

Lanes, Volumes, Timings  
1: Brownridge Road/Fifth Line & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	1140	70	25	585	50	15	0	10	30	10	85
Future Volume (vph)	180	1140	70	25	585	50	15	0	10	30	10	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	145.0		65.0	30.0		0.0	20.0		0.0	25.0		25.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	100.0			100.0			20.0			75.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.988			0.850				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	2959	1524	1444	2605	0	1480	1154	0	1289	1900	1468
Flt Permitted	0.411			0.234			0.751			0.751		
Satd. Flow (perm)	730	2959	1524	356	2605	0	1170	1154	0	1019	1900	1468
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			70		26			109				109
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		486.3			703.6			285.2			91.4	
Travel Time (s)		29.2			42.2			20.5			6.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	22%	6%	25%	38%	24%	22%	0%	40%	40%	0%	10%
Adj. Flow (vph)	180	1140	70	25	585	50	15	0	10	30	10	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	1140	70	25	635	0	15	10	0	30	10	85
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	25.0	25.0	25.0	25.0	25.0		10.0	10.0		10.0	10.0	10.0

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		16.0	16.0		16.0	16.0	16.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0		16.0	16.0		16.0	16.0	16.0
Total Split (%)	68.0%	68.0%	68.0%	68.0%	68.0%		32.0%	32.0%		32.0%	32.0%	32.0%
Maximum Green (s)	26.0	26.0	26.0	26.0	26.0		10.0	10.0		10.0	10.0	10.0
Yellow Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	8.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	Max		None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0	16.0		16.0	16.0		16.0	16.0	16.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	0
Act Effct Green (s)	36.1	36.1	36.1	36.1	36.1		10.0	10.0		10.0	10.0	10.0
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.72		0.20	0.20		0.20	0.20	0.20
v/c Ratio	0.34	0.54	0.06	0.10	0.34		0.06	0.03		0.15	0.03	0.22
Control Delay	9.3	8.2	2.2	7.5	6.1		17.4	0.2		18.9	16.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	9.3	8.2	2.2	7.5	6.1		17.4	0.2		18.9	16.6	4.9
LOS	A	A	A	A	A		B	A		B	B	A
Approach Delay		8.0			6.2			10.5			9.2	
Approach LOS		A			A			B			A	

Intersection Summary

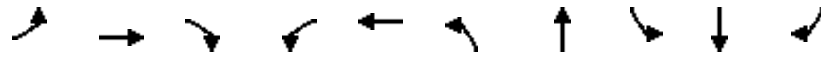
Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	50.3
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	7.5
Intersection LOS:	A
Intersection Capacity Utilization:	79.0%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Brownridge Road/Fifth Line & Steeles Avenue



Queues  
1: Brownridge Road/Fifth Line & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	180	1140	70	25	635	15	10	30	10	85
v/c Ratio	0.34	0.54	0.06	0.10	0.34	0.06	0.03	0.15	0.03	0.22
Control Delay	9.3	8.2	2.2	7.5	6.1	17.4	0.2	18.9	16.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	8.2	2.2	7.5	6.1	17.4	0.2	18.9	16.6	4.9
Queue Length 50th (m)	9.6	39.1	0.0	1.1	16.7	1.3	0.0	2.6	0.9	0.0
Queue Length 95th (m)	24.2	59.9	4.2	4.5	27.2	5.0	0.0	7.9	3.8	6.7
Internal Link Dist (m)	462.3		679.6				261.2		67.4	
Turn Bay Length (m)	145.0		65.0	30.0		20.0		25.0		25.0
Base Capacity (vph)	524	2124	1114	255	1877	233	317	202	378	379
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.54	0.06	0.10	0.34	0.06	0.03	0.15	0.03	0.22
<b>Intersection Summary</b>										

# HCM Signalized Intersection Capacity Analysis

## 1: Brownridge Road/Fifth Line & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	1140	70	25	585	50	15	0	10	30	10	85
Future Volume (vph)	180	1140	70	25	585	50	15	0	10	30	10	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1687	2959	1524	1444	2606		1480	1154		1289	1900	1468
Flt Permitted	0.41	1.00	1.00	0.23	1.00		0.75	1.00		0.75	1.00	1.00
Satd. Flow (perm)	729	2959	1524	356	2606		1170	1154		1019	1900	1468
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	1140	70	25	585	50	15	0	10	30	10	85
RTOR Reduction (vph)	0	0	26	0	10	0	0	9	0	0	0	75
Lane Group Flow (vph)	180	1140	44	25	625	0	15	1	0	30	10	10
Heavy Vehicles (%)	7%	22%	6%	25%	38%	24%	22%	0%	40%	40%	0%	10%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2				6
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	32.8	32.8	32.8	32.8	32.8		5.9	5.9		5.9	5.9	5.9
Effective Green, g (s)	32.8	32.8	32.8	32.8	32.8		5.9	5.9		5.9	5.9	5.9
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.62		0.11	0.11		0.11	0.11	0.11
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	453	1841	948	221	1621		130	129		114	212	164
v/s Ratio Prot		c0.39			0.24			0.00				0.01
v/s Ratio Perm	0.25		0.03	0.07			0.01			c0.03		0.01
v/c Ratio	0.40	0.62	0.05	0.11	0.39		0.12	0.01		0.26	0.05	0.06
Uniform Delay, d1	5.0	6.1	3.9	4.0	4.9		21.1	20.8		21.4	20.9	20.9
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	2.6	1.6	0.1	1.0	0.7		0.4	0.0		1.2	0.1	0.1
Delay (s)	7.6	7.7	4.0	5.1	5.6		21.4	20.8		22.6	21.0	21.1
Level of Service	A	A	A	A	A		C	C		C	C	C
Approach Delay (s)		7.5			5.6			21.2			21.4	
Approach LOS		A			A			C			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			7.9			HCM 2000 Level of Service				A		
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			52.7			Sum of lost time (s)				14.0		
Intersection Capacity Utilization			79.0%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
2: Fifth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (vph)	1180	30	10	655	10	5
Future Volume (vph)	1180	30	10	655	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	60.0		15.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			100.0		30.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2935	1538	1543	2635	1543	1615
Flt Permitted			0.238		0.950	
Satd. Flow (perm)	2935	1538	386	2635	1543	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		30				5
Link Speed (k/h)	60			60	60	
Link Distance (m)	703.6			479.7	556.9	
Travel Time (s)	42.2			28.8	33.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	23%	5%	17%	37%	17%	0%
Adj. Flow (vph)	1180	30	10	655	10	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1180	30	10	655	10	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	CI+Ex			CI+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases		4	8		2	2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	25.0	25.0	25.0	25.0	10.0	10.0

Lanes, Volumes, Timings  
2: Fifth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	33.0	33.0	33.0	33.0	16.0	16.0
Total Split (s)	34.0	34.0	34.0	34.0	16.0	16.0
Total Split (%)	68.0%	68.0%	68.0%	68.0%	32.0%	32.0%
Maximum Green (s)	26.0	26.0	26.0	26.0	10.0	10.0
Yellow Time (s)	6.0	6.0	6.0	6.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	48.3	48.3	48.3	48.3	10.1	10.1
Actuated g/C Ratio	0.93	0.93	0.93	0.93	0.19	0.19
v/c Ratio	0.43	0.02	0.03	0.27	0.03	0.02
Control Delay	2.9	1.4	2.8	2.1	20.3	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	1.4	2.8	2.1	20.3	14.2
LOS	A	A	A	A	C	B
Approach Delay	2.8			2.1	18.3	
Approach LOS	A			A	B	

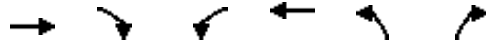
Intersection Summary

Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	52.2
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	2.7
Intersection LOS:	A
Intersection Capacity Utilization:	55.0%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: Fifth Line South & Steeles Avenue



Queues  
2: Fifth Line South & Steeles Avenue

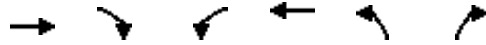


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1180	30	10	655	10	5
v/c Ratio	0.43	0.02	0.03	0.27	0.03	0.02
Control Delay	2.9	1.4	2.8	2.1	20.3	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	1.4	2.8	2.1	20.3	14.2
Queue Length 50th (m)	0.0	0.0	0.0	0.0	0.8	0.0
Queue Length 95th (m)	59.7	2.4	2.0	27.4	4.9	2.7
Internal Link Dist (m)	679.6			455.7	532.9	
Turn Bay Length (m)		30.0	60.0		15.0	
Base Capacity (vph)	2718	1427	357	2440	299	317
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.02	0.03	0.27	0.03	0.02
<b>Intersection Summary</b>						

# HCM Signalized Intersection Capacity Analysis

## 2: Fifth Line South & Steeles Avenue

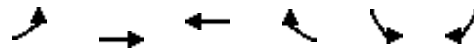
2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (vph)	1180	30	10	655	10	5
Future Volume (vph)	1180	30	10	655	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	8.0	8.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Flt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2935	1538	1543	2635	1543	1615
Flt Permitted	1.00	1.00	0.24	1.00	0.95	1.00
Satd. Flow (perm)	2935	1538	387	2635	1543	1615
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1180	30	10	655	10	5
RTOR Reduction (vph)	0	8	0	0	0	5
Lane Group Flow (vph)	1180	22	10	655	10	0
Heavy Vehicles (%)	23%	5%	17%	37%	17%	0%
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases		4	8		2	2
Actuated Green, G (s)	41.5	41.5	41.5	41.5	1.6	1.6
Effective Green, g (s)	41.5	41.5	41.5	41.5	1.6	1.6
Actuated g/C Ratio	0.73	0.73	0.73	0.73	0.03	0.03
Clearance Time (s)	8.0	8.0	8.0	8.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2133	1117	281	1915	43	45
v/s Ratio Prot	c0.40			0.25		
v/s Ratio Perm		0.01	0.03		c0.01	0.00
v/c Ratio	0.55	0.02	0.04	0.34	0.23	0.00
Uniform Delay, d1	3.6	2.2	2.2	2.8	27.1	27.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.0	0.2	0.5	2.8	0.0
Delay (s)	4.6	2.2	2.4	3.3	29.9	27.0
Level of Service	A	A	A	A	C	C
Approach Delay (s)	4.5			3.3	28.9	
Approach LOS	A			A	C	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			4.3		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			57.1		Sum of lost time (s)	14.0
Intersection Capacity Utilization			55.0%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						



Lanes, Volumes, Timings  
3: Steeles Avenue & Sixth Line



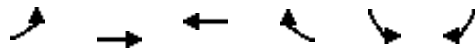
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	45	1235	630	5	15	45
Future Volume (vph)	45	1235	630	5	15	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0			30.0	30.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	100.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	2935	2674	1077	1031	1568
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1752	2935	2674	1077	1031	1568
Link Speed (k/h)		60	80		70	
Link Distance (m)		479.7	905.3		3066.1	
Travel Time (s)		28.8	40.7		157.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	23%	35%	50%	75%	3%
Adj. Flow (vph)	45	1235	630	5	15	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	1235	630	5	15	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.1% ICU Level of Service A
Analysis Period (min)	15

# HCM Unsignalized Intersection Capacity Analysis

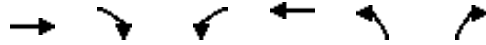
## 3: Steeles Avenue & Sixth Line

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↵	↕↕	↕↕	↗	↵	↗		
Traffic Volume (veh/h)	45	1235	630	5	15	45		
Future Volume (Veh/h)	45	1235	630	5	15	45		
Sign Control		Free	Free		Stop			
Grade		0%	0%		0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly flow rate (vph)	45	1235	630	5	15	45		
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	635			1338	315			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	635			1338	315			
tC, single (s)	4.2			8.3	7.0			
tC, 2 stage (s)								
tF (s)	2.2			4.2	3.3			
p0 queue free %	95			80	93			
cM capacity (veh/h)	937			73	678			
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	45	618	618	315	315	5	15	45
Volume Left	45	0	0	0	0	0	15	0
Volume Right	0	0	0	0	0	5	0	45
cSH	937	1700	1700	1700	1700	1700	73	678
Volume to Capacity	0.05	0.36	0.36	0.19	0.19	0.00	0.20	0.07
Queue Length 95th (m)	1.2	0.0	0.0	0.0	0.0	0.0	5.6	1.7
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	0.0	66.2	10.7
Lane LOS	A						F	B
Approach Delay (s)	0.3			0.0			24.6	
Approach LOS	C							
Intersection Summary								
Average Delay			1.0					
Intersection Capacity Utilization			44.1%		ICU Level of Service		A	
Analysis Period (min)			15					

Lanes, Volumes, Timings  
4: Sixth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (vph)	1215	35	100	570	15	40
Future Volume (vph)	1215	35	100	570	15	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	60.0		30.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			100.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3085	1615	1736	2798	1597	1509
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3085	1615	1736	2798	1597	1509
Link Speed (k/h)	80			80	50	
Link Distance (m)	905.3			497.0	169.8	
Travel Time (s)	40.7			22.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	0%	4%	29%	13%	7%
Adj. Flow (vph)	1215	35	100	570	15	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1215	35	100	570	15	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary

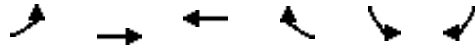
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
4: Sixth Line South & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area

	→	↘	↙	←	↖	↗			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑↑	↗	↙	↑↑	↙	↗			
Traffic Volume (veh/h)	1215	35	100	570	15	40			
Future Volume (Veh/h)	1215	35	100	570	15	40			
Sign Control	Free			Free	Stop				
Grade	0%			0%	0%				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Hourly flow rate (vph)	1215	35	100	570	15	40			
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			1250			1700	608		
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			1250			1700	608		
tC, single (s)			4.2			7.1	7.0		
tC, 2 stage (s)									
tF (s)			2.2			3.6	3.4		
p0 queue free %			82			75	91		
cM capacity (veh/h)			542			60	427		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	608	608	35	100	285	285	15	40	
Volume Left	0	0	0	100	0	0	15	0	
Volume Right	0	0	35	0	0	0	0	40	
cSH	1700	1700	1700	542	1700	1700	60	427	
Volume to Capacity	0.36	0.36	0.02	0.18	0.17	0.17	0.25	0.09	
Queue Length 95th (m)	0.0	0.0	0.0	5.4	0.0	0.0	6.9	2.5	
Control Delay (s)	0.0	0.0	0.0	13.1	0.0	0.0	83.5	14.3	
Lane LOS				B			F	B	
Approach Delay (s)	0.0			2.0			33.2		
Approach LOS							D		
Intersection Summary									
Average Delay			1.6						
Intersection Capacity Utilization			52.5%		ICU Level of Service		A		
Analysis Period (min)			15						

Lanes, Volumes, Timings  
5: Steeles Avenue & Hornby Road



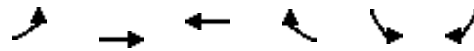
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	1130	595	20	10	40
Future Volume (vph)	20	1130	595	20	10	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0			30.0	30.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	100.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1687	2911	2597	1509	1543	1509
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1687	2911	2597	1509	1543	1509
Link Speed (k/h)		60	60		60	
Link Distance (m)		497.0	879.8		1223.8	
Travel Time (s)		29.8	52.8		73.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	24%	39%	7%	17%	7%
Adj. Flow (vph)	20	1130	595	20	10	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	1130	595	20	10	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.2	7.2		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.2%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 5: Steeles Avenue & Hornby Road

























2026 Background AM  
 Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↵	↑↑	↑↑	↵	↵	↵		
Traffic Volume (veh/h)	20	1130	595	20	10	40		
Future Volume (Veh/h)	20	1130	595	20	10	40		
Sign Control		Free	Free		Stop			
Grade		0%	0%		0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly flow rate (vph)	20	1130	595	20	10	40		
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	615				1200	298		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	615				1200	298		
tC, single (s)	4.2				7.1	7.0		
tC, 2 stage (s)								
tF (s)	2.3				3.7	3.4		
p0 queue free %	98				94	94		
cM capacity (veh/h)	927				154	684		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	20	565	565	298	298	20	10	40
Volume Left	20	0	0	0	0	0	10	0
Volume Right	0	0	0	0	0	20	0	40
cSH	927	1700	1700	1700	1700	1700	154	684
Volume to Capacity	0.02	0.33	0.33	0.17	0.17	0.01	0.06	0.06
Queue Length 95th (m)	0.5	0.0	0.0	0.0	0.0	0.0	1.6	1.5
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	0.0	30.0	10.6
Lane LOS	A						D	B
Approach Delay (s)	0.2			0.0			14.5	
Approach LOS							B	
Intersection Summary								
Average Delay	0.5							
Intersection Capacity Utilization	41.2%			ICU Level of Service			A	
Analysis Period (min)	15							

