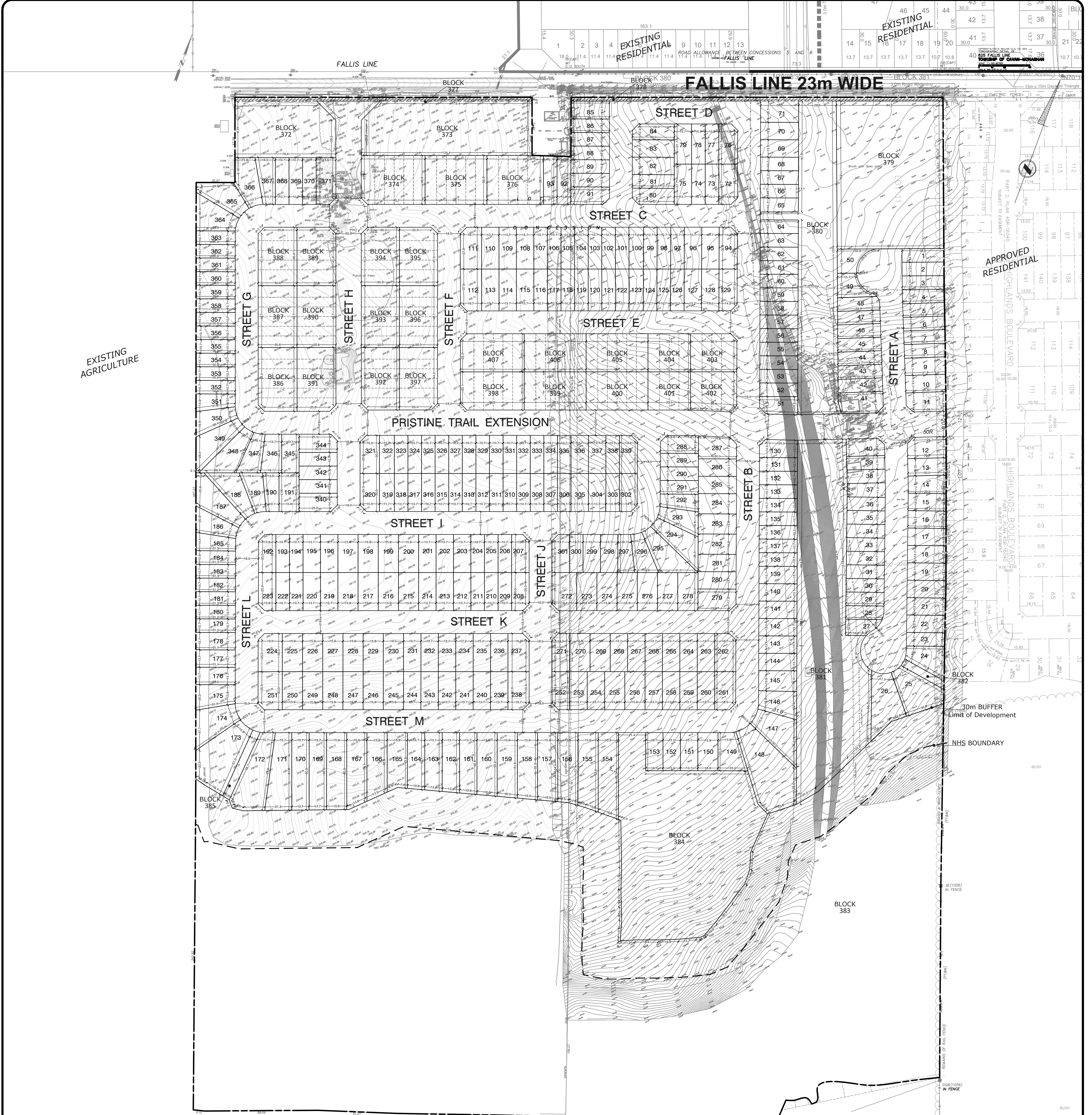


Appendix A

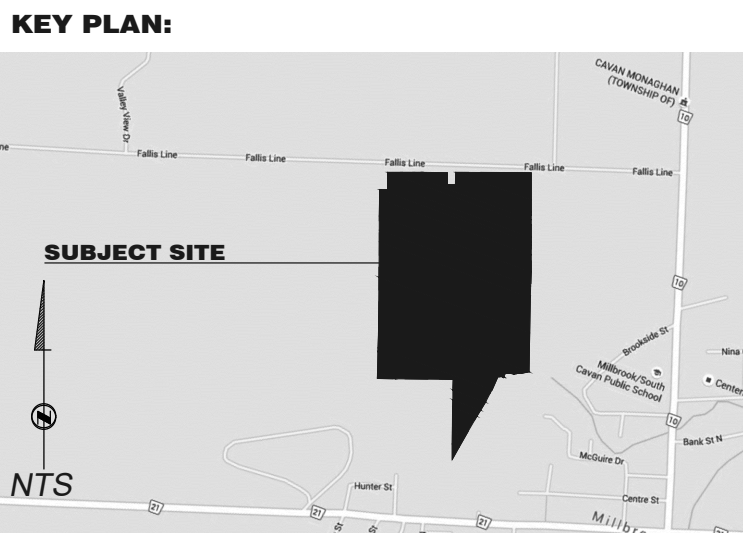
Draft Site Plan



Schedule of Land Use				
		Units	Blocks	Area (ha)
7.62m (24') Street Townhouse		125	374-376, 386-407	3.60
10.7m (35') Single Detached	C	208	1-8, 23, 24, 27-48, 51-68, 72-74, 76-78, 80, 81, 85-94, 97-107, 116-126, 129-138, 179-190, 192-194, 204-211, 221-223, 252, 271, 279-281, 285-297, 300-303, 306-335, 338-344, 347-363, 366-371	7.64
13.7m (45') Single Deatched	B	106	9-22, 25, 49, 50, 69-71, 75, 79, 82-84, 95, 96, 108-115, 127, 128, 139-144, 151-153, 161-164, 169-172, 176-178, 191, 195, 196, 201-203, 212-214, 219, 220, 231-244, 253, 254, 257-268, 298, 299, 304, 305, 336, 337, 345, 346, 364, 365,	4.94
15.9m (52') Single Detached	A	57	145-150, 154-160, 165-168, 173-175, 197-200, 215-218, 224-230, 245-251, 255, 256, 269, 270, 272-278, 282-284,	3.56
Medium Density (5-Storey Building)		200	372, 373	0.90
TOTAL		696		20.64
Parkland & Trails			380, 381, 382, 385	2.06
Natural Heritage System			383	16.31
Stormwater Management Pond			379, 384	2.34
Road Widening			377, 378	0.16
R.O.W.			PRISTINE TRAIL EXTENSION, STREETS A-M	7.68
TOTAL SUBJECT SITE				49.20

