations, and construction of intersections and roundabouts. • Project must be within an existing right-of-way • For projects that require property acquisition, refer to project description 33 to determine project schedule **EXEMPT from EA**
							$ 1,000,000.00	$ -			
							$ 1,000,000.00	$ -			
							$ 1,000,000.00	$ -			
	Subtotal (Protected Intersection)							$ -			
	SUBTOTAL (ACTIVE TRANSPORTATION)							$ -			

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Transit	Concrete Bus Pad										
	Subtotal (Bus Pad)							$ -			
	Bus Shelter										
	Subtotal (Bus Shelter)							$ -			
	Bike Rack										
	Subtotal (Bike Rack)							$ -			
	Wayfinding Signage (New sign + Pole)										
	Subtotal (Wayfinding Signage)							$ -			
	Bike Share Station (only the station (only infrastruction) and with bike fleet (assuming 5 bikes per station)										
	Subtotal (Bike Shared Station)							$ -			
	E-Bike Charging Station										
	Subtotal (E-Bike Charging Station)							$ -			
	Digital Signs										
	Subtotal (Digital Signs)							$ -			
	Transit Hub										
	Subtotal (Transit Hub)							$ -			
	SUBTOTAL (TRANSIT)							$ -			
Traffic Controls, Intersections & Pavement Design	New Signalization (Traffic Signal)	Sandwich Street at North Street	Lump Sum	1			$ 300,000.00	$ 300,000.00			
		Meloche Street at Alma Street	Lump Sum	1			$ 300,000.00	$ 300,000.00			
		Alma Street at Fryer Street/Tofflemire Street	Lump Sum	1			$ 300,000.00	$ 300,000.00			
	Subtotal (New Signalization)							**$ 900,000.00**			
	Stop Signs										
	Subtotal (Stop Signs)							$ -			
	Intersection Control Studies										
	Subtotal (Intersection Control Studies)							$ -			
	Concrete Median (Meloche at Simcoe)										
	Subtotal (Concrete Median)							$ -			
	Reconstruction for Heavy Vehicles										
	Subtotal (Heavy Vehicles)							$ -			
	Pavement Markings										
	Subtotal (Pavement Markings)							$ -			

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
	SUBTOTAL (TRAFFIC)							$ 900,000.00			
Traffic Calming Measures	Curb Bumpout										
	Subtotal (Curb Bumpout)							$ -			
	Mini Roundabout										
	Subtotal (Mini Roundabout)							$ -			
	Lane Separators										
	Subtotal (Lane Separators)							$ -			
	Traffic Calming Signs (Slow Speed Zones Signs)										
	Subtotal (Slow Speed Zones Signs)							$ -			
	Traffic Calming Gateways										
	Subtotal (Traffic Calming Gateways Speed Tables)							$ -			
	Raised Intersections										
	Subtotal (Raised Intersections)							$ -			
	Planters										
	Subtotal (Planters)							$ -			
	Speed Control Devices (Speed Bumps, Chicanes, Speed Cushions, Speed Display)										
	Subtotal (Speed Control Devices)							$ -			
	SUBTOTAL (TRAFFIC CALMING MEASURES)							$ -			
Parking & Placemaking	Parking Lane Markings										
	Subtotal (Parking Lane Markings)							$ -			
	EV Charging Stations										
	Subtotal (EV Charging Stations)							$ -			
	Trees										
	Subtotal (Trees)							$ -			
	SUBTOTAL (PARKING AND PLACE MAKING)							$ -			
TDM Programs	Educational Programs										
	Subtotal (Educational Programs)							$ -			
	Travel Surveys										
	Subtotal (Travel Surveys)							$ -			
	Charge for Vehicle Parking										
	Subtotal (Charge for Vehicle Parking)							$ -			
	Bike-to-work Week										
	Subtotal (Bike-to-work Week)							$ -			
	SUBTOTAL (TDM PROGRAMS)							$ -			
Standards &	Engineering Design Manual (Typical Cross-sections, Detailed Design Standards)										
	Subtotal (Engineering Design Manual)							$ -			
	Bicycle Parking Guideline										
	Subtotal (Bicycle Parking Guideline)							$ -			

Category	Item	Description / Segment / Locations	Unit of Measure	Quantity (m)	Length (m)	Width (m)	Unit Price	Total Cost	Source	Notes	MCEA Review
Guidelines	**Adopt Traffic Calming Policy**										
	Subtotal (Adept Traffic Calming Policy)							$ -			
	Adopt TDM Policy										
	Subtotal (Adopt TDM Policy)							$ -			
	SUBTOTAL (STANDARDS AND GUIDELINES)							$ -			
	TOTAL							$ 900,000.00			