Lanes, Volumes, Timings  
6: Trafalgar Road & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	715	240	590	565	50	155	350	445	190	1310	325
Future Volume (vph)	65	715	240	590	565	50	155	350	445	190	1310	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		40.0	130.0		70.0	100.0		65.0	250.0		80.0
Storage Lanes	2		1	2		1	2		1	1		1
Taper Length (m)	100.0			100.0			80.0			100.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2633	3085	1179	3400	2843	1455	2148	3167	1524	1752	3438	950
Flt Permitted	0.950			0.950			0.950			0.539		
Satd. Flow (perm)	2633	3085	1179	3400	2843	1455	2148	3167	1524	994	3438	950
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			105			422			205
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		879.8			311.3			332.0			289.5	
Travel Time (s)		52.8			18.7			17.1			14.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	33%	17%	37%	3%	27%	11%	63%	14%	6%	3%	5%	70%
Adj. Flow (vph)	65	715	240	590	565	50	155	350	445	190	1310	325
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	715	240	590	565	50	155	350	445	190	1310	325
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	9.0	20.0	20.0

Lanes, Volumes, Timings  
6: Trafalgar Road & Steeles Avenue

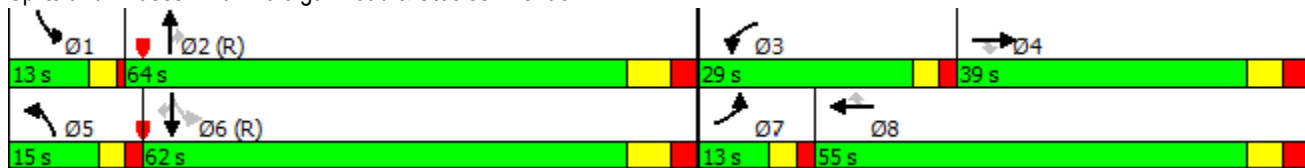
2026 Background AM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	12.0	27.0	27.0	13.0	27.0	27.0	13.0	28.0	28.0	13.0	28.0	28.0
Total Split (s)	13.0	39.0	39.0	29.0	55.0	55.0	15.0	64.0	64.0	13.0	62.0	62.0
Total Split (%)	9.0%	26.9%	26.9%	20.0%	37.9%	37.9%	10.3%	44.1%	44.1%	9.0%	42.8%	42.8%
Maximum Green (s)	8.0	32.0	32.0	24.0	48.0	48.0	10.0	56.0	56.0	9.0	54.0	54.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	8.0	8.0	4.0	8.0	8.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	4.0	3.0	3.0	4.0	0.2	0.2	3.0	0.2	0.2
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		26.0	26.0		26.0	26.0		26.0	26.0		26.0	26.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	7.8	32.0	32.0	24.0	50.6	50.6	10.0	56.0	56.0	67.0	54.0	54.0
Actuated g/C Ratio	0.05	0.22	0.22	0.17	0.35	0.35	0.07	0.39	0.39	0.46	0.37	0.37
v/c Ratio	0.46	1.05	0.65	1.05	0.57	0.09	1.05	0.29	0.53	0.38	1.02	0.67
Control Delay	77.5	102.3	29.2	108.7	41.9	0.3	149.9	31.5	5.9	23.3	75.7	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	102.3	29.2	108.7	41.9	0.3	149.9	31.5	5.9	23.3	75.7	21.2
LOS	E	F	C	F	D	A	F	C	A	C	E	C
Approach Delay		83.5			72.9			38.8			60.6	
Approach LOS		F			E			D			E	

Intersection Summary

Area Type: Other  
 Cycle Length: 145  
 Actuated Cycle Length: 145  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 64.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 100.3%  
 ICU Level of Service G  
 Analysis Period (min) 15













Splits and Phases: 6: Trafalgar Road & Steeles Avenue





Queues  
6: Trafalgar Road & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	65	715	240	590	565	50	155	350	445	190	1310	325
v/c Ratio	0.46	1.05	0.65	1.05	0.57	0.09	1.05	0.29	0.53	0.38	1.02	0.67
Control Delay	77.5	102.3	29.2	108.7	41.9	0.3	149.9	31.5	5.9	23.3	75.7	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	102.3	29.2	108.7	41.9	0.3	149.9	31.5	5.9	23.3	75.7	21.2
Queue Length 50th (m)	10.0	~123.5	26.6	~99.7	75.0	0.0	~26.1	38.2	4.3	31.3	~221.0	30.3
Queue Length 95th (m)	18.5	#165.1	59.1	#138.5	95.8	0.0	#50.7	51.3	30.2	47.4	#265.8	70.8
Internal Link Dist (m)		855.8			287.3			308.0			265.5	
Turn Bay Length (m)	115.0		40.0	130.0		70.0	100.0		65.0	250.0		80.0
Base Capacity (vph)	145	680	371	562	993	576	148	1223	847	506	1280	482
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	1.05	0.65	1.05	0.57	0.09	1.05	0.29	0.53	0.38	1.02	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 6: Trafalgar Road & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔↔	↑↑	↗	↔↔	↑↑	↗	↔↔	↑↑	↗	↗	↑↑	↗	
Traffic Volume (vph)	65	715	240	590	565	50	155	350	445	190	1310	325	
Future Volume (vph)	65	715	240	590	565	50	155	350	445	190	1310	325	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	8.0	8.0	4.0	8.0	8.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	2633	3085	1179	3400	2843	1455	2148	3167	1524	1752	3438	950	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.54	1.00	1.00	
Satd. Flow (perm)	2633	3085	1179	3400	2843	1455	2148	3167	1524	995	3438	950	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	65	715	240	590	565	50	155	350	445	190	1310	325	
RTOR Reduction (vph)	0	0	110	0	0	33	0	0	262	0	0	130	
Lane Group Flow (vph)	65	715	130	590	565	17	155	350	183	190	1310	195	
Heavy Vehicles (%)	33%	17%	37%	3%	27%	11%	63%	14%	6%	3%	5%	70%	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases			4			8			2	6		6	
Actuated Green, G (s)	6.4	33.0	33.0	24.0	50.6	50.6	10.0	55.0	55.0	62.0	53.0	53.0	
Effective Green, g (s)	6.4	33.0	33.0	24.0	50.6	50.6	10.0	55.0	55.0	62.0	53.0	53.0	
Actuated g/C Ratio	0.04	0.23	0.23	0.17	0.35	0.35	0.07	0.38	0.38	0.43	0.37	0.37	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	8.0	8.0	4.0	8.0	8.0	
Vehicle Extension (s)	3.0	3.0	3.0	4.0	3.0	3.0	4.0	0.2	0.2	3.0	0.2	0.2	
Lane Grp Cap (vph)	116	702	268	562	992	507	148	1201	578	472	1256	347	
v/s Ratio Prot	0.02	c0.23		c0.17	0.20		c0.07	0.11		0.02	c0.38		
v/s Ratio Perm			0.11			0.01			0.12	0.15		0.21	
v/c Ratio	0.56	1.02	0.48	1.05	0.57	0.03	1.05	0.29	0.32	0.40	1.04	0.56	
Uniform Delay, d1	67.9	56.0	48.6	60.5	38.4	31.1	67.5	31.4	31.7	26.7	46.0	36.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.1	38.7	1.4	51.7	0.8	0.0	87.1	0.6	1.4	0.6	37.4	6.4	
Delay (s)	74.0	94.7	50.0	112.2	39.1	31.1	154.6	32.0	33.2	27.3	83.4	43.2	
Level of Service	E	F	D	F	D	C	F	C	C	C	F	D	
Approach Delay (s)		82.9			74.6			52.6			70.4		
Approach LOS		F			E			D			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			70.5									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			1.04										
Actuated Cycle Length (s)			145.0									Sum of lost time (s)	25.0
Intersection Capacity Utilization			100.3%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings  
7: Toronto Premier Outlets & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖↗	↗
Traffic Volume (vph)	1295	10	10	1180	30	5
Future Volume (vph)	1295	10	10	1180	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		130.0	45.0		0.0	40.0
Storage Lanes		1	1		2	1
Taper Length (m)			80.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3374	1615	1543	3195	3045	1615
Flt Permitted			0.141		0.950	
Satd. Flow (perm)	3374	1615	229	3195	3045	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		10				5
Link Speed (k/h)	60			60	50	
Link Distance (m)	311.3			200.7	119.1	
Travel Time (s)	18.7			12.0	8.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	0%	17%	13%	15%	0%
Adj. Flow (vph)	1295	10	10	1180	30	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1295	10	10	1180	30	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			7.2	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	CI+Ex			CI+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	20.0	20.0	6.0	20.0	10.0	10.0

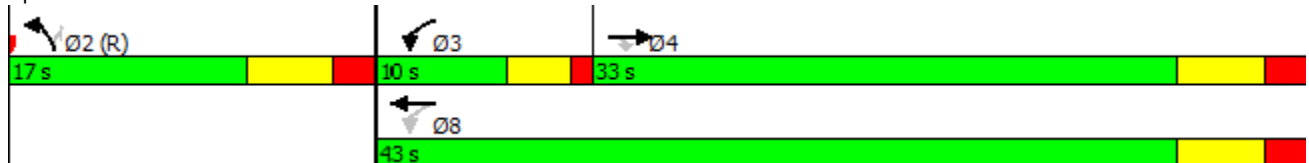


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	26.0	26.0	10.0	26.0	17.0	17.0
Total Split (s)	33.0	33.0	10.0	43.0	17.0	17.0
Total Split (%)	55.0%	55.0%	16.7%	71.7%	28.3%	28.3%
Maximum Green (s)	27.0	27.0	6.0	37.0	11.0	11.0
Yellow Time (s)	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	0.2	0.2	3.0	0.2	4.0	4.0
Recall Mode	Max	Max	None	Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0		17.0	21.0	21.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	35.0	35.0	39.0	37.0	11.0	11.0
Actuated g/C Ratio	0.58	0.58	0.65	0.62	0.18	0.18
v/c Ratio	0.66	0.01	0.04	0.60	0.05	0.02
Control Delay	12.1	4.7	4.0	8.6	20.6	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	4.7	4.0	8.6	20.6	13.8
LOS	B	A	A	A	C	B
Approach Delay	12.0			8.5	19.6	
Approach LOS	B			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBL an 6:; Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	10.5
Intersection Capacity Utilization	54.1%
Analysis Period (min)	15
Intersection LOS:	B
ICU Level of Service	A

Splits and Phases: 7: Toronto Premier Outlets & Steeles Avenue



Queues  
7: Toronto Premier Outlets & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1295	10	10	1180	30	5
v/c Ratio	0.66	0.01	0.04	0.60	0.05	0.02
Control Delay	12.1	4.7	4.0	8.6	20.6	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	4.7	4.0	8.6	20.6	13.8
Queue Length 50th (m)	41.8	0.0	0.4	37.3	1.4	0.0
Queue Length 95th (m)	#107.4	2.2	1.6	53.4	4.5	2.4
Internal Link Dist (m)	287.3			176.7	95.1	
Turn Bay Length (m)		130.0	45.0			40.0
Base Capacity (vph)	1968	946	280	1970	558	300
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.01	0.04	0.60	0.05	0.02

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be long r.  
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis  
7: Toronto Premier Outlets & Steeles Avenue

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖↗	↗
Traffic Volume (vph)	1295	10	10	1180	30	5
Future Volume (vph)	1295	10	10	1180	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Flt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3374	1615	1543	3195	3045	1615
Flt Permitted	1.00	1.00	0.14	1.00	0.95	1.00
Satd. Flow (perm)	3374	1615	229	3195	3045	1615
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1295	10	10	1180	30	5
RTOR Reduction (vph)	0	4	0	0	0	4
Lane Group Flow (vph)	1295	6	10	1180	30	1
Heavy Vehicles (%)	7%	0%	17%	13%	15%	0%
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	35.0	35.0	40.2	40.2	7.8	7.8
Effective Green, g (s)	35.0	35.0	40.2	40.2	7.8	7.8
Actuated g/C Ratio	0.58	0.58	0.67	0.67	0.13	0.13
Clearance Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Vehicle Extension (s)	0.2	0.2	3.0	0.2	4.0	4.0
Lane Grp Cap (vph)	1968	942	179	2140	395	209
v/s Ratio Prot	c0.38		0.00	c0.37	c0.01	
v/s Ratio Perm		0.00	0.04			0.00
v/c Ratio	0.66	0.01	0.06	0.55	0.08	0.00
Uniform Delay, d1	8.5	5.2	4.8	5.2	22.9	22.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.0	0.1	1.0	0.4	0.0
Delay (s)	10.2	5.2	4.9	6.2	23.3	22.7
Level of Service	B	A	A	A	C	C
Approach Delay (s)	10.2			6.2	23.2	
Approach LOS	B			A	C	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			8.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.57			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	16.0
Intersection Capacity Utilization			54.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

8: Toronto Premium Outlets/Eighth Line & Steeles Avenue Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	1190	20	40	745	30	5	5	15	235	10	465
Future Volume (vph)	100	1190	20	40	745	30	5	5	15	235	10	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		55.0	30.0		30.0	0.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	55.0			90.0			7.5			45.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.887			0.853	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	3252	1404	1752	2983	1482	2633	1536	0	1787	1605	0
Flt Permitted	0.286			0.126			0.950			0.744		
Satd. Flow (perm)	518	3252	1404	232	2983	1482	2633	1536	0	1400	1605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			182		15			404	
Link Speed (k/h)		60			60			50			70	
Link Distance (m)		200.7			870.8			218.1			3086.4	
Travel Time (s)		12.0			52.2			15.7			158.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	11%	15%	3%	21%	9%	33%	0%	13%	1%	0%	1%
Adj. Flow (vph)	100	1190	20	40	745	30	5	5	15	235	10	465
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	1190	20	40	745	30	5	20	0	235	475	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Perm	NA	
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8		8				6		
Detector Phase	7	4	4	3	8	8	5	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		10.0	10.0	

8: Toronto Premium Outlets/Eighth Line & Steeles Avenue Premier Gateway Phase 1B Employment Area

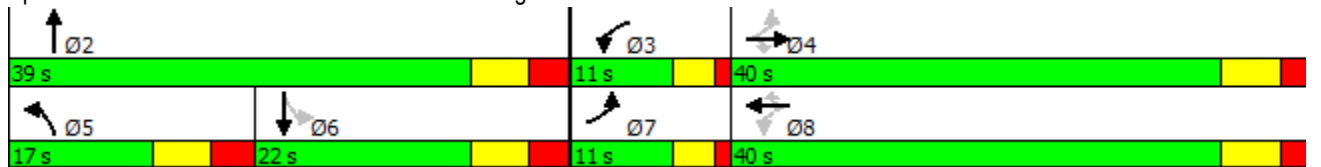


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	11.0	26.0	26.0	11.0	26.0	26.0	17.0	17.0		17.0	17.0	
Total Split (s)	11.0	40.0	40.0	11.0	40.0	40.0	17.0	39.0		22.0	22.0	
Total Split (%)	12.2%	44.4%	44.4%	12.2%	44.4%	44.4%	18.9%	43.3%		24.4%	24.4%	
Maximum Green (s)	7.0	34.0	34.0	7.0	34.0	34.0	10.0	32.0		15.0	15.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	0.2	0.2	3.0	0.2	0.2	4.0	4.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		Max	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0				
Flash Dont Walk (s)		17.0	17.0		17.0	17.0		21.0				
Pedestrian Calls (#/hr)		0	0		0	0		0				
Act Effct Green (s)	42.7	36.7	36.7	41.9	34.5	34.5	10.1	18.0		15.2	15.2	
Actuated g/C Ratio	0.58	0.49	0.49	0.56	0.46	0.46	0.14	0.24		0.20	0.20	
v/c Ratio	0.24	0.74	0.03	0.14	0.54	0.04	0.01	0.05		0.82	0.73	
Control Delay	8.9	21.3	0.1	8.6	17.7	0.1	32.2	12.2		55.3	14.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.9	21.3	0.1	8.6	17.7	0.1	32.2	12.2		55.3	14.0	
LOS	A	C	A	A	B	A	C	B		E	B	
Approach Delay		20.0			16.6			16.2			27.7	
Approach LOS		C			B			B			C	

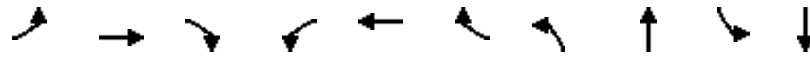
Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	74.2
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	20.9
Intersection LOS:	C
Intersection Capacity Utilization:	82.2%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 8: Toronto Premium Outlets/Eighth Line & Steeles Avenue







Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	100	1190	20	40	745	30	5	20	235	475
v/c Ratio	0.24	0.74	0.03	0.14	0.54	0.04	0.01	0.05	0.82	0.73
Control Delay	8.9	21.3	0.1	8.6	17.7	0.1	32.2	12.2	55.3	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	21.3	0.1	8.6	17.7	0.1	32.2	12.2	55.3	14.0
Queue Length 50th (m)	4.7	72.5	0.0	1.8	38.3	0.0	0.3	0.6	32.6	8.6
Queue Length 95th (m)	17.0	#156.9	0.0	8.3	78.5	0.0	2.1	5.4	#91.2	#59.1
Internal Link Dist (m)		176.7			846.8			194.1		3062.4
Turn Bay Length (m)	105.0		55.0	30.0		30.0			70.0	
Base Capacity (vph)	413	1609	786	276	1386	786	359	680	286	650
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.74	0.03	0.14	0.54	0.04	0.01	0.03	0.82	0.73

#### Intersection Summary






























# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

2026 Background AM

## 8: Toronto Premium Outlets/Eighth Line & Steeles Avenue Premier Gateway Phase 1B Employment Area

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 		 		 	
Traffic Volume (vph)	100	1190	20	40	745	30	5	5	15	235	10	465
Future Volume (vph)	100	1190	20	40	745	30	5	5	15	235	10	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3252	1404	1752	2983	1482	2633	1536		1787	1605	
Flt Permitted	0.29	1.00	1.00	0.13	1.00	1.00	0.95	1.00		0.74	1.00	
Satd. Flow (perm)	517	3252	1404	233	2983	1482	2633	1536		1400	1605	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	1190	20	40	745	30	5	5	15	235	10	465
RTOR Reduction (vph)	0	0	11	0	0	17	0	11	0	0	329	0
Lane Group Flow (vph)	100	1190	9	40	745	13	5	9	0	235	146	0
Heavy Vehicles (%)	5%	11%	15%	3%	21%	9%	33%	0%	13%	1%	0%	1%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Perm	NA	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases	4		4	8		8				6		
Actuated Green, G (s)	42.1	36.7	36.7	39.3	35.3	35.3	1.6	23.8		15.2	15.2	
Effective Green, g (s)	42.1	36.7	36.7	39.3	35.3	35.3	1.6	23.8		15.2	15.2	
Actuated g/C Ratio	0.52	0.45	0.45	0.48	0.43	0.43	0.02	0.29		0.19	0.19	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	0.2	0.2	3.0	0.2	0.2	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)	346	1464	632	186	1292	641	51	448		261	299	
v/s Ratio Prot	c0.02	c0.37		0.01	0.25		c0.00	0.01				0.09
v/s Ratio Perm	0.13		0.01	0.09		0.01				c0.17		
v/c Ratio	0.29	0.81	0.01	0.22	0.58	0.02	0.10	0.02		0.90	0.49	
Uniform Delay, d1	10.6	19.4	12.4	13.0	17.5	13.2	39.2	20.6		32.4	29.7	
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	5.0	0.0	0.6	1.9	0.1	1.1	0.0		35.0	5.6	
Delay (s)	11.1	24.5	12.4	13.6	19.3	13.3	40.4	20.6		67.4	35.3	
Level of Service	B	C	B	B	B	B	D	C		E	D	
Approach Delay (s)		23.3			18.8			24.5			45.9	
Approach LOS		C			B			C			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			27.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			81.5				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			82.2%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
9: Eighth Line South & Steeles Avenue

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖	↗
Traffic Volume (vph)	1435	5	5	810	5	0
Future Volume (vph)	1435	5	5	810	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	90.0		30.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Fr <sub>t</sub>	0.999					
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3280	0	1805	3034	1805	1900
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3280	0	1805	3034	1805	1900
Link Speed (k/h)	70			70	50	
Link Distance (m)	870.8			525.4	458.2	
Travel Time (s)	44.8			27.0	33.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	0%	0%	19%	0%	0%
Adj. Flow (vph)	1435	5	5	810	5	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1440	0	5	810	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.8%
Analysis Period (min)	15
	ICU Level of Service A

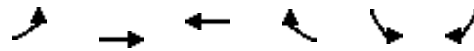
HCM Unsignalized Intersection Capacity Analysis  
 9: Eighth Line South & Steeles Avenue

2026 Background AM  
 Premier Gateway Phase 1B Employment Area

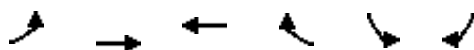
	→	↘	↙	←	↖	↗	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑		↘	↑↑	↘	↗	
Traffic Volume (veh/h)	1435	5	5	810	5	0	
Future Volume (Veh/h)	1435	5	5	810	5	0	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	1435	5	5	810	5	0	
<b>Pedestrians</b>							
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			1440		1852	720	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1440		1852	720	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			99		92	100	
cM capacity (veh/h)			477		66	375	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	957	483	5	405	405	5	0
Volume Left	0	0	5	0	0	5	0
Volume Right	0	5	0	0	0	0	0
cSH	1700	1700	477	1700	1700	66	1700
Volume to Capacity	0.56	0.28	0.01	0.24	0.24	0.08	0.00
Queue Length 95th (m)	0.0	0.0	0.3	0.0	0.0	1.9	0.0
Control Delay (s)	0.0	0.0	12.6	0.0	0.0	63.6	0.0
Lane LOS			B			F	A
Approach Delay (s)	0.0		0.1		63.6		
Approach LOS					F		
<b>Intersection Summary</b>							
Average Delay			0.2				
Intersection Capacity Utilization			49.8%		ICU Level of Service		A
Analysis Period (min)			15				

Lanes, Volumes, Timings  
10: Steeles Avenue & Ninth Line

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	100	1365	750	280	750	100
Future Volume (vph)	100	1365	750	280	750	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0			75.0	90.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	100.0				40.0	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1556	3312	3059	1509	3433	1324
Flt Permitted	0.257				0.950	
Satd. Flow (perm)	421	3312	3059	1509	3433	1324
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				280		100
Link Speed (k/h)		70	70		70	
Link Distance (m)		525.4	728.8		3120.2	
Travel Time (s)		27.0	37.5		160.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	16%	9%	18%	7%	2%	22%
Adj. Flow (vph)	100	1365	750	280	750	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	1365	750	280	750	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		CI+Ex	CI+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	7.0	20.0	20.0	20.0	10.0	10.0

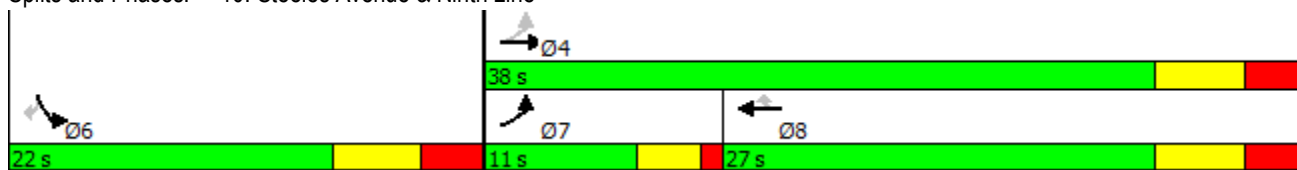


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	11.0	27.0	27.0	27.0	17.0	17.0
Total Split (s)	11.0	38.0	27.0	27.0	22.0	22.0
Total Split (%)	18.3%	63.3%	45.0%	45.0%	36.7%	36.7%
Maximum Green (s)	7.0	31.0	20.0	20.0	15.0	15.0
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?	Yes		Yes		Yes	
Vehicle Extension (s)	3.0	0.2	0.2	0.2	3.0	3.0
Recall Mode	None	Max	Max	Max	Max	Max
Act Effct Green (s)	34.0	31.0	22.2	22.2	15.0	15.0
Actuated g/C Ratio	0.57	0.52	0.37	0.37	0.25	0.25
v/c Ratio	0.27	0.80	0.66	0.38	0.87	0.25
Control Delay	8.0	16.5	20.2	4.0	35.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	16.5	20.2	4.0	35.3	6.5
LOS	A	B	C	A	D	A
Approach Delay	15.9		15.8	31.9		
Approach LOS	B		B	C		

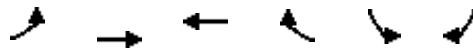
Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	19.9
Intersection LOS:	B
Intersection Capacity Utilization:	70.8%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 10: Steeles Avenue & Ninth Line



Queues  
10: Steeles Avenue & Ninth Line



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	100	1365	750	280	750	100
v/c Ratio	0.27	0.80	0.66	0.38	0.87	0.25
Control Delay	8.0	16.5	20.2	4.0	35.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	16.5	20.2	4.0	35.3	6.5
Queue Length 50th (m)	4.8	62.5	39.5	0.0	42.8	0.0
Queue Length 95th (m)	10.5	88.7	58.2	13.9	#71.9	9.8
Internal Link Dist (m)		501.4	704.8		3096.2	
Turn Bay Length (m)	65.0			75.0	90.0	
Base Capacity (vph)	370	1711	1131	734	858	406
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.80	0.66	0.38	0.87	0.25

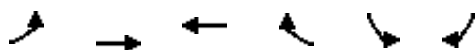
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 10: Steeles Avenue & Ninth Line

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↵	↵↵	↵
Traffic Volume (vph)	100	1365	750	280	750	100
Future Volume (vph)	100	1365	750	280	750	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1556	3312	3059	1509	3433	1324
Flt Permitted	0.26	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	421	3312	3059	1509	3433	1324
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	1365	750	280	750	100
RTOR Reduction (vph)	0	0	0	178	0	75
Lane Group Flow (vph)	100	1365	750	102	750	25
Heavy Vehicles (%)	16%	9%	18%	7%	2%	22%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	31.8	31.8	22.2	22.2	15.0	15.0
Effective Green, g (s)	31.8	31.8	22.2	22.2	15.0	15.0
Actuated g/C Ratio	0.52	0.52	0.37	0.37	0.25	0.25
Clearance Time (s)	4.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2	0.2	0.2	3.0	3.0
Lane Grp Cap (vph)	324	1732	1116	550	846	326
v/s Ratio Prot	0.03	c0.41	0.25		c0.22	
v/s Ratio Perm	0.13			0.07		0.02
v/c Ratio	0.31	0.79	0.67	0.19	0.89	0.08
Uniform Delay, d1	8.0	11.8	16.2	13.1	22.1	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	3.7	3.2	0.7	13.2	0.5
Delay (s)	8.5	15.5	19.5	13.9	35.3	18.0
Level of Service	A	B	B	B	D	B
Approach Delay (s)		15.0	18.0		33.3	
Approach LOS		B	B		C	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			20.6		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.90			
Actuated Cycle Length (s)			60.8		Sum of lost time (s)	18.0
Intersection Capacity Utilization			70.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						



Lanes, Volumes, Timings  
11: Trafalgar Rd & Hornby Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	10	5	415	1740	25
Future Volume (vph)	20	10	5	415	1740	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	100.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955				0.998	
Flt Protected	0.968			0.999		
Satd. Flow (prot)	1436	0	0	1631	1807	0
Flt Permitted	0.968			0.999		
Satd. Flow (perm)	1436	0	0	1631	1807	0
Link Speed (k/h)	60			80	80	
Link Distance (m)	54.4			135.9	215.8	
Travel Time (s)	3.3			6.1	9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	25%	17%	50%	16%	5%	0%
Adj. Flow (vph)	20	10	5	415	1740	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	0	420	1765	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	103.1%
ICU Level of Service	G
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 11: Trafalgar Rd & Hornby Rd

















2026 Background AM  
 Premier Gateway Phase 1B Employment Area



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	10	5	415	1740	25
Future Volume (Veh/h)	20	10	5	415	1740	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	10	5	415	1740	25
<b>Pedestrians</b>						
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	2178	1752	1740			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2178	1752	1740			
tC, single (s)	6.6	6.4	4.6			
tC, 2 stage (s)						
tF (s)	3.7	3.5	2.7			
p0 queue free %	53	90	98			
cM capacity (veh/h)	43	97	261			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	30	420	1765			
Volume Left	20	5	0			
Volume Right	10	0	25			
cSH	53	261	1700			
Volume to Capacity	0.57	0.02	1.04			
Queue Length 95th (m)	17.8	0.5	0.0			
Control Delay (s)	141.1	0.7	0.0			
Lane LOS	F	A				
Approach Delay (s)	141.1	0.7	0.0			
Approach LOS	F					
<b>Intersection Summary</b>						
Average Delay			2.0			
Intersection Capacity Utilization			103.1%	ICU Level of Service	G	
Analysis Period (min)			15			

Lanes, Volumes, Timings  
12: Fifth Line & 5 Side Road

















2026 Background AM  
Premier Gateway Phase 1B Employment Area

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	740	15	30	210	5	5	30	25	50	60	35
Future Volume (vph)	15	740	15	30	210	5	5	30	25	50	60	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.997			0.997			0.944			0.967	
Fl <sub>t</sub> Protected		0.999			0.994			0.996			0.983	
Satd. Flow (prot)	0	1850	0	0	1785	0	0	1537	0	0	1724	0
Fl <sub>t</sub> Permitted		0.999			0.994			0.996			0.983	
Satd. Flow (perm)	0	1850	0	0	1785	0	0	1537	0	0	1724	0
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		320.1			648.3			2473.7			211.2	
Travel Time (s)		19.2			38.9			127.2			10.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	2%	9%	10%	5%	0%	25%	20%	10%	9%	4%	0%
Adj. Flow (vph)	15	740	15	30	210	5	5	30	25	50	60	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	770	0	0	245	0	0	60	0	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Free			Free			Stop			Stop	
<b>Intersection Summary</b>												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	63.9%						ICU Level of Service B					
Analysis Period (min)	15											

# HCM Unsignalized Intersection Capacity Analysis

















## 12: Fifth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	740	15	30	210	5	5	30	25	50	60	35
Future Volume (Veh/h)	15	740	15	30	210	5	5	30	25	50	60	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	15	740	15	30	210	5	5	30	25	50	60	35
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	215			755			1115	1052	748	1090	1058	212
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	215			755			1115	1052	748	1090	1058	212
tC, single (s)	4.2			4.2			7.3	6.7	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.7	4.2	3.4	3.6	4.0	3.3
p0 queue free %	99			96			96	85	94	67	72	96
cM capacity (veh/h)	1309			820			121	200	400	149	212	833
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	770	245	60	145								
Volume Left	15	30	5	50								
Volume Right	15	5	25	35								
cSH	1309	820	237	220								
Volume to Capacity	0.01	0.04	0.25	0.66								
Queue Length 95th (m)	0.3	0.9	7.8	32.4								
Control Delay (s)	0.3	1.5	25.3	48.3								
Lane LOS	A	A	D	E								
Approach Delay (s)	0.3	1.5	25.3	48.3								
Approach LOS			D	E								
Intersection Summary												
Average Delay			7.5									
Intersection Capacity Utilization			63.9%	ICU Level of Service							B	
Analysis Period (min)			15									

Lanes, Volumes, Timings  
13: Sixth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	785	5	15	225	5	5	15	40	30	25	25
Future Volume (vph)	10	785	5	15	225	5	5	15	40	30	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.997			0.910			0.958	
Flt Protected		0.999			0.997			0.996			0.982	
Satd. Flow (prot)	0	1839	0	0	1794	0	0	1547	0	0	1723	0
Flt Permitted		0.999			0.997			0.996			0.982	
Satd. Flow (perm)	0	1839	0	0	1794	0	0	1547	0	0	1723	0
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		620.4			640.8			3066.1			190.9	
Travel Time (s)		37.2			38.4			157.7			9.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	3%	1%	0%	5%	33%	0%	0%	17%	10%	0%	0%
Adj. Flow (vph)	10	785	5	15	225	5	5	15	40	30	25	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	800	0	0	245	0	0	60	0	0	80	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Free			Free			Stop			Stop	
<b>Intersection Summary</b>												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	62.3%						ICU Level of Service B					
Analysis Period (min)	15											

# HCM Unsignalized Intersection Capacity Analysis

## 13: Sixth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	10	785	5	15	225	5	5	15	40	30	25	25
Future Volume (Veh/h)	10	785	5	15	225	5	5	15	40	30	25	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	785	5	15	225	5	5	15	40	30	25	25
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	230			790			1102	1068	788	1112	1068	228
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	230			790			1102	1068	788	1112	1068	228
tC, single (s)	4.2			4.1			7.1	6.5	6.4	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.5	3.6	4.0	3.3
p0 queue free %	99			98			97	93	89	80	89	97
cM capacity (veh/h)	1270			839			165	218	369	149	218	817
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	800	245	60	80								
Volume Left	10	15	5	30								
Volume Right	5	5	40	25								
cSH	1270	839	289	230								
Volume to Capacity	0.01	0.02	0.21	0.35								
Queue Length 95th (m)	0.2	0.4	6.1	11.8								
Control Delay (s)	0.2	0.8	20.7	28.7								
Lane LOS	A	A	C	D								
Approach Delay (s)	0.2	0.8	20.7	28.7								
Approach LOS			C	D								
Intersection Summary												
Average Delay			3.3									
Intersection Capacity Utilization			62.3%		ICU Level of Service					B		
Analysis Period (min)			15									