TITLE:
DRAFT PLAN OF SUBDIVISION

LEGAL DESCRIPTION:
DRAFT PLAN OF PROPOSED SUBDIVISION
PART OF LOT 11, CONCESSION 5
(Geographic Village of Millbrook, Township of Cavan)
PART OF LOT 11, CONCESSION 5 (Geographic Township of Cavan)
TOWNSHIP OF CAVAN-MONAGHAN
NORTH MONAGAN
(COUNTY OF PETERBOROUGH)



SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATE AND CORRECTLY SHOWN IN ACCORDANCE WITH A PLAN OF SURVEY PREPARED BY SURVEYOR, COMPANY

DAVID COMERY
IBW SURVEYORS
2021/06/08
DATE

OWNER'S CERTIFICATE
I HEREBY AUTHORIZE THE BIGLIERI GROUP LTD. TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE MUNICIPALITY

SAVERIO MONTEMARRANO
CS4 DEVELOPMENT
2021/06/08
DATE

- REQUIRED INFORMATION**
AS REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT R.S.O. 1990.
- | | |
|------------------------------|---|
| (a) SEE PLAN | (g) SEE PLAN |
| (b) SEE PLAN | (h) MUNICIPAL WATER AND SEWAGE AVAILABLE |
| (c) SEE KEY MAP | (i) SANDY SILT / SILTY SAND TO CLAYEY SILT / SILTY CLAY |
| (d) SEE SCHEDULE OF LAND USE | (j) SEE PLAN |
| (e) SEE PLAN | (k) MUNICIPAL WATER AND SEWAGE AVAILABLE |
| (f) SEE PLAN | (l) SEE PLAN |
- NOTE: CONTOURS RELATE TO CANADIAN GEODETIC DATUM

REVISIONS			
No.	Description	Date	Int.
3			
2			
1			

PROJECT No.:	20697
DATE:	May 16, 2021
SCALE:	1:1500
DRAFTED BY:	JS
CHECKED BY:	MT
DRAWING No.:	DP-01

THE BIGLIERI GROUP LTD.
Planning | Development | Project Management | Urban Design
20 Leslie Street, Suite 122, Toronto, Ontario, M4M 1A4
125 Catherine Street North, Hamilton, Ontario, L8R 1J4
(416) 693-9155
thebiglierigroup.com

Appendix B

Traffic Data and Data Projections

Ontario Traffic Inc

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 10:00:00

One Hour Peak

From: 7:30:00

To: 8:30:00

Municipality: Millbrook
Site #: 1710800001
Intersection: County Rd 10 & Fallis Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S

North Leg Total: 392

North Entering: 167

North Peds: 0

Peds Cross: $\nlessgtr$

	Heavys	Trucks	Cars	Totals
North	0	0	0	0
East	1	7	0	8
South	4	155	0	159
Totals	5	162	0	



	Heavys	Trucks	Cars	Totals
North	0	13	212	225

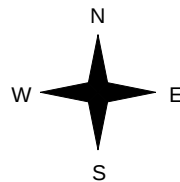
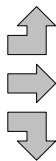
East Leg Total: 0
 East Entering: 0
 East Peds: 0
 Peds Cross: $\nlessgtr$

Heavys	Trucks	Cars	Totals
0	1	19	20



Fallis Line

Heavys	Trucks	Cars	Totals
0	1	9	10
0	0	0	0
0	0	15	15
0	1	24	



County Rd 10

County Rd 10

Cars	Trucks	Heavys	Totals
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

Private Driveway



Cars	Trucks	Heavys	Totals
0	0	0	0

Peds Cross: $\nlessgtr$
 West Peds: 0
 West Entering: 25
 West Leg Total: 45

	Cars	Trucks	Heavys	Totals
West	170	7	0	177



	Cars	Trucks	Heavys	Totals
West	15	0	0	15
East	203	12	0	215
Totals	15	12	0	

Peds Cross: $\nlessgtr$
 South Peds: 0
 South Entering: 230
 South Leg Total: 407

Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period

From: 16:00:00

To: 19:00:00

One Hour Peak

From: 16:30:00

To: 17:30:00

Municipality: Millbrook

Site #: 1710800001

Intersection: County Rd 10 & Fallis Line

TFR File #: 1

Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S

North Leg Total: 415

North Entering: 241

North Peds: 0

Peds Cross: $\nlessgtr$

Heavys	0	0	0	0
Trucks	0	4	0	4
Cars	11	226	0	237
Totals	11	230	0	



Heavys 0

Trucks 0

Cars 174

Totals 174

East Leg Total: 1

East Entering: 0

East Peds: 0

Peds Cross: $\nlessgtr$

Heavys	0	0	30	30
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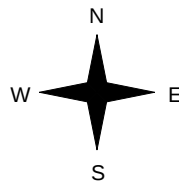


Fallis Line

Heavys	0	0	4	4
Trucks	0	0	0	0
Cars	0	0	18	18
Totals	0	0	22	



County Rd 10



Cars	0	0	0	0
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	0	0	0	



Private Driveway



Cars	1	0	0	1
------	---	---	---	---

Peds Cross: $\nlessgtr$

West Peds: 0

West Entering: 22

West Leg Total: 52

Cars	244	19	170	1	190
Trucks	4	0	0	0	0
Heavys	0	0	0	0	0
Totals	248	19	170	1	



Peds Cross: $\nlessgtr$

South Peds: 0

South Entering: 190

South Leg Total: 438

Comments

Ontario Traffic Inc

Total Count Diagram

Municipality: Millbrook
Site #: 1710800001
Intersection: County Rd 10 & Fallis Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:
Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S

North Leg Total: 1864
 North Entering: 933
 North Peds: 0
 Peds Cross: $\nless$

Heavys	Trucks	Cars	Totals
0	3	32	35
0	32	866	898
0	0	0	0
0	35	898	933



Heavys	Trucks	Cars	Totals
0	32	899	931

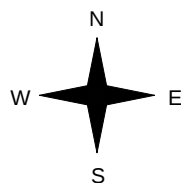
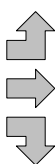
East Leg Total: 3
 East Entering: 1
 East Peds: 0
 Peds Cross: $\nless$

Heavys	Trucks	Cars	Totals
0	5	97	102



Fallis Line

Heavys	Trucks	Cars	Totals
0	2	37	39
0	0	0	0
0	1	87	88
0	3	124	127



County Rd 10



Cars	Trucks	Heavys	Totals
1	0	0	1
0	0	0	0
0	0	0	0
1	0	0	1

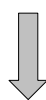
Private Driveway



Cars	Trucks	Heavys	Totals
2	0	0	2

Peds Cross: $\nless$
 West Peds: 1
 West Entering: 127
 West Leg Total: 229

Cars	Trucks	Heavys	Totals
953	33	0	986



Cars	Trucks	Heavys	Totals
65	2	0	67
861	30	0	891
2	0	0	2
928	32	0	960

Peds Cross: $\nless$
 South Peds: 0
 South Entering: 960
 South Leg Total: 1946

Comments

Ontario Traffic Inc

Traffic Count Summary

Intersection: County Rd 10 & Fallis Line

Count Date: 25-Apr-17

Municipality: Millbrook

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	138	3	141	0	318	8:00:00	13	164	0	177	0
9:00:00	0	128	5	133	0	329	9:00:00	12	184	0	196	0
10:00:00	0	106	5	111	0	259	10:00:00	8	139	1	148	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	191	7	198	0	374	17:00:00	16	159	1	176	0
18:00:00	0	215	10	225	0	390	18:00:00	13	152	0	165	0
19:00:00	0	120	5	125	0	223	19:00:00	5	93	0	98	0

East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	20	8:00:00	7	0	13	20	0
9:00:00	0	0	0	0	0	23	9:00:00	12	0	11	23	0
10:00:00	0	0	1	1	0	20	10:00:00	7	0	12	19	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	17	17:00:00	2	0	15	17	0
18:00:00	0	0	0	0	0	28	18:00:00	5	0	23	28	0
19:00:00	0	0	0	0	0	20	19:00:00	6	0	14	20	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	10:00		16:00	17:00	18:00	19:00
Crossing Values:	0	7	12	7		0	2	5	6

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800001

Interval Time	Passenger Cars - North Approach				Trucks - North Approach				Heavys - North Approach				Pedestrians							
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	16	16	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
7:30:00	0	0	42	26	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
7:45:00	0	0	75	33	0	0	0	0	0	6	3	0	0	0	0	0	0	0	0	0
8:00:00	0	0	130	55	2	2	2	2	0	8	2	1	1	0	0	0	0	0	0	0
8:15:00	0	0	164	34	3	1	3	1	0	10	2	1	0	0	0	0	0	0	0	0
8:30:00	0	0	197	33	4	1	4	1	0	10	0	1	0	0	0	0	0	0	0	0
8:45:00	0	0	219	22	4	0	4	0	0	11	1	1	0	0	0	0	0	0	0	0
9:00:00	0	0	252	33	7	3	7	3	0	14	3	1	0	0	0	0	0	0	0	0
9:15:00	0	0	275	23	8	1	8	1	0	17	3	1	0	0	0	0	0	0	0	0
9:30:00	0	0	286	11	9	1	9	1	0	18	1	1	0	0	0	0	0	0	0	0
9:45:00	0	0	314	28	10	1	10	1	0	21	3	2	1	0	0	0	0	0	0	0
10:00:00	0	0	348	34	11	1	11	1	0	24	3	2	0	0	0	0	0	0	0	0
10:00:03	0	0	348	0	11	0	11	0	0	24	0	2	0	0	0	0	0	0	0	0
16:00:00	0	0	348	0	11	0	11	0	0	24	0	2	0	0	0	0	0	0	0	0
16:15:00	0	0	392	44	13	2	13	2	0	25	1	2	0	0	0	0	0	0	0	0
16:30:00	0	0	424	32	15	2	15	2	0	27	2	2	0	0	0	0	0	0	0	0
16:45:00	0	0	477	53	17	2	17	2	0	28	1	2	0	0	0	0	0	0	0	0
17:00:00	0	0	534	57	18	1	18	1	0	29	1	2	0	0	0	0	0	0	0	0
17:15:00	0	0	587	53	24	6	24	6	0	30	1	2	0	0	0	0	0	0	0	0
17:30:00	0	0	650	63	26	2	26	2	0	31	1	2	0	0	0	0	0	0	0	0
17:45:00	0	0	702	52	28	2	28	2	0	31	0	2	0	0	0	0	0	0	0	0
18:00:00	0	0	747	45	28	0	28	0	0	31	0	2	0	0	0	0	0	0	0	0
18:15:00	0	0	781	34	28	0	28	0	0	31	0	3	1	0	0	0	0	0	0	0
18:30:00	0	0	819	38	30	2	30	2	0	31	0	3	0	0	0	0	0	0	0	0
18:45:00	0	0	846	27	32	2	32	2	0	32	1	3	0	0	0	0	0	0	0	0
19:00:00	0	0	866	20	32	0	32	0	0	32	0	3								

Ontario Traffic Inc																				
Count Date: 25-Apr-17 Site #: 1710800001																				
Interval Time	Passenger Cars - East Approach				Trucks - East Approach				Heavyys - East Approach				Pedestrians							
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:03	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:02	0	0	0	0	1	0	0													