Lanes, Volumes, Timings  
14: Trafalgar Rd & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	460	315	75	125	15	25	420	45	35	1480	45
Future Volume (vph)	45	460	315	75	125	15	25	420	45	35	1480	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		40.0	40.0		0.0	40.0		0.0	50.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	80.0			80.0			100.0			100.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.984			0.985				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1863	1568	1687	1737	0	1444	2858	0	1480	3374	1292
Flt Permitted	0.668			0.153			0.089			0.447		
Satd. Flow (perm)	1164	1863	1568	272	1737	0	135	2858	0	696	3374	1292
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179		6			14				120
Link Speed (k/h)		60			60			80			80	
Link Distance (m)		617.5			665.2			264.1			262.0	
Travel Time (s)		37.1			39.9			11.9			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	2%	3%	7%	1%	63%	25%	25%	19%	22%	7%	25%
Adj. Flow (vph)	45	460	315	75	125	15	25	420	45	35	1480	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	460	315	75	140	0	25	465	0	35	1480	45
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		6			6
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		7.0	25.0		7.0	25.0	25.0

Lanes, Volumes, Timings  
14: Trafalgar Rd & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.0	22.0	22.0	9.0	22.0		11.0	32.0		11.0	32.0	32.0
Total Split (s)	9.0	30.0	30.0	9.0	30.0		11.0	50.0		11.0	50.0	50.0
Total Split (%)	9.0%	30.0%	30.0%	9.0%	30.0%		11.0%	50.0%		11.0%	50.0%	50.0%
Maximum Green (s)	5.0	24.0	24.0	5.0	24.0		7.0	44.0		7.0	44.0	44.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0		3.0	5.0		3.0	5.0	5.0
Recall Mode	None	None	None	None	None		None	Max		None	Max	Max
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	7.0
Flash Dont Walk (s)		25.0	25.0		25.0			20.0			20.0	20.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	30.1	24.2	24.2	30.9	26.1		50.3	44.4		51.1	46.4	46.4
Actuated g/C Ratio	0.32	0.26	0.26	0.33	0.28		0.54	0.47		0.54	0.49	0.49
v/c Ratio	0.11	0.96	0.59	0.45	0.29		0.15	0.34		0.08	0.89	0.06
Control Delay	22.2	69.2	19.1	31.3	29.9		11.5	17.2		10.1	31.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	22.2	69.2	19.1	31.3	29.9		11.5	17.2		10.1	31.0	0.2
LOS	C	E	B	C	C		B	B		B	C	A
Approach Delay		47.4			30.4			16.9			29.7	
Approach LOS		D			C			B			C	

Intersection Summary

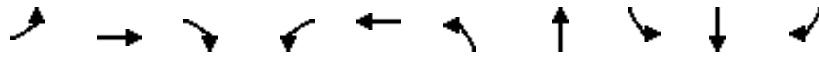
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	93.8
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	32.4
Intersection LOS:	C
Intersection Capacity Utilization:	82.6%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 14: Trafalgar Rd & 5 Side Road





Queues  
14: Trafalgar Rd & 5 Side Road



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	45	460	315	75	140	25	465	35	1480	45
v/c Ratio	0.11	0.96	0.59	0.45	0.29	0.15	0.34	0.08	0.89	0.06
Control Delay	22.2	69.2	19.1	31.3	29.9	11.5	17.2	10.1	31.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	69.2	19.1	31.3	29.9	11.5	17.2	10.1	31.0	0.2
Queue Length 50th (m)	6.1	~101.0	23.5	10.3	22.6	2.1	31.4	3.0	120.4	0.0
Queue Length 95th (m)	14.0	#162.8	53.4	20.7	40.3	5.8	44.2	7.3	#209.3	0.0
Internal Link Dist (m)		593.5			641.2		240.1		238.0	
Turn Bay Length (m)	40.0		40.0	40.0		40.0		50.0		20.0
Base Capacity (vph)	399	480	537	165	487	171	1359	437	1669	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.96	0.59	0.45	0.29	0.15	0.34	0.08	0.89	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.























# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 14: Trafalgar Rd & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	460	315	75	125	15	25	420	45	35	1480	45
Future Volume (vph)	45	460	315	75	125	15	25	420	45	35	1480	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	1863	1568	1687	1737		1444	2859		1480	3374	1292
Flt Permitted	0.67	1.00	1.00	0.15	1.00		0.09	1.00		0.45	1.00	1.00
Satd. Flow (perm)	1164	1863	1568	272	1737		135	2859		696	3374	1292
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	45	460	315	75	125	15	25	420	45	35	1480	45
RTOR Reduction (vph)	0	0	133	0	4	0	0	8	0	0	0	24
Lane Group Flow (vph)	45	460	182	75	136	0	25	457	0	35	1480	21
Heavy Vehicles (%)	9%	2%	3%	7%	1%	63%	25%	25%	19%	22%	7%	25%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	27.8	25.0	25.0	30.0	26.1		47.7	45.1		50.3	46.4	46.4
Effective Green, g (s)	27.8	25.0	25.0	30.0	26.1		47.7	45.1		50.3	46.4	46.4
Actuated g/C Ratio	0.28	0.26	0.26	0.31	0.27		0.49	0.46		0.51	0.47	0.47
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	344	475	400	139	463		100	1317		388	1599	612
v/s Ratio Prot	0.00	c0.25		c0.02	0.08		c0.01	0.16		0.00	c0.44	
v/s Ratio Perm	0.03		0.12	0.14			0.11			0.04		0.02
v/c Ratio	0.13	0.97	0.45	0.54	0.29		0.25	0.35		0.09	0.93	0.03
Uniform Delay, d1	25.8	36.1	30.7	26.8	28.6		18.6	17.0		11.9	24.1	13.8
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	0.2	33.3	1.7	4.0	0.7		1.3	0.7		0.1	10.6	0.1
Delay (s)	26.0	69.4	32.4	30.8	29.3		19.9	17.7		12.0	34.8	13.9
Level of Service	C	E	C	C	C		B	B		B	C	B
Approach Delay (s)		52.8			29.8			17.8			33.6	
Approach LOS		D			C			B			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			36.0			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			97.9			Sum of lost time (s)			20.0			
Intersection Capacity Utilization			82.6%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
15: Eighth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	25	475	10	40	155	20	5	115	30	85	650	90
Future Volume (vph)	25	475	10	40	155	20	5	115	30	85	650	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.987			0.973			0.985	
Flt Protected		0.998			0.991			0.998			0.995	
Satd. Flow (prot)	0	1839	0	0	1783	0	0	1817	0	0	1860	0
Flt Permitted		0.976			0.773			0.977			0.949	
Satd. Flow (perm)	0	1799	0	0	1391	0	0	1778	0	0	1774	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			7			25			12	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		643.4			668.7			3086.4			454.5	
Travel Time (s)		38.6			40.1			158.7			23.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	13%	2%	14%	7%	3%	8%	0%	1%	4%	0%	0%	1%
Adj. Flow (vph)	25	475	10	40	155	20	5	115	30	85	650	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	510	0	0	215	0	0	150	0	0	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	30.0	30.0		30.0	30.0		45.0	45.0		45.0	45.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	

Lanes, Volumes, Timings  
15: Eighth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	24.0	24.0		24.0	24.0		39.0	39.0		39.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		23.0			23.0			39.0			39.0	
Actuated g/C Ratio		0.31			0.31			0.53			0.53	
v/c Ratio		0.91			0.49			0.16			0.88	
Control Delay		48.1			24.5			8.3			28.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		48.1			24.5			8.3			28.5	
LOS		D			C			A			C	
Approach Delay		48.1			24.5			8.3			28.5	
Approach LOS		D			C			A			C	

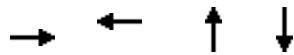
Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	74
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.91
Intersection Signal Delay:	32.1
Intersection LOS:	C
Intersection Capacity Utilization:	100.8%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 15: Eighth Line & 5 Side Road



Queues  
15: Eighth Line & 5 Side Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	510	215	150	825
v/c Ratio	0.91	0.49	0.16	0.88
Control Delay	48.1	24.5	8.3	28.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	48.1	24.5	8.3	28.5
Queue Length 50th (m)	71.0	24.5	9.0	101.1
Queue Length 95th (m)	#127.8	44.7	18.2	#180.9
Internal Link Dist (m)	619.4	644.7	3062.4	430.5
Turn Bay Length (m)				
Base Capacity (vph)	584	455	949	941
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.87	0.47	0.16	0.88

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 15: Eighth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	25	475	10	40	155	20	5	115	30	85	650	90
Future Volume (vph)	25	475	10	40	155	20	5	115	30	85	650	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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			0.97			0.99	
Flt Protected		1.00			0.99			1.00			0.99	
Satd. Flow (prot)		1839			1784			1817			1860	
Flt Permitted		0.98			0.77			0.98			0.95	
Satd. Flow (perm)		1800			1391			1779			1775	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	475	10	40	155	20	5	115	30	85	650	90
RTOR Reduction (vph)	0	1	0	0	5	0	0	12	0	0	6	0
Lane Group Flow (vph)	0	509	0	0	210	0	0	138	0	0	819	0
Heavy Vehicles (%)	13%	2%	14%	7%	3%	8%	0%	1%	4%	0%	0%	1%
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)		23.0			23.0			39.0			39.0	
Effective Green, g (s)		23.0			23.0			39.0			39.0	
Actuated g/C Ratio		0.31			0.31			0.53			0.53	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		559			432			937			935	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.15			0.08			c0.46	
v/c Ratio		0.91			0.49			0.15			0.88	
Uniform Delay, d1		24.5			20.7			9.0			15.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		19.1			0.9			0.3			11.3	
Delay (s)		43.6			21.6			9.3			26.7	
Level of Service		D			C			A			C	
Approach Delay (s)		43.6			21.6			9.3			26.7	
Approach LOS		D			C			A			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			29.6					HCM 2000 Level of Service		C		
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			74.0					Sum of lost time (s)		12.0		
Intersection Capacity Utilization			100.8%					ICU Level of Service		G		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
16: Ninth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	590	35	5	150	20	15	400	30	345	850	35
Future Volume (vph)	30	590	35	5	150	20	15	400	30	345	850	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	40.0		40.0	40.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.992				0.850		0.990			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1810	0	1805	1863	1615	1289	3215	0	1805	3388	0
Flt Permitted	0.662			0.169			0.321			0.363		
Satd. Flow (perm)	1143	1810	0	321	1863	1615	436	3215	0	690	3388	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				76		7			5	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		580.9			458.3			3120.2			329.9	
Travel Time (s)		34.9			27.5			160.5			17.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	4%	6%	0%	2%	0%	40%	12%	0%	0%	6%	4%
Adj. Flow (vph)	30	590	35	5	150	20	15	400	30	345	850	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	625	0	5	150	20	15	430	0	345	885	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0	15.0	15.0	15.0		7.0	20.0	

Lanes, Volumes, Timings  
16: Ninth Line & 5 Side Road

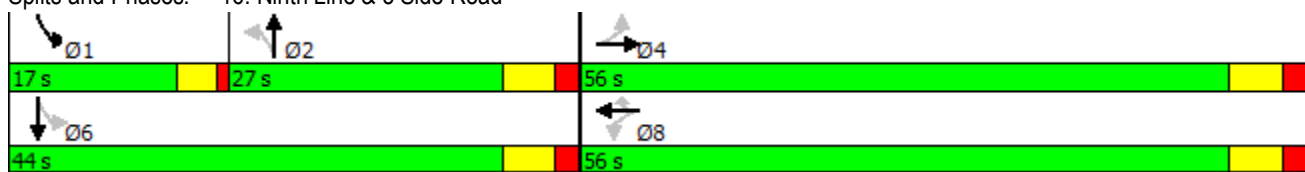
2026 Background AM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	24.0	24.0		24.0	24.0	24.0	21.0	21.0		11.0	26.0	
Total Split (s)	56.0	56.0		56.0	56.0	56.0	27.0	27.0		17.0	44.0	
Total Split (%)	56.0%	56.0%		56.0%	56.0%	56.0%	27.0%	27.0%		17.0%	44.0%	
Maximum Green (s)	50.0	50.0		50.0	50.0	50.0	21.0	21.0		13.0	38.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		4.0	6.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.5	3.5		3.5	3.5	3.5	5.5	5.5		3.0	5.5	
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Walk Time (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0			7.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0			0	
Act Effct Green (s)	34.5	34.5		34.5	34.5	34.5	21.6	21.6		40.5	38.5	
Actuated g/C Ratio	0.41	0.41		0.41	0.41	0.41	0.25	0.25		0.48	0.45	
v/c Ratio	0.06	0.85		0.04	0.20	0.03	0.14	0.52		0.70	0.58	
Control Delay	14.5	34.2		14.4	16.1	0.1	33.5	31.6		26.5	20.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	14.5	34.2		14.4	16.1	0.1	33.5	31.6		26.5	20.8	
LOS	B	C		B	B	A	C	C		C	C	
Approach Delay		33.3			14.3			31.7			22.4	
Approach LOS		C			B			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	85.1
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	26.3
Intersection LOS:	C
Intersection Capacity Utilization:	85.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 16: Ninth Line & 5 Side Road





Queues  
16: Ninth Line & 5 Side Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	625	5	150	20	15	430	345	885
v/c Ratio	0.06	0.85	0.04	0.20	0.03	0.14	0.52	0.70	0.58
Control Delay	14.5	34.2	14.4	16.1	0.1	33.5	31.6	26.5	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	34.2	14.4	16.1	0.1	33.5	31.6	26.5	20.8
Queue Length 50th (m)	3.0	92.8	0.5	16.0	0.0	2.0	32.7	36.5	56.4
Queue Length 95th (m)	8.0	134.7	2.5	27.5	0.0	8.8	58.5	#92.1	100.7
Internal Link Dist (m)		556.9		434.3			3096.2		305.9
Turn Bay Length (m)	40.0		40.0		40.0	40.0		40.0	
Base Capacity (vph)	680	1078	190	1108	991	110	820	500	1534
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.58	0.03	0.14	0.02	0.14	0.52	0.69	0.58
























Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 16: Ninth Line & 5 Side Road

2026 Background AM  
Premier Gateway Phase 1B Employment Area

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	30	590	35	5	150	20	15	400	30	345	850	35	
Future Volume (vph)	30	590	35	5	150	20	15	400	30	345	850	35	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		4.0	6.0		
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.99		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1641	1810		1805	1863	1615	1289	3214		1805	3388		
Flt Permitted	0.66	1.00		0.17	1.00	1.00	0.32	1.00		0.36	1.00		
Satd. Flow (perm)	1143	1810		321	1863	1615	436	3214		690	3388		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	30	590	35	5	150	20	15	400	30	345	850	35	
RTOR Reduction (vph)	0	2	0	0	0	12	0	5	0	0	3	0	
Lane Group Flow (vph)	30	623	0	5	150	8	15	425	0	345	882	0	
Heavy Vehicles (%)	10%	4%	6%	0%	2%	0%	40%	12%	0%	0%	6%	4%	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA		
Protected Phases		4			8			2		1	6		
Permitted Phases	4			8		8	2			6			
Actuated Green, G (s)	34.5	34.5		34.5	34.5	34.5	21.7	21.7		38.5	38.5		
Effective Green, g (s)	34.5	34.5		34.5	34.5	34.5	21.7	21.7		38.5	38.5		
Actuated g/C Ratio	0.41	0.41		0.41	0.41	0.41	0.26	0.26		0.45	0.45		
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		4.0	6.0		
Vehicle Extension (s)	3.5	3.5		3.5	3.5	3.5	5.5	5.5		3.0	5.5		
Lane Grp Cap (vph)	463	734		130	756	655	111	820		480	1534		
v/s Ratio Prot		c0.34			0.08			0.13		c0.11	0.26		
v/s Ratio Perm	0.03			0.02		0.01	0.03			c0.22			
v/c Ratio	0.06	0.85		0.04	0.20	0.01	0.14	0.52		0.72	0.58		
Uniform Delay, d1	15.4	22.9		15.2	16.3	15.1	24.4	27.2		16.2	17.2		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.1	9.2		0.1	0.2	0.0	2.5	2.3		5.1	1.6		
Delay (s)	15.5	32.1		15.4	16.5	15.1	26.9	29.5		21.3	18.8		
Level of Service	B	C		B	B	B	C	C		C	B		
Approach Delay (s)		31.3			16.3			29.4			19.5		
Approach LOS		C			B			C			B		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			24.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.81										
Actuated Cycle Length (s)			85.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			85.3%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings  
1: Brownridge Road/Fifth Line & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	365	5	5	1420	15	60	10	30	55	5	135
Future Volume (vph)	65	365	5	5	1420	15	60	10	30	55	5	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	145.0		65.0	30.0		0.0	20.0		0.0	25.0		25.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	100.0			100.0			20.0			75.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.887				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	3085	1214	1203	3300	0	1687	1495	0	1583	1429	1568
Flt Permitted	0.147			0.534			0.754			0.731		
Satd. Flow (perm)	263	3085	1214	676	3300	0	1339	1495	0	1218	1429	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			55		3			30				91
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		486.3			703.6			285.2			91.4	
Travel Time (s)		29.2			42.2			20.5			6.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	17%	33%	50%	9%	27%	7%	0%	17%	14%	33%	3%
Adj. Flow (vph)	65	365	5	5	1420	15	60	10	30	55	5	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	365	5	5	1435	0	60	40	0	55	5	135
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	25.0	25.0	25.0	25.0	25.0		10.0	10.0		10.0	10.0	10.0

Lanes, Volumes, Timings  
1: Brownridge Road/Fifth Line & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area

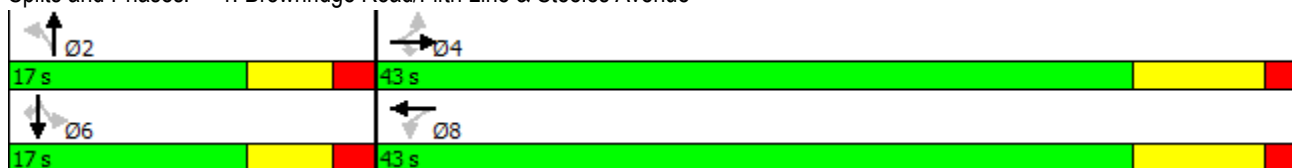


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	33.0	33.0	33.0	33.0	33.0		16.0	16.0		16.0	16.0	16.0
Total Split (s)	43.0	43.0	43.0	43.0	43.0		17.0	17.0		17.0	17.0	17.0
Total Split (%)	71.7%	71.7%	71.7%	71.7%	71.7%		28.3%	28.3%		28.3%	28.3%	28.3%
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0		11.0	11.0		11.0	11.0	11.0
Yellow Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	8.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	Max		None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0	16.0		16.0	16.0		16.0	16.0	16.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	0
Act Effct Green (s)	40.2	40.2	40.2	40.2	40.2		10.2	10.2		10.2	10.2	10.2
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68		0.17	0.17		0.17	0.17	0.17
v/c Ratio	0.37	0.17	0.01	0.01	0.64		0.26	0.14		0.26	0.02	0.39
Control Delay	14.6	5.4	0.0	5.2	9.5		24.7	12.2		25.1	20.6	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	14.6	5.4	0.0	5.2	9.5		24.7	12.2		25.1	20.6	13.0
LOS	B	A	A	A	A		C	B		C	C	B
Approach Delay		6.7			9.5			19.7			16.6	
Approach LOS		A			A			B			B	

Intersection Summary

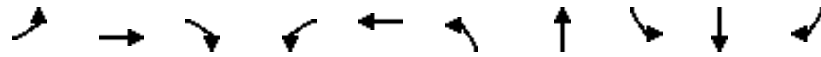
Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	59.5
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	10.0
Intersection LOS:	B
Intersection Capacity Utilization:	75.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Brownridge Road/Fifth Line & Steeles Avenue



Queues  
1: Brownridge Road/Fifth Line & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	65	365	5	5	1435	60	40	55	5	135
v/c Ratio	0.37	0.17	0.01	0.01	0.64	0.26	0.14	0.26	0.02	0.39
Control Delay	14.6	5.4	0.0	5.2	9.5	24.7	12.2	25.1	20.6	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	5.4	0.0	5.2	9.5	24.7	12.2	25.1	20.6	13.0
Queue Length 50th (m)	3.5	8.7	0.0	0.2	53.5	6.0	1.0	5.5	0.5	4.3
Queue Length 95th (m)	15.0	14.7	0.0	1.3	80.3	15.3	8.0	14.4	2.9	17.5
Internal Link Dist (m)	462.3				679.6		261.2		67.4	
Turn Bay Length (m)	145.0		65.0	30.0			20.0	25.0		25.0
Base Capacity (vph)	178	2086	838	457	2232	247	300	225	264	364
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.17	0.01	0.01	0.64	0.24	0.13	0.24	0.02	0.37

Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 1: Brownridge Road/Fifth Line & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



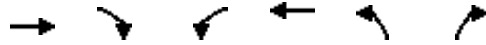
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	365	5	5	1420	15	60	10	30	55	5	135
Future Volume (vph)	65	365	5	5	1420	15	60	10	30	55	5	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	3085	1214	1203	3301		1687	1496		1583	1429	1568
Flt Permitted	0.15	1.00	1.00	0.53	1.00		0.75	1.00		0.73	1.00	1.00
Satd. Flow (perm)	263	3085	1214	677	3301		1340	1496		1218	1429	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	365	5	5	1420	15	60	10	30	55	5	135
RTOR Reduction (vph)	0	0	2	0	1	0	0	26	0	0	0	79
Lane Group Flow (vph)	65	365	3	5	1434	0	60	14	0	55	5	56
Heavy Vehicles (%)	6%	17%	33%	50%	9%	27%	7%	0%	17%	14%	33%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2				6
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	38.6	38.6	38.6	38.6	38.6		8.1	8.1		8.1	8.1	8.1
Effective Green, g (s)	38.6	38.6	38.6	38.6	38.6		8.1	8.1		8.1	8.1	8.1
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64		0.13	0.13		0.13	0.13	0.13
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	167	1961	772	430	2099		178	199		162	190	209
v/s Ratio Prot		0.12			c0.43			0.01				0.00
v/s Ratio Perm	0.25		0.00	0.01			0.04			c0.05		0.04
v/c Ratio	0.39	0.19	0.00	0.01	0.68		0.34	0.07		0.34	0.03	0.27
Uniform Delay, d1	5.3	4.6	4.0	4.1	7.1		23.9	23.0		23.9	22.9	23.6
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	6.7	0.2	0.0	0.0	1.8		1.1	0.2		1.3	0.1	0.7
Delay (s)	12.1	4.8	4.0	4.1	8.9		25.0	23.2		25.1	22.9	24.3
Level of Service	B	A	A	A	A		C	C		C	C	C
Approach Delay (s)		5.9			8.9			24.3				24.5
Approach LOS		A			A			C				C
<b>Intersection Summary</b>												
HCM 2000 Control Delay			10.4			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			60.7			Sum of lost time (s)			14.0			
Intersection Capacity Utilization			75.7%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
2: Fifth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (vph)	740	5	5	1445	20	10
Future Volume (vph)	740	5	5	1445	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	60.0		15.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			100.0		30.0	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3085	1615	1203	3312	1687	1380
Flt Permitted			0.371		0.950	
Satd. Flow (perm)	3085	1615	470	3312	1687	1380
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		5				10
Link Speed (k/h)	60			60	60	
Link Distance (m)	703.6			479.7	556.9	
Travel Time (s)	42.2			28.8	33.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	17%	0%	50%	9%	7%	17%
Adj. Flow (vph)	740	5	5	1445	20	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	740	5	5	1445	20	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	CI+Ex			CI+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases		4	8		2	2
Detector Phase	4	4	8	8	2	2
Switch Phase						
Minimum Initial (s)	25.0	25.0	25.0	25.0	10.0	10.0

Lanes, Volumes, Timings  
2: Fifth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	33.0	33.0	33.0	33.0	16.0	16.0
Total Split (s)	39.0	39.0	39.0	39.0	16.0	16.0
Total Split (%)	70.9%	70.9%	70.9%	70.9%	29.1%	29.1%
Maximum Green (s)	31.0	31.0	31.0	31.0	10.0	10.0
Yellow Time (s)	6.0	6.0	6.0	6.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	50.8	50.8	50.8	50.8	10.1	10.1
Actuated g/C Ratio	0.86	0.86	0.86	0.86	0.17	0.17
v/c Ratio	0.28	0.00	0.01	0.51	0.07	0.04
Control Delay	3.4	3.0	4.2	4.9	24.1	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.4	3.0	4.2	4.9	24.1	14.5
LOS	A	A	A	A	C	B
Approach Delay	3.4			4.9	20.9	
Approach LOS	A			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	55
Actuated Cycle Length:	59.3
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	4.6
Intersection Capacity Utilization	59.9%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	B

Splits and Phases: 2: Fifth Line South & Steeles Avenue





Queues  
2: Fifth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	740	5	5	1445	20	10
v/c Ratio	0.28	0.00	0.01	0.51	0.07	0.04
Control Delay	3.4	3.0	4.2	4.9	24.1	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.4	3.0	4.2	4.9	24.1	14.5
Queue Length 50th (m)	0.0	0.0	0.0	0.0	1.7	0.0
Queue Length 95th (m)	29.6	1.0	1.2	75.3	7.7	3.8
Internal Link Dist (m)	679.6			455.7	532.9	
Turn Bay Length (m)		30.0	60.0		15.0	
Base Capacity (vph)	2644	1385	403	2839	288	243
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.00	0.01	0.51	0.07	0.04
<b>Intersection Summary</b>						

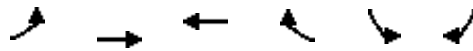
HCM Signalized Intersection Capacity Analysis  
2: Fifth Line South & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (vph)	740	5	5	1445	20	10
Future Volume (vph)	740	5	5	1445	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	8.0	8.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3085	1615	1203	3312	1687	1380
Flt Permitted	1.00	1.00	0.37	1.00	0.95	1.00
Satd. Flow (perm)	3085	1615	469	3312	1687	1380
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	740	5	5	1445	20	10
RTOR Reduction (vph)	0	1	0	0	0	9
Lane Group Flow (vph)	740	4	5	1445	20	1
Heavy Vehicles (%)	17%	0%	50%	9%	7%	17%
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases		4	8		2	2
Actuated Green, G (s)	45.6	45.6	45.6	45.6	3.5	3.5
Effective Green, g (s)	45.6	45.6	45.6	45.6	3.5	3.5
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.06	0.06
Clearance Time (s)	8.0	8.0	8.0	8.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2229	1167	338	2393	93	76
v/s Ratio Prot	0.24			c0.44		
v/s Ratio Perm		0.00	0.01		c0.01	0.00
v/c Ratio	0.33	0.00	0.01	0.60	0.22	0.01
Uniform Delay, d1	3.2	2.4	2.5	4.3	28.5	28.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.1	1.1	1.2	0.0
Delay (s)	3.6	2.4	2.5	5.4	29.6	28.2
Level of Service	A	A	A	A	C	C
Approach Delay (s)	3.6			5.4	29.2	
Approach LOS	A			A	C	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			5.1		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.58			
Actuated Cycle Length (s)			63.1		Sum of lost time (s)	14.0
Intersection Capacity Utilization			59.9%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings  
3: Steeles Avenue & Sixth Line



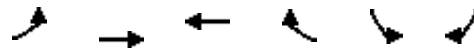
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	60	1035	1485	25	10	45
Future Volume (vph)	60	1035	1485	25	10	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0			30.0	30.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	100.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	2983	3282	1524	1805	1615
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	2983	3282	1524	1805	1615
Link Speed (k/h)		60	80		70	
Link Distance (m)		479.7	905.3		3066.1	
Travel Time (s)		28.8	40.7		157.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	21%	10%	6%	0%	0%
Adj. Flow (vph)	60	1035	1485	25	10	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	1035	1485	25	10	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.7%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 3: Steeles Avenue & Sixth Line

2026 Background PM  
 Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷		
Traffic Volume (veh/h)	60	1035	1485	25	10	45		
Future Volume (Veh/h)	60	1035	1485	25	10	45		
Sign Control		Free	Free		Stop			
Grade		0%	0%		0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly flow rate (vph)	60	1035	1485	25	10	45		
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	1510				2122	742		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	1510				2122	742		
tC, single (s)	4.1				6.8	6.9		
tC, 2 stage (s)								
tF (s)	2.2				3.5	3.3		
p0 queue free %	86				74	88		
cM capacity (veh/h)	439				38	362		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	60	518	518	742	742	25	10	45
Volume Left	60	0	0	0	0	0	10	0
Volume Right	0	0	0	0	0	25	0	45
cSH	439	1700	1700	1700	1700	1700	38	362
Volume to Capacity	0.14	0.30	0.30	0.44	0.44	0.01	0.26	0.12
Queue Length 95th (m)	3.8	0.0	0.0	0.0	0.0	0.0	6.9	3.4
Control Delay (s)	14.5	0.0	0.0	0.0	0.0	0.0	130.3	16.3
Lane LOS	B						F	C
Approach Delay (s)	0.8			0.0			37.1	
Approach LOS							E	
Intersection Summary								
Average Delay	1.1							
Intersection Capacity Utilization	57.7%			ICU Level of Service			B	
Analysis Period (min)	15							

Lanes, Volumes, Timings  
4: Sixth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (vph)	525	15	260	1180	30	10
Future Volume (vph)	525	15	260	1180	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		30.0	60.0		30.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			100.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2959	1615	1805	3282	1805	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	2959	1615	1805	3282	1805	1615
Link Speed (k/h)	80			80	50	
Link Distance (m)	905.3			497.0	169.8	
Travel Time (s)	40.7			22.4	12.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	22%	0%	0%	10%	0%	0%
Adj. Flow (vph)	525	15	260	1180	30	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	525	15	260	1180	30	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary

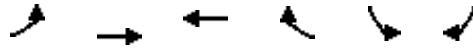
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.6%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
 4: Sixth Line South & Steeles Avenue

2026 Background PM  
 Premier Gateway Phase 1B Employment Area

	→	↘	↙	←	↖	↗			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑↑	↗	↙	↑↑	↙	↗			
Traffic Volume (veh/h)	525	15	260	1180	30	10			
Future Volume (Veh/h)	525	15	260	1180	30	10			
Sign Control	Free			Free	Stop				
Grade	0%			0%	0%				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Hourly flow rate (vph)	525	15	260	1180	30	10			
<b>Pedestrians</b>									
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			540			1635	262		
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			540			1635	262		
tC, single (s)			4.1			6.8	6.9		
tC, 2 stage (s)									
tF (s)			2.2			3.5	3.3		
p0 queue free %			75			57	99		
cM capacity (veh/h)			1039			70	742		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	262	262	15	260	590	590	30	10	
Volume Left	0	0	0	260	0	0	30	0	
Volume Right	0	0	15	0	0	0	0	10	
cSH	1700	1700	1700	1039	1700	1700	70	742	
Volume to Capacity	0.15	0.15	0.01	0.25	0.35	0.35	0.43	0.01	
Queue Length 95th (m)	0.0	0.0	0.0	7.9	0.0	0.0	13.4	0.3	
Control Delay (s)	0.0	0.0	0.0	9.6	0.0	0.0	90.1	9.9	
Lane LOS				A			F	A	
Approach Delay (s)	0.0		1.7			70.1			
Approach LOS							F		
<b>Intersection Summary</b>									
Average Delay			2.6						
Intersection Capacity Utilization			42.6%		ICU Level of Service		A		
Analysis Period (min)			15						

Lanes, Volumes, Timings  
5: Steeles Avenue & Hornby Road

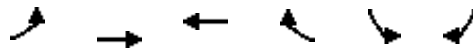


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	675	1395	20	5	70
Future Volume (vph)	40	675	1395	20	5	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0			30.0	30.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	100.0				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3034	3282	1615	1357	1615
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	3034	3282	1615	1357	1615
Link Speed (k/h)		60	60		60	
Link Distance (m)		497.0	879.8		1223.8	
Travel Time (s)		29.8	52.8		73.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	19%	10%	0%	33%	0%
Adj. Flow (vph)	40	675	1395	20	5	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	675	1395	20	5	70
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.2	7.2		3.6	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.6% ICU Level of Service A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 5: Steeles Avenue & Hornby Road