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800001

Interval Time	Passenger Cars - South Approach				Trucks - South Approach				Heavys - South Approach				Pedestrians							
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	23	23	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
7:30:00	7	5	52	29	0	0	1	1	1	3	1	0	0	0	0	0	0	0	0	0
7:45:00	10	3	102	50	0	0	1	1	0	6	3	0	0	0	0	0	0	0	0	0
8:00:00	12	2	156	54	0	0	1	0	0	8	2	0	0	0	0	0	0	0	0	0
8:15:00	17	5	204	48	0	0	1	0	0	13	5	0	0	0	0	0	0	0	0	0
8:30:00	22	5	255	51	0	0	1	0	0	15	2	0	0	0	0	0	0	0	0	0
8:45:00	22	0	301	46	0	0	1	0	0	16	1	0	0	0	0	0	0	0	0	0
9:00:00	24	2	330	29	0	0	1	0	0	18	2	0	0	0	0	0	0	0	0	0
9:15:00	25	1	358	28	1	1	1	0	0	18	0	0	0	0	0	0	0	0	0	0
9:30:00	26	1	384	26	1	0	1	0	0	20	2	0	0	0	0	0	0	0	0	0
9:45:00	29	3	419	35	1	0	1	0	0	23	3	0	0	0	0	0	0	0	0	0
10:00:00	32	3	459	40	1	0	1	0	0	28	5	0	0	0	0	0	0	0	0	0
10:00:03	32	0	459	0	1	0	1	0	0	28	0	0	0	0	0	0	0	0	0	0
16:00:00	32	0	459	0	1	0	1	0	0	28	0	0	0	0	0	0	0	0	0	0
16:15:00	36	4	495	36	1	0	1	0	0	30	2	0	0	0	0	0	0	0	0	0
16:30:00	37	1	539	44	1	0	2	1	0	30	0	0	0	0	0	0	0	0	0	0
16:45:00	42	5	587	48	1	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
17:00:00	47	5	616	29	2	1	2	0	0	30	0	0	0	0	0	0	0	0	0	0
17:15:00	51	4	679	63	2	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
17:30:00	56	5	709	30	2	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
17:45:00	58	2	737	28	2	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
18:00:00	60	2	768	31	2	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
18:15:00	64	4	799	31	2	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
18:30:00	65	1	827	28	2	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
18:45:00	65	0	846	19	2	0	2	0	0	30	0	0	0	0	0	0	0	0	0	0
19:00:00	65	0	861	15	2	0	2	0	0	30	0	0	0</							

Count Date: 25-Apr-17

Site #: 1710800001

Ontario Traffic Inc

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians		
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross		
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15:00	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30:00	3	2	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45:00	3	0	0	0	11	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
8:00:00	6	3	0	0	13	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15:00	9	3	0	0	18	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30:00	12	3	0	0	21	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45:00	15	3	0	0	21	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00:00	17	2	0	0	24	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	
9:15:00	18	1	0	0	24	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30:00	19	1	0	0	28	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:45:00	21	2	0	0	32	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00:00	24	3	0	0	36	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00:03	24	0	0	0	36	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:00:00	24	0	0	0	36	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15:00	25	1	0	0	43	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30:00	26	1	0	0	45	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:45:00	26	0	0	0	48	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:00:00	26	0	0	0	51	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:15:00	28	2	0	0	57	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30:00	30	2	0	0	63	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45:00	30	0	0	0	68	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:00:00	31	1	0	0	74	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:15:00	33	2	0	0	77	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:30:00	34	1	0	0	81	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:45:00	36	2	0	0	82	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1	
19:00:00	37	1	0	0	87	5	2	0	0	0	0	1	1	0	0	0	0	0	1	0	
19:00:02	3																				

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 17:00:00

One Hour Peak

From: 12:00:00

To: 13:00:00

Municipality: Millbrook

Site #: 1722900001

Intersection: CR 10 & Fallis Line

TFR File #: 18

Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S

North Leg Total: 382

North Entering: 195

North Peds: 0

Peds Cross: 

Heavys	0	0	0
Trucks	0	1	1
Cars	10	184	194
Totals	10	185	



Heavys	0
Trucks	0
Cars	187
Totals	187

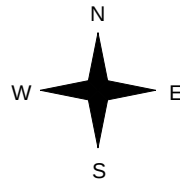
Heavys	Trucks	Cars	Totals
0	0	31	31



CR 10



Fallis Line



Heavys	Trucks	Cars	Totals
0	0	7	7
0	0	18	18
0	0	25	



CR 10

Peds Cross: 

West Peds: 0

West Entering: 25

West Leg Total: 56

Cars	202
Trucks	1
Heavys	0
Totals	203



Cars	21	180	201
Trucks	0	0	0
Heavys	0	0	0
Totals	21	180	

Peds Cross: 

South Peds: 0

South Entering: 201

South Leg Total: 404

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Millbrook
Site #: 1722900001
Intersection: CR 10 & Fallis Line
TFR File #: 18
Count date: 12-Aug-17

Weather conditions:
Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S

North Leg Total: 2021
 North Entering: 1039
 North Peds: 0
 Peds Cross: 

Heavys	Trucks	Cars	Totals
0	0	0	0
0	9	9	9
59	971	1030	1030
59	980		980

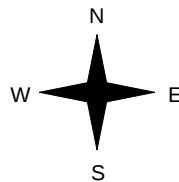
Heavys	Trucks	Cars	Totals
0	9	973	982

Heavys	Trucks	Cars	Totals
0	1	163	164



Fallis Line

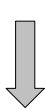
Heavys	Trucks	Cars	Totals
0	0	48	48
0	2	128	130
0	2	176	



CR 10

Peds Cross: 
 West Peds: 1
 West Entering: 178
 West Leg Total: 342

Cars	Trucks	Heavys	Totals
1100	11	0	1111



Cars	Trucks	Heavys	Totals
104	1	0	105
925	9	0	934
1031	10	0	

Peds Cross: 
 South Peds: 0
 South Entering: 1041
 South Leg Total: 2152

Comments

Ontario Traffic Inc.