2026 Background PM  
 Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	40	675	1395	20	5	70		
Future Volume (Veh/h)	40	675	1395	20	5	70		
Sign Control		Free	Free		Stop			
Grade		0%	0%		0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly flow rate (vph)	40	675	1395	20	5	70		
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	1415				1812	698		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	1415				1812	698		
tC, single (s)	4.1				7.5	6.9		
tC, 2 stage (s)								
tF (s)	2.2				3.8	3.3		
p0 queue free %	92				89	82		
cM capacity (veh/h)	488				46	388		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	40	338	338	698	698	20	5	70
Volume Left	40	0	0	0	0	0	5	0
Volume Right	0	0	0	0	0	20	0	70
cSH	488	1700	1700	1700	1700	1700	46	388
Volume to Capacity	0.08	0.20	0.20	0.41	0.41	0.01	0.11	0.18
Queue Length 95th (m)	2.1	0.0	0.0	0.0	0.0	0.0	2.8	5.2
Control Delay (s)	13.0	0.0	0.0	0.0	0.0	0.0	93.6	16.3
Lane LOS	B						F	C
Approach Delay (s)	0.7			0.0			21.5	
Approach LOS							C	
Intersection Summary								
Average Delay	1.0							
Intersection Capacity Utilization	49.6%			ICU Level of Service			A	
Analysis Period (min)	15							



Lanes, Volumes, Timings  
6: Trafalgar Road & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
Future Volume (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		40.0	130.0		70.0	100.0		65.0	250.0		80.0
Storage Lanes	2		1	2		1	2		1	1		1
Taper Length (m)	100.0			100.0			80.0			100.0		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2653	3139	1262	3433	3312	1583	3099	3505	1568	1805	3471	1129
Flt Permitted	0.950			0.950			0.950			0.214		
Satd. Flow (perm)	2653	3139	1262	3433	3312	1583	3099	3505	1568	407	3471	1129
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187			148			511			179
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		879.8			311.3			332.0			289.5	
Travel Time (s)		52.8			18.7			17.1			14.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	32%	15%	28%	2%	9%	2%	13%	3%	3%	0%	4%	43%
Adj. Flow (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	7.0	20.0	20.0

Lanes, Volumes, Timings  
6: Trafalgar Road & Steeles Avenue

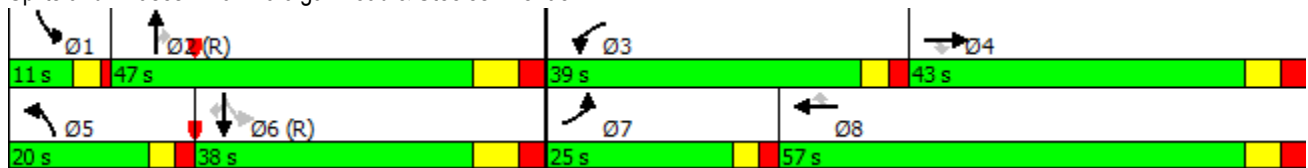
2026 Background PM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	12.0	27.0	27.0	13.0	27.0	27.0	13.0	28.0	28.0	11.0	28.0	28.0
Total Split (s)	25.0	43.0	43.0	39.0	57.0	57.0	20.0	47.0	47.0	11.0	38.0	38.0
Total Split (%)	17.9%	30.7%	30.7%	27.9%	40.7%	40.7%	14.3%	33.6%	33.6%	7.9%	27.1%	27.1%
Maximum Green (s)	20.0	36.0	36.0	34.0	50.0	50.0	15.0	39.0	39.0	7.0	30.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	1.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	8.0	8.0	4.0	8.0	8.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	4.0	3.0	3.0	4.0	0.2	0.2	3.0	0.2	0.2
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		26.0	26.0		26.0	26.0		26.0	26.0		26.0	26.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	19.5	35.3	35.3	33.3	49.1	49.1	14.0	42.6	42.6	43.3	32.3	32.3
Actuated g/C Ratio	0.14	0.25	0.25	0.24	0.35	0.35	0.10	0.30	0.30	0.31	0.23	0.23
v/c Ratio	0.89	0.87	0.32	0.92	0.94	0.31	0.66	0.75	0.85	0.26	0.46	0.18
Control Delay	85.3	62.9	3.8	69.2	59.3	10.6	71.2	50.3	24.2	31.3	49.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	62.9	3.8	69.2	59.3	10.6	71.2	50.3	24.2	31.3	49.3	1.0
LOS	F	E	A	E	E	B	E	D	C	C	D	A
Approach Delay		61.9			58.2			42.0			40.6	
Approach LOS		E			E			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle:	95
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	52.2
Intersection LOS:	D
Intersection Capacity Utilization:	88.4%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 6: Trafalgar Road & Steeles Avenue



Queues  
6: Trafalgar Road & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
v/c Ratio	0.89	0.87	0.32	0.92	0.94	0.31	0.66	0.75	0.85	0.26	0.46	0.18
Control Delay	85.3	62.9	3.8	69.2	59.3	10.6	71.2	50.3	24.2	31.3	49.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	62.9	3.8	69.2	59.3	10.6	71.2	50.3	24.2	31.3	49.3	1.0
Queue Length 50th (m)	49.2	101.4	0.0	109.9	159.6	10.0	29.9	115.1	64.5	9.2	50.3	0.0
Queue Length 95th (m)	#76.1	#129.1	7.6	#144.3	#202.8	29.0	43.9	141.0	#149.4	18.4	67.3	0.0
Internal Link Dist (m)		855.8			287.3			308.0			265.5	
Turn Bay Length (m)	115.0		40.0	130.0		70.0	100.0		65.0	250.0		80.0
Base Capacity (vph)	379	807	463	833	1182	660	332	1066	832	196	801	398
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.86	0.31	0.90	0.92	0.30	0.62	0.75	0.85	0.26	0.46	0.18

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 6: Trafalgar Road & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕	↗	↔↔	↕↕	↗	↔↔	↕↕	↗	↗	↕↕	↗
Traffic Volume (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
Future Volume (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	8.0	8.0	4.0	8.0	8.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2653	3139	1262	3433	3312	1583	3099	3505	1568	1805	3471	1129
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	2653	3139	1262	3433	3312	1583	3099	3505	1568	406	3471	1129
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	690	145	750	1090	200	205	800	710	50	370	70
RTOR Reduction (vph)	0	0	108	0	0	96	0	0	358	0	0	54
Lane Group Flow (vph)	330	690	37	750	1090	104	205	800	352	50	370	16
Heavy Vehicles (%)	32%	15%	28%	2%	9%	2%	13%	3%	3%	0%	4%	43%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6
Actuated Green, G (s)	19.5	35.3	35.3	33.3	49.1	49.1	14.0	41.8	41.8	38.0	32.4	32.4
Effective Green, g (s)	19.5	35.3	35.3	33.3	49.1	49.1	14.0	41.8	41.8	38.0	32.4	32.4
Actuated g/C Ratio	0.14	0.25	0.25	0.24	0.35	0.35	0.10	0.30	0.30	0.27	0.23	0.23
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	5.0	8.0	8.0	4.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	4.0	3.0	3.0	4.0	0.2	0.2	3.0	0.2	0.2
Lane Grp Cap (vph)	369	791	318	816	1161	555	309	1046	468	166	803	261
v/s Ratio Prot	0.12	0.22		c0.22	c0.33		c0.07	c0.23		0.01	0.11	
v/s Ratio Perm			0.03			0.07			0.22	0.07		0.01
v/c Ratio	0.89	0.87	0.11	0.92	0.94	0.19	0.66	0.76	0.75	0.30	0.46	0.06
Uniform Delay, d1	59.2	50.2	40.3	52.0	44.0	31.6	60.7	44.6	44.4	38.8	46.3	42.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.9	10.4	0.2	15.4	14.0	0.2	5.8	5.3	10.6	1.0	1.9	0.5
Delay (s)	82.2	60.6	40.5	67.4	58.0	31.7	66.5	50.0	55.0	39.9	48.2	42.4
Level of Service	F	E	D	E	E	C	E	D	E	D	D	D
Approach Delay (s)		64.2			58.9			54.0			46.5	
Approach LOS		E			E			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			57.4			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			25.0			
Intersection Capacity Utilization			88.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
7: Toronto Premier Outlets & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖↗	↗
Traffic Volume (vph)	1375	50	30	1670	385	90
Future Volume (vph)	1375	50	30	1670	385	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		130.0	45.0		0.0	40.0
Storage Lanes		1	1		2	1
Taper Length (m)			80.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Fr <sub>t</sub>		0.850				0.850
Fl <sub>t</sub> Protected			0.950		0.950	
Satd. Flow (prot)	3312	1482	1805	3406	3467	1599
Fl <sub>t</sub> Permitted			0.111		0.950	
Satd. Flow (perm)	3312	1482	211	3406	3467	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		50				90
Link Speed (k/h)	60			60	50	
Link Distance (m)	311.3			200.7	119.1	
Travel Time (s)	18.7			12.0	8.6	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	9%	0%	6%	1%	1%
Adj. Flow (vph)	1375	50	30	1670	385	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1375	50	30	1670	385	90
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			7.2	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	CI+Ex			CI+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	20.0	20.0	6.0	20.0	10.0	10.0

Lanes, Volumes, Timings  
7: Toronto Premier Outlets & Steeles Avenue

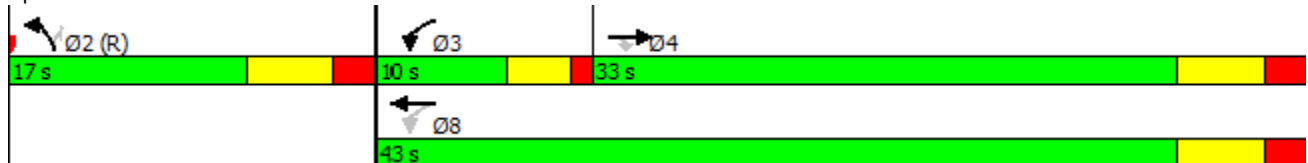


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	26.0	26.0	10.0	26.0	17.0	17.0
Total Split (s)	33.0	33.0	10.0	43.0	17.0	17.0
Total Split (%)	55.0%	55.0%	16.7%	71.7%	28.3%	28.3%
Maximum Green (s)	27.0	27.0	6.0	37.0	11.0	11.0
Yellow Time (s)	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	0.2	0.2	3.0	0.2	4.0	4.0
Recall Mode	Max	Max	None	Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0		17.0	21.0	21.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	33.0	33.0	39.0	37.0	11.0	11.0
Actuated g/C Ratio	0.55	0.55	0.65	0.62	0.18	0.18
v/c Ratio	0.76	0.06	0.10	0.80	0.61	0.25
Control Delay	16.3	3.6	4.5	12.3	27.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.6	4.5	12.3	27.1	7.8
LOS	B	A	A	B	C	A
Approach Delay	15.9			12.2	23.5	
Approach LOS	B			B	C	

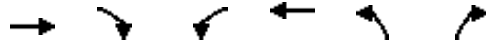
Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBL an 6:, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	15.1
Intersection Capacity Utilization	67.1%
Analysis Period (min)	15
Intersection LOS:	B
ICU Level of Service	C

Splits and Phases: 7: Toronto Premier Outlets & Steeles Avenue



Queues  
7: Toronto Premier Outlets & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1375	50	30	1670	385	90
v/c Ratio	0.76	0.06	0.10	0.80	0.61	0.25
Control Delay	16.3	3.6	4.5	12.3	27.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.6	4.5	12.3	27.1	7.8
Queue Length 50th (m)	46.8	0.0	1.0	65.1	21.3	0.0
Queue Length 95th (m)	#120.2	4.8	3.2	93.3	33.7	10.2
Internal Link Dist (m)	287.3			176.7	95.1	
Turn Bay Length (m)		130.0	45.0			40.0
Base Capacity (vph)	1821	837	296	2100	635	366
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.06	0.10	0.80	0.61	0.25

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be long r.  
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis  
7: Toronto Premier Outlets & Steeles Avenue

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖↗	↗
Traffic Volume (vph)	1375	50	30	1670	385	90
Future Volume (vph)	1375	50	30	1670	385	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3312	1482	1805	3406	3467	1599
Flt Permitted	1.00	1.00	0.11	1.00	0.95	1.00
Satd. Flow (perm)	3312	1482	211	3406	3467	1599
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1375	50	30	1670	385	90
RTOR Reduction (vph)	0	23	0	0	0	77
Lane Group Flow (vph)	1375	28	30	1670	385	13
Heavy Vehicles (%)	9%	9%	0%	6%	1%	1%
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	33.0	33.0	39.4	39.4	8.6	8.6
Effective Green, g (s)	33.0	33.0	39.4	39.4	8.6	8.6
Actuated g/C Ratio	0.55	0.55	0.66	0.66	0.14	0.14
Clearance Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Vehicle Extension (s)	0.2	0.2	3.0	0.2	4.0	4.0
Lane Grp Cap (vph)	1821	815	202	2236	496	229
v/s Ratio Prot	0.42		0.01	c0.49	c0.11	
v/s Ratio Perm		0.02	0.09			0.01
v/c Ratio	0.76	0.03	0.15	0.75	0.78	0.06
Uniform Delay, d1	10.4	6.2	6.0	6.9	24.8	22.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	0.1	0.3	2.3	11.3	0.5
Delay (s)	13.4	6.3	6.3	9.3	36.1	22.7
Level of Service	B	A	A	A	D	C
Approach Delay (s)	13.1			9.2	33.5	
Approach LOS	B			A	C	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			14.0		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.82			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	16.0
Intersection Capacity Utilization			67.1%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						



8: Toronto Premium Outlets/Eighth Line & Steeles Avenue Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	1065	20	150	1655	150	70	35	130	45	25	80
Future Volume (vph)	285	1065	20	150	1655	150	70	35	130	45	25	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	105.0		55.0	30.0		30.0	0.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	55.0			90.0			7.5			45.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.882			0.886	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3223	1615	1770	3374	1599	3367	1650	0	1752	1658	0
Flt Permitted	0.056			0.235			0.950			0.653		
Satd. Flow (perm)	106	3223	1615	438	3374	1599	3367	1650	0	1205	1658	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126			159		130				80
Link Speed (k/h)		60			60			50				70
Link Distance (m)		200.7			870.8			218.1				3086.4
Travel Time (s)		12.0			52.2			15.7				158.7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	12%	0%	2%	7%	1%	4%	0%	2%	3%	0%	2%
Adj. Flow (vph)	285	1065	20	150	1655	150	70	35	130	45	25	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	285	1065	20	150	1655	150	70	165	0	45	105	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Perm	NA	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases	4		4	8		8				6		
Detector Phase	7	4	4	3	8	8	5	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		10.0	10.0	

8: Toronto Premium Outlets/Eighth Line & Steeles Avenue Premier Gateway Phase 1B Employment Area

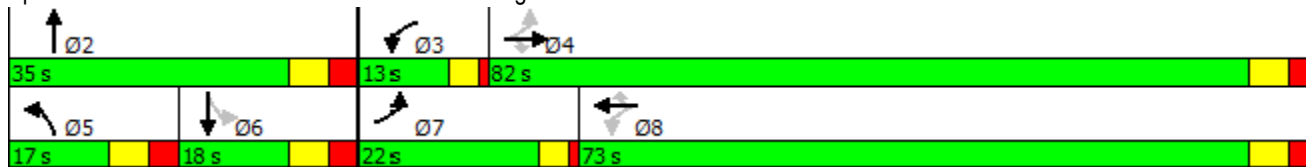


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	11.0	26.0	26.0	11.0	26.0	26.0	17.0	17.0		17.0	17.0	
Total Split (s)	22.0	82.0	82.0	13.0	73.0	73.0	17.0	35.0		18.0	18.0	
Total Split (%)	16.9%	63.1%	63.1%	10.0%	56.2%	56.2%	13.1%	26.9%		13.8%	13.8%	
Maximum Green (s)	18.0	76.0	76.0	9.0	67.0	67.0	10.0	28.0		11.0	11.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	0.2	0.2	3.0	0.2	0.2	4.0	4.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	None	None		Max	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0				
Flash Dont Walk (s)		17.0	17.0		17.0	17.0		21.0				
Pedestrian Calls (#/hr)		0	0		0	0		0				
Act Effct Green (s)	90.9	76.5	76.5	78.1	67.7	67.7	10.0	24.2		11.0	11.0	
Actuated g/C Ratio	0.72	0.61	0.61	0.62	0.54	0.54	0.08	0.19		0.09	0.09	
v/c Ratio	0.93	0.55	0.02	0.42	0.92	0.16	0.26	0.39		0.43	0.48	
Control Delay	72.6	16.8	0.1	10.8	37.1	2.5	59.0	14.5		70.0	26.4	
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	72.6	17.3	0.1	10.8	37.1	2.5	59.0	14.5		70.0	26.4	
LOS	E	B	A	B	D	A	E	B		E	C	
Approach Delay		28.5			32.4			27.8			39.5	
Approach LOS		C			C			C			D	

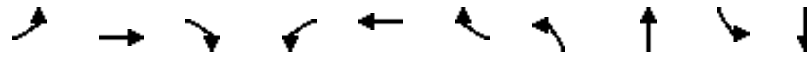
Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	126.2
Natural Cycle:	100
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	31.0
Intersection LOS:	C
Intersection Capacity Utilization:	99.7%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 8: Toronto Premium Outlets/Eighth Line & Steeles Avenue



8: Toronto Premium Outlets/Eighth Line & Steeles Avenue Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	285	1065	20	150	1655	150	70	165	45	105
v/c Ratio	0.93	0.55	0.02	0.42	0.92	0.16	0.26	0.39	0.43	0.48
Control Delay	72.6	16.8	0.1	10.8	37.1	2.5	59.0	14.5	70.0	26.4
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.6	17.3	0.1	10.8	37.1	2.5	59.0	14.5	70.0	26.4
Queue Length 50th (m)	59.4	89.3	0.0	12.1	216.6	0.0	9.3	7.6	11.8	6.4
Queue Length 95th (m)	#114.2	109.1	0.0	19.4	#276.1	9.4	17.3	27.6	25.3	25.5
Internal Link Dist (m)		176.7			846.8			194.1		3062.4
Turn Bay Length (m)	105.0		55.0	30.0		30.0			70.0	
Base Capacity (vph)	319	1952	1028	368	1808	931	268	468	105	218
Starvation Cap Reductn	0	431	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.70	0.02	0.41	0.92	0.16	0.26	0.35	0.43	0.48

Intersection Summary






























# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

2026 Background PM

## 8: Toronto Premium Outlets/Eighth Line & Steeles Avenue Premier Gateway Phase 1B Employment Area

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	285	1065	20	150	1655	150	70	35	130	45	25	80
Future Volume (vph)	285	1065	20	150	1655	150	70	35	130	45	25	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3223	1615	1770	3374	1599	3367	1649		1752	1658	
Flt Permitted	0.06	1.00	1.00	0.24	1.00	1.00	0.95	1.00		0.65	1.00	
Satd. Flow (perm)	106	3223	1615	439	3374	1599	3367	1649		1204	1658	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	285	1065	20	150	1655	150	70	35	130	45	25	80
RTOR Reduction (vph)	0	0	8	0	0	70	0	104	0	0	73	0
Lane Group Flow (vph)	285	1065	12	150	1655	80	70	61	0	45	32	0
Heavy Vehicles (%)	0%	12%	0%	2%	7%	1%	4%	0%	2%	3%	0%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Perm	NA	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases	4		4	8		8				6		
Actuated Green, G (s)	88.9	76.5	76.5	76.1	67.7	67.7	7.8	25.8		11.0	11.0	
Effective Green, g (s)	88.9	76.5	76.5	76.1	67.7	67.7	7.8	25.8		11.0	11.0	
Actuated g/C Ratio	0.70	0.60	0.60	0.60	0.53	0.53	0.06	0.20		0.09	0.09	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	0.2	0.2	3.0	0.2	0.2	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)	302	1930	967	349	1788	847	205	333		103	142	
v/s Ratio Prot	c0.13	0.33		0.03	0.49		c0.02	0.04				0.02
v/s Ratio Perm	c0.53		0.01	0.23		0.05				c0.04		
v/c Ratio	0.94	0.55	0.01	0.43	0.93	0.09	0.34	0.18		0.44	0.22	
Uniform Delay, d1	43.0	15.3	10.3	11.8	27.7	14.8	57.5	42.2		55.4	54.4	
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	36.8	1.1	0.0	0.9	9.7	0.2	1.4	0.4		12.9	3.6	
Delay (s)	79.9	16.5	10.4	12.6	37.4	15.1	58.8	42.6		68.3	58.0	
Level of Service	E	B	B	B	D	B	E	D		E	E	
Approach Delay (s)		29.6			33.8			47.4			61.1	
Approach LOS		C			C			D			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			34.2				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			127.7				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			99.7%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
 9: Eighth Line South & Steeles Avenue



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵
Traffic Volume (vph)	1200	5	0	1965	5	10
Future Volume (vph)	1200	5	0	1965	5	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	90.0		30.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999					0.850
Flt Protected					0.950	
Satd. Flow (prot)	3274	0	1900	3406	1805	1346
Flt Permitted					0.950	
Satd. Flow (perm)	3274	0	1900	3406	1805	1346
Link Speed (k/h)	70			70	50	
Link Distance (m)	870.8			525.4	458.2	
Travel Time (s)	44.8			27.0	33.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	10%	50%	0%	6%	0%	20%
Adj. Flow (vph)	1200	5	0	1965	5	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1205	0	0	1965	5	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.3%
ICU Level of Service	C
Analysis Period (min)	15

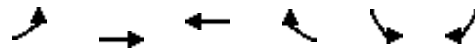
HCM Unsignalized Intersection Capacity Analysis  
 9: Eighth Line South & Steeles Avenue

2026 Background PM  
 Premier Gateway Phase 1B Employment Area

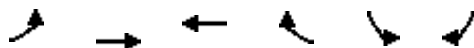
	→	↘	↙	←	↖	↗	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑		↘	↑↑	↘	↗	
Traffic Volume (veh/h)	1200	5	0	1965	5	10	
Future Volume (Veh/h)	1200	5	0	1965	5	10	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	1200	5	0	1965	5	10	
<b>Pedestrians</b>							
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			1205			2185	602
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1205			2185	602
tC, single (s)			4.1			6.8	7.3
tC, 2 stage (s)							
tF (s)			2.2			3.5	3.5
p0 queue free %			100			88	98
cM capacity (veh/h)			586			40	401
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	800	405	0	982	982	5	10
Volume Left	0	0	0	0	0	5	0
Volume Right	0	5	0	0	0	0	10
cSH	1700	1700	1700	1700	1700	40	401
Volume to Capacity	0.47	0.24	0.00	0.58	0.58	0.12	0.02
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	3.1	0.6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	107.4	14.2
Lane LOS						F	B
Approach Delay (s)	0.0		0.0		45.3		
Approach LOS						E	
<b>Intersection Summary</b>							
Average Delay			0.2				
Intersection Capacity Utilization			64.3%		ICU Level of Service		C
Analysis Period (min)			15				

Lanes, Volumes, Timings  
10: Steeles Avenue & Ninth Line

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	135	1110	1840	920	350	90
Future Volume (vph)	135	1110	1840	920	350	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	65.0			75.0	90.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	100.0				40.0	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	3252	3406	1615	3367	1524
Flt Permitted	0.059				0.950	
Satd. Flow (perm)	107	3252	3406	1615	3367	1524
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				757		90
Link Speed (k/h)		70	70		70	
Link Distance (m)		525.4	728.8		3120.2	
Travel Time (s)		27.0	37.5		160.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	11%	6%	0%	4%	6%
Adj. Flow (vph)	135	1110	1840	920	350	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	1110	1840	920	350	90
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (m)	2.0	10.0	10.0	2.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	0.6	2.0	2.0	2.0
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		CI+Ex	CI+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	7.0	20.0	20.0	20.0	10.0	10.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	11.0	27.0	27.0	27.0	17.0	17.0
Total Split (s)	11.0	82.0	71.0	71.0	18.0	18.0
Total Split (%)	11.0%	82.0%	71.0%	71.0%	18.0%	18.0%
Maximum Green (s)	7.0	75.0	64.0	64.0	11.0	11.0
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	0.2	0.2	0.2	3.0	3.0
Recall Mode	None	Max	Max	Max	Max	Max
Act Effct Green (s)	78.0	75.0	64.0	64.0	11.0	11.0
Actuated g/C Ratio	0.78	0.75	0.64	0.64	0.11	0.11
v/c Ratio	0.69	0.46	0.84	0.70	0.95	0.36
Control Delay	34.8	5.4	18.9	5.2	80.3	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	5.4	18.9	5.2	80.3	13.6
LOS	C	A	B	A	F	B
Approach Delay		8.6	14.3		66.7	
Approach LOS		A	B		E	

Intersection Summary

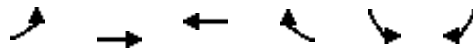
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	17.9
Intersection LOS:	B
Intersection Capacity Utilization:	83.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 10: Steeles Avenue & Ninth Line





Queues  
10: Steeles Avenue & Ninth Line



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	135	1110	1840	920	350	90
v/c Ratio	0.69	0.46	0.84	0.70	0.95	0.36
Control Delay	34.8	5.4	18.9	5.2	80.3	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	5.4	18.9	5.2	80.3	13.6
Queue Length 50th (m)	10.0	37.4	140.4	12.1	37.1	0.0
Queue Length 95th (m)	#37.5	47.9	177.8	39.8	#65.3	14.8
Internal Link Dist (m)		501.4	704.8		3096.2	
Turn Bay Length (m)	65.0			75.0	90.0	
Base Capacity (vph)	196	2439	2179	1306	370	247
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.46	0.84	0.70	0.95	0.36

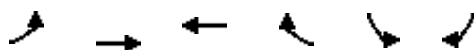
Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 10: Steeles Avenue & Ninth Line

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↵	↵↵	↵
Traffic Volume (vph)	135	1110	1840	920	350	90
Future Volume (vph)	135	1110	1840	920	350	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Flt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3252	3406	1615	3367	1524
Flt Permitted	0.06	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	106	3252	3406	1615	3367	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	135	1110	1840	920	350	90
RTOR Reduction (vph)	0	0	0	273	0	80
Lane Group Flow (vph)	135	1110	1840	647	350	10
Heavy Vehicles (%)	5%	11%	6%	0%	4%	6%
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	75.0	75.0	64.0	64.0	11.0	11.0
Effective Green, g (s)	75.0	75.0	64.0	64.0	11.0	11.0
Actuated g/C Ratio	0.75	0.75	0.64	0.64	0.11	0.11
Clearance Time (s)	4.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2	0.2	0.2	3.0	3.0
Lane Grp Cap (vph)	192	2439	2179	1033	370	167
v/s Ratio Prot	c0.05	0.34	c0.54		c0.10	
v/s Ratio Perm	0.48			0.40		0.01
v/c Ratio	0.70	0.46	0.84	0.63	0.95	0.06
Uniform Delay, d1	22.7	4.7	14.1	10.8	44.2	39.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.1	0.6	4.2	2.9	34.9	0.7
Delay (s)	33.8	5.4	18.3	13.7	79.1	40.5
Level of Service	C	A	B	B	E	D
Approach Delay (s)		8.4	16.8		71.3	
Approach LOS		A	B		E	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			19.8		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)	18.0
Intersection Capacity Utilization			83.3%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings  
11: Trafalgar Rd & Hornby Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	10	5	1315	435	80
Future Volume (vph)	45	10	5	1315	435	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	100.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975				0.979	
Flt Protected	0.961					
Satd. Flow (prot)	1780	0	0	1863	1829	0
Flt Permitted	0.961					
Satd. Flow (perm)	1780	0	0	1863	1829	0
Link Speed (k/h)	60			80	80	
Link Distance (m)	54.4			135.9	215.8	
Travel Time (s)	3.3			6.1	9.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	45	10	5	1315	435	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	0	0	1320	515	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	83.2%
ICU Level of Service	E
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 11: Trafalgar Rd & Hornby Rd

















2026 Background PM  
 Premier Gateway Phase 1B Employment Area



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	10	5	1315	435	80
Future Volume (Veh/h)	45	10	5	1315	435	80
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	45	10	5	1315	435	80
<b>Pedestrians</b>						
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	1800	475	435			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1800	475	435			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	49	98	100			
cM capacity (veh/h)	88	594	1135			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	55	1320	515			
Volume Left	45	5	0			
Volume Right	10	0	80			
cSH	105	1135	1700			
Volume to Capacity	0.53	0.00	0.30			
Queue Length 95th (m)	19.2	0.1	0.0			
Control Delay (s)	72.5	0.2	0.0			
Lane LOS	F	A				
Approach Delay (s)	72.5	0.2	0.0			
Approach LOS	F					
<b>Intersection Summary</b>						
Average Delay			2.2			
Intersection Capacity Utilization			83.2%	ICU Level of Service	E	
Analysis Period (min)			15			

Lanes, Volumes, Timings  
12: Fifth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	255	5	20	535	25	10	50	30	5	35	20
Future Volume (vph)	45	255	5	20	535	25	10	50	30	5	35	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.994			0.955			0.955	
Flt Protected		0.993			0.998			0.994			0.996	
Satd. Flow (prot)	0	1852	0	0	1834	0	0	1742	0	0	1710	0
Flt Permitted		0.993			0.998			0.994			0.996	
Satd. Flow (perm)	0	1852	0	0	1834	0	0	1742	0	0	1710	0
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		320.1			648.3			2473.7			211.2	
Travel Time (s)		19.2			38.9			127.2			10.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	0%	0%	3%	0%	17%	0%	5%	0%	0%	17%
Adj. Flow (vph)	45	255	5	20	535	25	10	50	30	5	35	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	305	0	0	580	0	0	90	0	0	60	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.8%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
12: Fifth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	255	5	20	535	25	10	50	30	5	35	20
Future Volume (Veh/h)	45	255	5	20	535	25	10	50	30	5	35	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	45	255	5	20	535	25	10	50	30	5	35	20
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	560			260			972	948	258	990	938	548
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			260			972	948	258	990	938	548
tC, single (s)	4.1			4.1			7.3	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.7	4.0	3.3	3.5	4.0	3.5
p0 queue free %	96			98			94	80	96	97	86	96
cM capacity (veh/h)	1021			1316			178	248	774	177	251	509
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	305	580	90	60								
Volume Left	45	20	10	5								
Volume Right	5	25	30	20								
cSH	1021	1316	303	290								
Volume to Capacity	0.04	0.02	0.30	0.21								
Queue Length 95th (m)	1.1	0.4	9.7	6.1								
Control Delay (s)	1.7	0.4	21.8	20.6								
Lane LOS	A	A	C	C								
Approach Delay (s)	1.7	0.4	21.8	20.6								
Approach LOS			C	C								
<b>Intersection Summary</b>												
Average Delay			3.8									
Intersection Capacity Utilization			47.8%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings  
13: Sixth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	250	5	15	600	25	10	35	20	10	20	10
Future Volume (vph)	5	250	5	15	600	25	10	35	20	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.995			0.958			0.966	
Flt Protected		0.999			0.999			0.992			0.988	
Satd. Flow (prot)	0	1834	0	0	1782	0	0	1716	0	0	1769	0
Flt Permitted		0.999			0.999			0.992			0.988	
Satd. Flow (perm)	0	1834	0	0	1782	0	0	1716	0	0	1769	0
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		620.4			640.8			3066.1			190.9	
Travel Time (s)		37.2			38.4			157.7			9.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	3%	1%	0%	5%	33%	0%	0%	17%	10%	0%	0%
Adj. Flow (vph)	5	250	5	15	600	25	10	35	20	10	20	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	260	0	0	640	0	0	65	0	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.8%
ICU Level of Service	A
Analysis Period (min)	15

# HCM Unsignalized Intersection Capacity Analysis

## 13: Sixth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	5	250	5	15	600	25	10	35	20	10	20	10
Future Volume (Veh/h)	5	250	5	15	600	25	10	35	20	10	20	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	250	5	15	600	25	10	35	20	10	20	10
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	625			255			925	918	252	942	908	612
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	625			255			925	918	252	942	908	612
tC, single (s)	4.2			4.1			7.1	6.5	6.4	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.5	3.6	4.0	3.3
p0 queue free %	99			99			96	87	97	95	93	98
cM capacity (veh/h)	901			1322			230	269	751	203	273	496
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	260	640	65	40								
Volume Left	5	15	10	10								
Volume Right	5	25	20	10								
cSH	901	1322	325	280								
Volume to Capacity	0.01	0.01	0.20	0.14								
Queue Length 95th (m)	0.1	0.3	5.9	3.9								
Control Delay (s)	0.2	0.3	18.8	20.0								
Lane LOS	A	A	C	C								
Approach Delay (s)	0.2	0.3	18.8	20.0								
Approach LOS			C	C								
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			51.8%		ICU Level of Service				A			
Analysis Period (min)			15									