Traffic Count Summary

Intersection: CR 10 & Fallis Line

Count Date: 12-Aug-17

Municipality: Millbrook

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	0	158	7	165	0	378	12:00:00	24	188	1	213	0
13:00:00	0	185	10	195	0	396	13:00:00	21	180	0	201	0
14:00:00	0	175	12	187	0	340	14:00:00	13	140	0	153	0
15:00:00	0	146	12	158	0	332	15:00:00	16	157	1	174	0
16:00:00	0	166	7	173	0	329	16:00:00	13	143	0	156	0
17:00:00	0	150	11	161	0	305	17:00:00	18	126	0	144	0

[illegible]

[illegible]

[illegible]

[illegible]

Ontario Traffic Inc

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 10:00:00

One Hour Peak

From: 7:30:00

To: 8:30:00

Municipality: Millbrook
Site #: 1710800002
Intersection: County Rd 10 & Larmer Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S

North Leg Total: 404

North Entering: 167

North Peds: 0

Peds Cross: $\nlessgtr$

	Heavys	Trucks	Cars	Totals
North	0	0	0	0
East	2	6	0	8
South	1	153	5	159
Totals	3	159	5	



	Heavys	Trucks	Cars	Totals
North	0	13	224	237
East	0	0	0	0
South	0	0	0	0
Totals	0	13	224	237

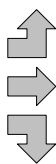
East Leg Total: 34
 East Entering: 15
 East Peds: 0
 Peds Cross: $\nlessgtr$

Heavys	Trucks	Cars	Totals
0	2	9	11

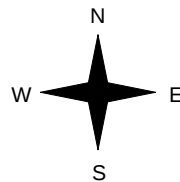


Larmer Line

Heavys	Trucks	Cars	Totals
0	0	23	23
0	0	4	4
0	2	8	10
0	2	35	



County Rd 10



Cars	Trucks	Heavys	Totals
9	0	0	9
2	0	0	2
4	0	0	4
15	0	0	

Larmer Line



Cars	Trucks	Heavys	Totals
19	0	0	19

Peds Cross: $\nlessgtr$
 West Peds: 0
 West Entering: 37
 West Leg Total: 48

Cars	Trucks	Heavys	Totals
165	8	0	173



Cars	Trucks	Heavys	Totals
6	0	0	6
192	13	0	205
10	0	0	10
208	13	0	

Peds Cross: $\nlessgtr$
 South Peds: 0
 South Entering: 221
 South Leg Total: 394

Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period

From: 16:00:00

To: 19:00:00

One Hour Peak

From: 16:30:00

To: 17:30:00

Municipality: Millbrook

Site #: 1710800002

Intersection: County Rd 10 & Larmer Line

TFR File #: 1

Count date: 25-Apr-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S

North Leg Total: 413

North Entering: 242

North Peds: 0

Peds Cross: 0

Heavys	0	0	0	0
Trucks	0	3	0	3
Cars	9	222	8	239
Totals	9	225	8	



Heavys 0

Trucks 2

Cars 169

Totals 171

East Leg Total: 21

East Entering: 8

East Peds: 0

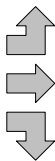
Peds Cross: 0

Heavys	0	0	18	18
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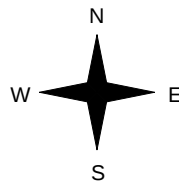


Larmer Line

Heavys	0	0	3	3
Trucks	0	0	1	1
Cars	0	0	6	6
Totals	0	0	10	



County Rd 10



Cars	2	1	0	3
Trucks	1	0	0	1
Heavys	3	1	0	4
Totals	6	2	0	

Larmer Line



Cars	13	0	0	13
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Peds Cross: 0

West Peds: 0

West Entering: 10

West Leg Total: 28

Cars	231	8	164	4	176
Trucks	4	0	1	0	1
Heavys	0	0	0	0	0
Totals	235	8	165	4	



Peds Cross: 0

South Peds: 0

South Entering: 177

South Leg Total: 412

Comments

Ontario Traffic Inc

Total Count Diagram

Municipality: Millbrook
Site #: 1710800002
Intersection: County Rd 10 & Larmer Line
TFR File #: 1
Count date: 25-Apr-17

Weather conditions:
Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: County Rd 10 runs N/S

North Leg Total: 1872
 North Entering: 947
 North Peds: 0
 Peds Cross: $\nlessgtr$

	Heavys	Trucks	Cars	Totals
North	0	0	0	0
East	4	30	0	34
South	39	842	32	913
Totals	43	872	32	



	Heavys	Trucks	Cars	Totals
North	1	31	893	925

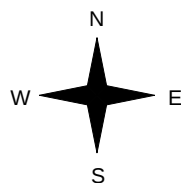
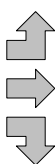
East Leg Total: 134
 East Entering: 62
 East Peds: 0
 Peds Cross: $\nlessgtr$

Heavys	Trucks	Cars	Totals
0	4	85	89



Larmer Line

Heavys	Trucks	Cars	Totals
0	1	54	55
0	0	12	12
0	2	42	44
0	3	108	



County Rd 10



Cars	Trucks	Heavys	Totals
31	2	0	33
7	0	0	7
19	3	0	22
57	5	0	

Larmer Line



Cars	Trucks	Heavys	Totals
68	4	0	72

Peds Cross: $\nlessgtr$
 West Peds: 0
 West Entering: 111
 West Leg Total: 200

	Cars	Trucks	Heavys	Totals
West	903	35	0	938



	Cars	Trucks	Heavys	Totals
West	39	0	0	39
East	808	28	1	837
Totals	24	4	0	28
	871	32	1	

Peds Cross: $\nlessgtr$
 South Peds: 0
 South Entering: 904
 South Leg Total: 1842

Comments

Ontario Traffic Inc

Traffic Count Summary

Intersection: County Rd 10 & Larmer Line						Count Date: 25-Apr-17		Municipality: Millbrook					
North Approach Totals						North/South Total Approaches	South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total		
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0	
8:00:00	1	125	5	131	0	300	8:00:00	3	162	4	169	0	
9:00:00	6	129	3	138	0	325	9:00:00	6	171	10	187	0	
10:00:00	2	113	3	118	0	254	10:00:00	8	124	4	136	0	
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0	
17:00:00	7	180	6	193	0	358	17:00:00	7	152	6	165	0	
18:00:00	8	209	11	228	0	377	18:00:00	7	140	2	149	0	
19:00:00	8	116	15	139	0	237	19:00:00	8	88	2	98	0	
Totals:						1851	39 837 28 904						0
East Approach Totals						East/West Total Approaches	West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total		
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0	
8:00:00	4	1	16	21	0	53	8:00:00	22	2	8	32	0	
9:00:00	2	1	3	6	0	36	9:00:00	16	4	10	30	0	
10:00:00	1	1	6	8	0	20	10:00:00	4	1	7	12	0	
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0	
17:00:00	7	0	5	12	0	26	17:00:00	2	2	10	14	0	
18:00:00	2	1	1	4	0	13	18:00:00	2	3	4	9	0	
19:00:00	6	3	2	11	0	25	19:00:00	9	0	5	14	0	
Totals:						173	55 12 44 111						0
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	7:00	8:00	9:00	10:00			16:00	17:00	18:00	19:00			
Crossing Values:	0	28	22	6			0	11	7	18			