Lanes, Volumes, Timings  
14: Trafalgar Rd & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	190	50	55	445	50	115	1375	70	10	650	80
Future Volume (vph)	65	190	50	55	445	50	115	1375	70	10	650	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		40.0	40.0		0.0	40.0		0.0	50.0		20.0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (m)	80.0			80.0			100.0			100.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.985			0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1863	1482	1805	1872	0	1770	3453	0	1583	3438	1509
Flt Permitted	0.158			0.592			0.320			0.092		
Satd. Flow (perm)	275	1863	1482	1125	1872	0	596	3453	0	153	3438	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			76		6			6				76
Link Speed (k/h)		60			60			80			80	
Link Distance (m)		617.5			665.2			264.1			262.0	
Travel Time (s)		37.1			39.9			11.9			11.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	9%	2%	9%	0%	0%	0%	2%	4%	0%	14%	5%	7%
Adj. Flow (vph)	65	190	50	55	445	50	115	1375	70	10	650	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	190	50	55	495	0	115	1445	0	10	650	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		6			6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		7.0	25.0		7.0	25.0	25.0

Lanes, Volumes, Timings  
14: Trafalgar Rd & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		11.0	31.0		11.0	31.0	31.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0		11.0	49.0		11.0	49.0	49.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		11.0%	49.0%		11.0%	49.0%	49.0%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0		7.0	43.0		7.0	43.0	43.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	5.0		3.0	5.0	5.0
Recall Mode	None	None	None	None	None		None	Max		None	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	25.0	25.0	25.0	25.0	25.0			20.0			20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	0
Act Effct Green (s)	30.2	30.2	30.2	30.2	30.2		55.4	52.0		52.2	43.1	43.1
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31		0.57	0.54		0.54	0.45	0.45
v/c Ratio	0.76	0.33	0.10	0.16	0.84		0.27	0.77		0.05	0.42	0.11
Control Delay	80.1	26.7	2.8	24.6	44.2		11.6	22.9		10.4	19.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	80.1	26.7	2.8	24.6	44.2		11.6	22.9		10.4	19.8	5.0
LOS	F	C	A	C	D		B	C		B	B	A
Approach Delay		34.2			42.2			22.1			18.1	
Approach LOS		C			D			C			B	

Intersection Summary

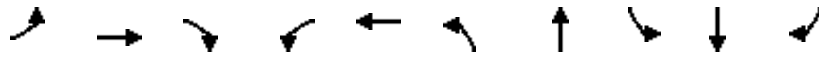
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	96.4
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	25.8
Intersection LOS:	C
Intersection Capacity Utilization:	103.4%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 14: Trafalgar Rd & 5 Side Road



Queues  
14: Trafalgar Rd & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	65	190	50	55	495	115	1445	10	650	80
v/c Ratio	0.76	0.33	0.10	0.16	0.84	0.27	0.77	0.05	0.42	0.11
Control Delay	80.1	26.7	2.8	24.6	44.2	11.6	22.9	10.4	19.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	26.7	2.8	24.6	44.2	11.6	22.9	10.4	19.8	5.0
Queue Length 50th (m)	11.3	28.2	0.0	7.7	88.6	10.2	113.3	0.9	47.1	0.4
Queue Length 95th (m)	#36.0	46.4	4.4	17.1	#130.9	19.0	#201.1	3.2	63.4	9.0
Internal Link Dist (m)		593.5			641.2		240.1		238.0	
Turn Bay Length (m)	40.0		40.0	40.0		40.0		50.0		20.0
Base Capacity (vph)	97	658	573	397	665	428	1866	186	1538	717
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.29	0.09	0.14	0.74	0.27	0.77	0.05	0.42	0.11

Intersection Summary























# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 14: Trafalgar Rd & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	190	50	55	445	50	115	1375	70	10	650	80
Future Volume (vph)	65	190	50	55	445	50	115	1375	70	10	650	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	1863	1482	1805	1871		1770	3452		1583	3438	1509
Flt Permitted	0.16	1.00	1.00	0.59	1.00		0.32	1.00		0.09	1.00	1.00
Satd. Flow (perm)	276	1863	1482	1125	1871		597	3452		153	3438	1509
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	190	50	55	445	50	115	1375	70	10	650	80
RTOR Reduction (vph)	0	0	35	0	4	0	0	3	0	0	0	41
Lane Group Flow (vph)	65	190	15	55	491	0	115	1442	0	10	650	39
Heavy Vehicles (%)	9%	2%	9%	0%	0%	0%	2%	4%	0%	14%	5%	7%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	30.2	30.2	30.2	30.2	30.2		57.3	52.0		47.6	46.3	46.3
Effective Green, g (s)	30.2	30.2	30.2	30.2	30.2		57.3	52.0		47.6	46.3	46.3
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30		0.58	0.52		0.48	0.47	0.47
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	83	565	449	341	567		426	1804		91	1599	702
v/s Ratio Prot		0.10			c0.26		c0.02	c0.42		0.00	0.19	
v/s Ratio Perm	0.24		0.01	0.05			0.14			0.05		0.03
v/c Ratio	0.78	0.34	0.03	0.16	0.87		0.27	0.80		0.11	0.41	0.06
Uniform Delay, d1	31.7	26.9	24.4	25.4	32.7		10.2	19.5		16.4	17.5	14.6
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	41.7	0.7	0.1	0.5	14.1		0.3	3.8		0.5	0.8	0.2
Delay (s)	73.4	27.6	24.4	25.8	46.9		10.6	23.3		16.9	18.3	14.8
Level of Service	E	C	C	C	D		B	C		B	B	B
Approach Delay (s)		36.8			44.8			22.4			17.9	
Approach LOS		D			D			C			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			26.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			99.5			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			103.4%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings  
15: Eighth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	60	260	10	25	515	95	5	430	55	25	130	30
Future Volume (vph)	60	260	10	25	515	95	5	430	55	25	130	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.996			0.980			0.985			0.978	
Fl <sub>t</sub> Protected		0.991			0.998			0.999			0.993	
Satd. Flow (prot)	0	1818	0	0	1833	0	0	1843	0	0	1833	0
Fl <sub>t</sub> Permitted		0.837			0.979			0.997			0.913	
Satd. Flow (perm)	0	1536	0	0	1798	0	0	1839	0	0	1686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			23			14			22	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		643.4			668.7			3086.4			454.5	
Travel Time (s)		38.6			40.1			158.7			23.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	2%	22%	11%	1%	1%	0%	1%	5%	0%	0%	4%
Adj. Flow (vph)	60	260	10	25	515	95	5	430	55	25	130	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	330	0	0	635	0	0	490	0	0	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	27.0	27.0		27.0	27.0		23.0	23.0		23.0	23.0	
Total Split (%)	54.0%	54.0%		54.0%	54.0%		46.0%	46.0%		46.0%	46.0%	

Lanes, Volumes, Timings  
15: Eighth Line & 5 Side Road

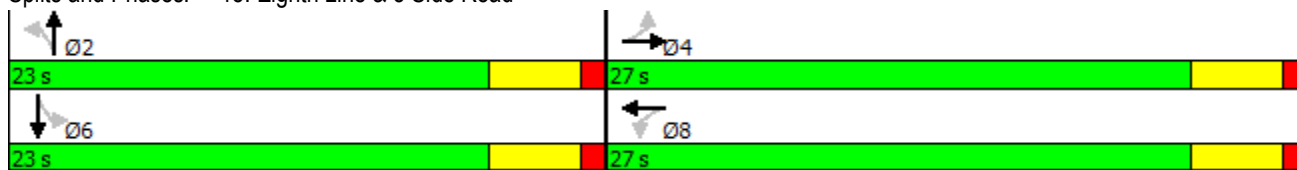
2026 Background PM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	22.5	22.5		22.5	22.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		19.5			19.5			18.6			18.6	
Actuated g/C Ratio		0.41			0.41			0.39			0.39	
v/c Ratio		0.52			0.84			0.67			0.27	
Control Delay		13.3			24.1			18.4			10.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.3			24.1			18.4			10.9	
LOS		B			C			B			B	
Approach Delay		13.3			24.1			18.4			10.9	
Approach LOS		B			C			B			B	

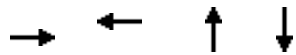
Intersection Summary

Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	47.2
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	18.7
Intersection LOS:	B
Intersection Capacity Utilization	74.5%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 15: Eighth Line & 5 Side Road



Queues  
15: Eighth Line & 5 Side Road



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	330	635	490	185
v/c Ratio	0.52	0.84	0.67	0.27
Control Delay	13.3	24.1	18.4	10.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.3	24.1	18.4	10.9
Queue Length 50th (m)	19.8	44.8	36.0	10.1
Queue Length 95th (m)	37.9	#96.8	#70.8	22.0
Internal Link Dist (m)	619.4	644.7	3062.4	430.5
Turn Bay Length (m)				
Base Capacity (vph)	739	874	734	678
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.73	0.67	0.27

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 15: Eighth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	60	260	10	25	515	95	5	430	55	25	130	30
Future Volume (vph)	60	260	10	25	515	95	5	430	55	25	130	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			0.98			0.98	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1818			1832			1844			1834	
Flt Permitted		0.84			0.98			1.00			0.91	
Satd. Flow (perm)		1535			1798			1840			1686	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	260	10	25	515	95	5	430	55	25	130	30
RTOR Reduction (vph)	0	2	0	0	13	0	0	8	0	0	13	0
Lane Group Flow (vph)	0	328	0	0	622	0	0	482	0	0	172	0
Heavy Vehicles (%)	5%	2%	22%	11%	1%	1%	0%	1%	5%	0%	0%	4%
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)		19.5			19.5			18.6			18.6	
Effective Green, g (s)		19.5			19.5			18.6			18.6	
Actuated g/C Ratio		0.41			0.41			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)		635			744			726			665	
v/s Ratio Prot												
v/s Ratio Perm		0.21			0.35			0.26			0.10	
v/c Ratio		0.52			0.84			0.66			0.26	
Uniform Delay, d1		10.3			12.4			11.7			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			8.1			4.7			0.9	
Delay (s)		11.0			20.4			16.4			10.5	
Level of Service		B			C			B			B	
Approach Delay (s)		11.0			20.4			16.4			10.5	
Approach LOS		B			C			B			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			16.2					HCM 2000 Level of Service		B		
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			47.1					Sum of lost time (s)		9.0		
Intersection Capacity Utilization			74.5%					ICU Level of Service		D		
Analysis Period (min)			15									
c Critical Lane Group												



Lanes, Volumes, Timings  
16: Ninth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	260	20	10	585	295	20	985	15	35	400	30
Future Volume (vph)	35	260	20	10	585	295	20	985	15	35	400	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	40.0		0.0	40.0		40.0	40.0		0.0	40.0		0.0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989				0.850		0.998			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1879	0	1805	1900	1615	1805	3601	0	1805	3541	0
Flt Permitted	0.197			0.542			0.502			0.195		
Satd. Flow (perm)	363	1879	0	1030	1900	1615	954	3601	0	370	3541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				41		2			11	
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		580.9			458.3			3120.2			329.9	
Travel Time (s)		34.9			27.5			160.5			17.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	0%	3%	0%	1%	0%
Adj. Flow (vph)	35	260	20	10	585	295	20	985	15	35	400	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	280	0	10	585	295	20	1000	0	35	430	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	20.0	20.0		20.0	20.0	

Lanes, Volumes, Timings  
16: Ninth Line & 5 Side Road

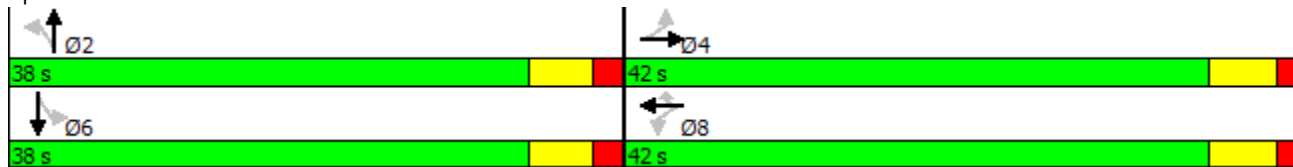
2026 Background PM  
Premier Gateway Phase 1B Employment Area

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	24.0	24.0		24.0	24.0	24.0	26.0	26.0		26.0	26.0	
Total Split (s)	42.0	42.0		42.0	42.0	42.0	38.0	38.0		38.0	38.0	
Total Split (%)	52.5%	52.5%		52.5%	52.5%	52.5%	47.5%	47.5%		47.5%	47.5%	
Maximum Green (s)	36.0	36.0		36.0	36.0	36.0	32.0	32.0		32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.5	3.5		3.5	3.5	3.5	5.5	5.5		5.5	5.5	
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	
Walk Time (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)	27.6	27.6		27.6	27.6	27.6	32.3	32.3		32.3	32.3	
Actuated g/C Ratio	0.38	0.38		0.38	0.38	0.38	0.45	0.45		0.45	0.45	
v/c Ratio	0.25	0.39		0.03	0.80	0.46	0.05	0.62		0.21	0.27	
Control Delay	19.5	16.8		12.8	28.8	16.1	14.4	18.5		19.1	14.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.5	16.8		12.8	28.8	16.1	14.4	18.5		19.1	14.0	
LOS	B	B		B	C	B	B	B		B	B	
Approach Delay		17.1			24.4			18.4			14.3	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 72  
 Natural Cycle: 55  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 19.5      Intersection LOS: B  
 Intersection Capacity Utilization 69.9%      ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 16: Ninth Line & 5 Side Road



Queues  
16: Ninth Line & 5 Side Road
























2026 Background PM  
Premier Gateway Phase 1B Employment Area



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	35	280	10	585	295	20	1000	35	430
v/c Ratio	0.25	0.39	0.03	0.80	0.46	0.05	0.62	0.21	0.27
Control Delay	19.5	16.8	12.8	28.8	16.1	14.4	18.5	19.1	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	16.8	12.8	28.8	16.1	14.4	18.5	19.1	14.0
Queue Length 50th (m)	3.3	27.1	0.9	71.3	25.6	1.6	55.8	3.0	19.2
Queue Length 95th (m)	10.1	44.8	3.6	108.7	45.1	6.2	89.8	11.1	34.2
Internal Link Dist (m)		556.9		434.3			3096.2		305.9
Turn Bay Length (m)	40.0		40.0		40.0	40.0		40.0	
Base Capacity (vph)	183	951	519	959	835	427	1616	166	1594
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.29	0.02	0.61	0.35	0.05	0.62	0.21	0.27
<b>Intersection Summary</b>									

HCM Signalized Intersection Capacity Analysis  
16: Ninth Line & 5 Side Road

2026 Background PM  
Premier Gateway Phase 1B Employment Area

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	35	260	20	10	585	295	20	985	15	35	400	30	
Future Volume (vph)	35	260	20	10	585	295	20	985	15	35	400	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0		
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00		1.00	0.99		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1752	1880		1805	1900	1615	1805	3600		1805	3539		
Flt Permitted	0.20	1.00		0.54	1.00	1.00	0.50	1.00		0.19	1.00		
Satd. Flow (perm)	364	1880		1029	1900	1615	953	3600		370	3539		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	35	260	20	10	585	295	20	985	15	35	400	30	
RTOR Reduction (vph)	0	4	0	0	0	25	0	1	0	0	6	0	
Lane Group Flow (vph)	35	276	0	10	585	270	20	999	0	35	424	0	
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	0%	3%	0%	1%	0%	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8		8	2			6			
Actuated Green, G (s)	27.6	27.6		27.6	27.6	27.6	32.3	32.3		32.3	32.3		
Effective Green, g (s)	27.6	27.6		27.6	27.6	27.6	32.3	32.3		32.3	32.3		
Actuated g/C Ratio	0.38	0.38		0.38	0.38	0.38	0.45	0.45		0.45	0.45		
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0		
Vehicle Extension (s)	3.5	3.5		3.5	3.5	3.5	5.5	5.5		5.5	5.5		
Lane Grp Cap (vph)	139	721		394	729	619	428	1617		166	1589		
v/s Ratio Prot		0.15			c0.31			c0.28			0.12		
v/s Ratio Perm	0.10			0.01		0.17	0.02			0.09			
v/c Ratio	0.25	0.38		0.03	0.80	0.44	0.05	0.62		0.21	0.27		
Uniform Delay, d1	15.1	16.0		13.8	19.7	16.4	11.1	15.1		12.0	12.4		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	1.1	0.4		0.0	6.5	0.6	0.2	1.8		2.9	0.4		
Delay (s)	16.2	16.4		13.8	26.3	17.0	11.3	16.9		14.9	12.8		
Level of Service	B	B		B	C	B	B	B		B	B		
Approach Delay (s)		16.4			23.0			16.8			13.0		
Approach LOS		B			C			B			B		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			18.1									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			71.9									Sum of lost time (s)	12.0
Intersection Capacity Utilization			69.9%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													