Ontario Traffic Inc

Count Date: 25-Apr-17 Site #: 1710800002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	11	11	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
7:30:00	0	0	34	23	2	2	0	0	2	1	1	0	0	0	0	0	0	0	0	0
7:45:00	1	1	66	32	3	1	0	0	4	2	1	0	0	0	0	0	0	0	0	0
8:00:00	1	0	119	53	3	0	0	0	6	2	2	1	0	0	0	0	0	0	0	0
8:15:00	4	3	151	32	3	0	0	0	8	2	3	1	0	0	0	0	0	0	0	0
8:30:00	5	1	187	36	3	0	0	0	8	0	3	0	0	0	0	0	0	0	0	0
8:45:00	6	1	210	23	3	0	0	0	9	1	3	0	0	0	0	0	0	0	0	0
9:00:00	7	1	242	32	5	2	0	0	12	3	3	0	0	0	0	0	0	0	0	0
9:15:00	7	0	268	26	6	1	0	0	15	3	4	1	0	0	0	0	0	0	0	0
9:30:00	7	0	280	12	6	0	0	0	15	0	4	0	0	0	0	0	0	0	0	0
9:45:00	7	0	305	25	6	0	0	0	19	4	4	0	0	0	0	0	0	0	0	0
10:00:00	9	2	345	40	7	1	0	0	22	3	4	0	0	0	0	0	0	0	0	0
10:05:45	9	0	345	0	7	0	0	0	22	0	4	0	0	0	0	0	0	0	0	0
16:00:00	9	0	345	0	7	0	0	0	22	0	4	0	0	0	0	0	0	0	0	0
16:15:00	10	1	382	37	7	0	0	0	24	2	4	0	0	0	0	0	0	0	0	0
16:30:00	12	2	411	29	9	2	0	0	25	1	4	0	0	0	0	0	0	0	0	0
16:45:00	14	2	458	47	12	3	0	0	25	0	4	0	0	0	0	0	0	0	0	0
17:00:00	16	2	521	63	13	1	0	0	26	1	4	0	0	0	0	0	0	0	0	0
17:15:00	18	2	572	51	16	3	0	0	27	1	4	0	0	0	0	0	0	0	0	0
17:30:00	20	2	633	61	18	2	0	0	28	1	4	0	0	0	0	0	0	0	0	0
17:45:00	21	1	681	48	21	3	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:00:00	24	3	728	47	24	3	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:15:00	27	3	758	30	32	8	0	0	29	1	4	0	0	0	0	0	0	0	0	0
18:30:00	28	1	795	37	33	1	0	0	29	0	4	0	0	0	0	0	0	0	0	0
18:45:00	31	3	820	25	37	4	0	0	30	1	4	0	0	0	0	0	0	0	0	0
19:00:00	32	1	842	22	39	2	0	0	30	0	4	0	0	0						

Ontario Traffic Inc

Count Date: 25-Apr-17Site #: 1710800002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavyys - East Approach						Pedestrians		
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross		
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15:00	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30:00	2	0	0	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45:00	3	1	1	1	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00:00	4	1	1	0	16	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15:00	4	0	1	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30:00	6	2	2	1	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45:00	6	0	2	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00:00	6	0	2	0	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15:00	6	0	2	0	21	2	1	1	0	0	1	1	0	0	0	0	0	0	0	0	
9:30:00	6	0	3	1	22	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
9:45:00	6	0	3	0	23	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
10:00:00	6	0	3	0	24	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
10:05:45	6	0	3	0	24	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
16:00:00	6	0	3	0	24	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
16:15:00	8	2	3	0	26	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
16:30:00	9	1	3	0	27	1	2	1	0	0	1	0	0	0	0	0	0	0	0	0	
16:45:00	10	1	3	0	27	0	3	1	0	0	2	1	0	0	0	0	0	0	0	0	
17:00:00	11	1	3	0	28	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
17:15:00	12	1	3	0	29	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
17:30:00	12	0	4	1	29	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
17:45:00	12	0	4	0	29	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
18:00:00	13	1	4	0	29	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
18:15:00	17	4	6	2	30	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
18:30:00	17	0	6	0	30	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
18:45:00	19	2	6	0	30	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
19:00:00	19	0	7	1	31	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0	
19:05:10	19	0	7	0	31</																

Ontario Traffic Inc

Count Date: 25-Apr-17Site #: 1710800002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians		
	Left			Thru			Right			Left			Thru			Right			South Cross		
	Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr		Cum	Incr	
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	1	1	54	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	1	0	102	48	1	1	0	0	0	4	4	2	0	0	0	0	0	0	0	0	0
8:00:00	3	2	155	53	2	1	0	0	0	7	3	2	0	0	0	0	0	0	0	0	0
8:15:00	5	2	199	44	5	3	0	0	0	11	4	2	0	0	0	0	0	0	0	0	0
8:30:00	7	2	246	47	10	5	0	0	0	13	2	2	0	0	0	0	0	0	0	0	0
8:45:00	9	2	286	40	11	1	0	0	0	15	2	2	0	0	0	0	0	0	0	0	0
9:00:00	9	0	315	29	11	0	0	0	0	18	3	3	1	0	0	0	0	0	0	0	0
9:15:00	10	1	340	25	12	1	0	0	0	18	0	3	0	0	0	0	0	0	0	0	0
9:30:00	12	2	364	24	12	0	0	0	0	21	3	3	0	0	0	0	0	0	0	0	0
9:45:00	14	2	398	34	13	1	0	0	0	23	2	4	1	0	0	0	0	0	0	0	0
10:00:00	17	3	431	33	14	1	0	0	0	26	3	4	0	0	0	0	0	0	0	0	0
10:05:45	17	0	431	0	14	0	0	0	0	26	0	4	0	0	0	0	0	0	0	0	0
16:00:00	17	0	431	0	14	0	0	0	0	26	0	4	0	0	0	0	0	0	0	0	0
16:15:00	19	2	465	34	14	0	0	0	0	27	1	4	0	0	0	0	0	0	0	0	0
16:30:00	20	1	504	39	16	2	0	0	0	27	0	4	0	0	0	0	0	0	0	0	0
16:45:00	23	3	550	46	17	1	0	0	0	27	0	4	0	0	0	0	0	0	0	0	0
17:00:00	24	1	581	31	20	3	0	0	0	28	1	4	0	0	0	0	0	0	0	0	0
17:15:00	27	3	640	59	20	0	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
17:30:00	28	1	668	28	20	0	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
17:45:00	30	2	691	23	22	2	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:00:00	31	1	721	30	22	0	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:15:00	32	1	755	34	22	0	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:30:00	36	4	776	21	23	1	0	0	0	28	0	4	0	0	0	0	0	0	0	0	0
18:45:00	38	2	793	17	24	1	0	0	0	28	0	4	0	0	0						

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 17:00:00

One Hour Peak

From: 12:00:00

To: 13:00:00

Municipality: Millbrook
Site #: 1722900002
Intersection: CR 10 & Larmer Line
TFR File #: 1
Count date: 12-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S

North Leg Total: 385

North Entering: 197

North Peds: 0

Peds Cross: $\nlessgtr$

	Heavys	Trucks	Cars	Totals
North	0	0	0	0
East	0	2	0	2
South	12	179	4	195
Totals	12	181	4	



	Heavys	Trucks	Cars	Totals
North	0	1	187	188

East Leg Total: 30

East Entering: 17

East Peds: 5

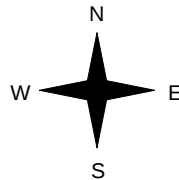
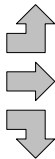
Peds Cross: $\nlessgtr$

Heavys	Trucks	Cars	Totals
0	0	30	30



Larmer Line

Heavys	Trucks	Cars	Totals
0	0	14	14
0	0	3	3
0	0	10	10
0	0	27	



CR 10



Cars	Trucks	Heavys	Totals
4	0	0	4
6	0	0	6
7	0	0	7
17	0	0	



Larmer Line



Cars	Trucks	Heavys	Totals
13	0	0	13

Peds Cross: $\nlessgtr$

West Peds: 0

West Entering: 27

West Leg Total: 57

	Cars	Trucks	Heavys	Totals
West	196	2	0	198
North	12	0	0	12
East	169	1	0	170
South	6	0	0	6
Totals	187	1	0	



Peds Cross: $\nlessgtr$

South Peds: 0

South Entering: 188

South Leg Total: 386

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Millbrook
Site #: 1722900002
Intersection: CR 10 & Larmer Line
TFR File #: 1
Count date: 12-Aug-17

Weather conditions:
Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 10 runs N/S

North Leg Total: 2027
 North Entering: 1044
 North Peds: 0
 Peds Cross: $\nless$

Heavys	Trucks	Cars	Totals
0	0	0	0
0	10	0	10
59	943	32	1034
59	953	32	

Heavys	Trucks	Cars	Totals
0	14	969	983

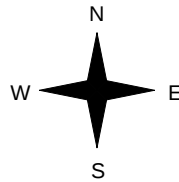
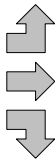
East Leg Total: 169
 East Entering: 85
 East Peds: 5
 Peds Cross: $\nless$

Heavys	Trucks	Cars	Totals
0	0	160	160



Larmer Line

Heavys	Trucks	Cars	Totals
0	0	75	75
0	0	22	22
0	0	54	54
0	0	151	



CR 10



Cars	Trucks	Heavys	Totals
33	2	0	35
27	0	0	27
22	1	0	23
82	3	0	



Larmer Line



Cars	Trucks	Heavys	Totals
84	0	0	84

Peds Cross: $\nless$
 West Peds: 0
 West Entering: 151
 West Leg Total: 311

Cars	Trucks	Heavys	Totals
1019	11	0	1030



Cars	Trucks	Heavys	Totals
74	0	0	74
861	12	0	873
30	0	0	30
965	12	0	

Peds Cross: $\nless$
 South Peds: 0
 South Entering: 977
 South Leg Total: 2007

Comments

Ontario Traffic Inc.

Traffic Count Summary

Intersection: CR 10 & Larmer Line

Count Date: 12-Aug-17

Municipality: Millbrook

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	2	152	7	161	0	357	12:00:00	7	185	4	196	0
13:00:00	4	181	12	197	0	385	13:00:00	12	170	6	188	0
14:00:00	5	177	9	191	0	336	14:00:00	14	124	7	145	0
15:00:00	8	149	7	164	0	330	15:00:00	15	146	5	166	0
16:00:00	10	154	11	175	0	322	16:00:00	11	128	8	147	0
17:00:00	3	140	13	156	0	289	17:00:00	15	118	0	133	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	11:00	12:00	13:00	14:00	15:00	16:00	17:00	17:00
Crossing Values:	0	21	27	21	15	21	24	24

[illegible]

[illegible]

[illegible]

[illegible]

REGISTERED AND PROJECTED VOLUMES

Volumes at AM and PM Peak Hours															
CR10 / Larmer Line			Eastbound			Northbound			Westbound			Southbound			Volume Type
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
April	2017	AM	23	4	10	6	205	10	4	2	9	5	159	3	Registered Volumes
April	2017	PM	3	1	6	8	165	4	4	1	3	8	225	9	
August	2017	SAT	14	3	10	12	170	6	7	6	4	4	181	12	
Annual Growth Rate 2.00%															
	2021	AM	25	4	11	6	222	11	4	2	10	5	172	3	Existing Volumes (Projected)
	2021	PM	3	1	6	9	179	4	4	1	3	9	244	10	
	2021	SAT	15	3	11	13	184	6	8	6	4	4	196	13	
		AM	0	0	0	0	103	6	2	0	0	0	34	0	Tower Hills South Trips
		PM	0	0	0	0	67	4	6	0	0	0	115	0	
		SAT	0	0	0	0	81	5	5	0	0	0	94	0	
		AM	0	0	6	3	1	3	4	0	0	0	2	0	Millbrook Community Centre
		PM	0	0	8	8	3	3	4	0	0	0	2	0	
		SAT	0	0	4	3	1	3	3	0	0	0	1	0	
	2021	AM	25	4	17	9	326	20	10	2	10	5	208	3	Total Existing Volumes
	2021	PM	3	1	14	17	249	11	14	1	3	9	361	10	
	2021	SAT	15	3	15	16	266	14	16	6	4	4	291	13	
	2025	AM	27	5	12	7	240	12	5	2	11	6	186	4	Background Volumes (Projected)
	2025	PM	4	1	7	9	193	5	5	1	4	9	264	11	
	2025	SAT	16	4	12	14	199	7	8	7	5	5	212	14	
		AM	0	0	6	3	104	9	6	0	0	0	36	0	Tower Hills South & M. Community Centre
		PM	0	0	8	8	70	7	10	0	0	0	117	0	
		SAT	0	0	4	3	82	8	8	0	0	0	95	0	
		AM	0	0	17	25	187	20	14	0	0	0	0	0	Development "A" & School
		PM	0	0	20	13	122	8	13	0	0	0	0	0	
		SAT	0	0	19	17	178	12	12	0	0	0	0	0	
		AM	0	0	0	0	31	0	0	0	0	0	48	0	Development "B"
		PM	0	0	0	0	65	0	0	0	0	0	27	0	
		SAT	0	0	0	0	60	0	0	0	0	0	61	0	
		AM	0	0	5	1	63	4	2	0	0	0	47	0	Development "C" 100% Commercial 50% Residential
		PM	0	0	2	3	42	2	2	0	0	0	75	0	
		SAT	0	0	3	5	81	4	4	0	0	0	84	0	
	2025	AM	27	5	40	36	625	45	27	2	11	6	317	4	Total Background Volumes 2025
	2025	PM	4	1	37	33	492	22	30	1	4	9	483	11	
	2025	SAT	16	4	38	39	600	31	32	7	5	5	452	14	
Annual Growth Rate 2.00%															
	2030	AM	30	5	13	8	265	13	5	3	12	6	206	4	Background Volumes (Projected)
	2030	PM	4	1	8	10	213	5	5	1	4	10	291	12	
	2030	SAT	18	4	13	16	220	8	9	8	5	5	234	16	
		AM	0	0	6	3	104	9	6	0	0	0	36	0	Tower Hills South & M. Community Centre
		PM	0	0	8	8	70	7	10	0	0	0	117	0	
		SAT	0	0	4	3	82	8	8	0	0	0	95	0	
		AM	0	0	17	25	218	20	14	0	0	0	48	0	Developments "A", "B"
		PM	0	0	20	13	187	8	13	0	0	0	27	0	
		SAT	0	0	19	17	238	12	12	0	0	0	61	0	
		AM	0	0	5	2	86	5	3	0	0	0	56	0	Development "C" 100%
		PM	0	0	3	5	79	4	3	0	0	0	99	0	
		SAT	0	0	5	6	96	5	6	0	0	0	112	0	
	2030	AM	30	5	41	38	673	47	28	3	12	6	346	4	Total Background Volumes 2030
	2030	PM	4	1	39	36	549	24	31	1	4	10	534	12	
	2030	SAT	18	4	41	42	636	33	35	8	5	5	502	16	

Volumes at AM and PM Peak Hours

CR10 / Fallis Line			Eastbound			Northbound			Westbound			Southbound			Volume Type
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
April	2017	AM	10	0	15	15	215	0	0	0	0	162	5	Registered Volumes	
April	2017	PM	4	0	18	19	170	1	0	0	0	230	11		
August	2017	SAT	7	0	18	21	180	0	0	0	0	185	10		
Annual Growth Rate 2.00%															
	2021	AM	11	0	16	16	233	0	0	0	0	175	5	Existing Volumes (Projected)	
	2021	PM	4	0	19	21	184	1	0	0	0	249	12		
	2021	SAT	8	0	19	23	195	0	0	0	0	200	11		
		AM	109	0	49	16	0	0	0	0	0	0	36	Tower Hills South Trips	
		PM	71	0	32	55	0	0	0	0	0	0	121		
		SAT	86	0	38	45	0	0	0	0	0	0	99		
		AM	7	0	0	14	6	0	0	0	0	3	0	Millbrook Community Centre	
		PM	14	0	0	14	6	0	0	0	0	6	1		
		SAT	7	0	0	8	5	0	0	0	0	2	0		
	2021	AM	127	0	65	46	239	0	0	0	0	178	41	Total Existing Volumes	
	2021	PM	89	0	51	90	190	1	0	0	0	255	134		
	2021	SAT	101	0	57	76	200	0	0	0	0	202	110		
	2025	AM	12	0	18	18	252	0	0	0	0	190	6	Background Volumes (Projected)	
	2025	PM	5	0	21	22	199	1	0	0	0	269	13		
	2025	SAT	8	0	21	25	211	0	0	0	0	217	12		
		AM	116	0	49	30	6	0	0	0	0	3	36	Tower Hills South & M. Community Centre	
		PM	85	0	32	69	6	0	0	0	0	6	122		
		SAT	93	0	38	53	5	0	0	0	0	2	99		
		AM	70	0	128	95	9	0	0	0	0	26	44	Development "A" & School	
		PM	35	0	60	76	28	0	0	0	0	16	56		
		SAT	53	0	82	82	25	0	0	0	0	25	50		
		AM	31	0	25	23	0	0	0	0	0	0	48	Development "B"	
		PM	77	0	35	31	-12	0	0	0	0	-12	27		
		SAT	60	0	75	40	0	0	0	0	0	0	61		
		AM	-10	9	1	0	34	14	28	9	43	12	44	-2	Development "C" 100% Commercial 50% Residential
		PM	-9	13	-4	0	53	24	34	25	30	33	55	-9	
		SAT	-14	14	0	0	58	27	36	27	42	28	72	-9	
	2025	AM	219	9	221	166	301	14	28	9	43	12	263	132	Total Background Volumes 2025
	2025	PM	193	13	144	198	274	25	34	25	30	33	334	209	
	2025	SAT	200	14	216	200	299	27	36	27	42	28	316	213	
Annual Growth Rate 2.00%															
	2030	AM	13	0	19	19	278	0	0	0	0	210	6	Background Volumes (Projected)	
	2030	PM	5	0	23	25	220	1	0	0	0	298	14		
	2030	SAT	9	0	23	27	233	0	0	0	0	239	13		
		AM	116	0	49	30	6	0	0	0	0	3	36	Tower Hills South & M. Community Centre	
		PM	85	0	32	69	6	0	0	0	0	6	122		
		SAT	93	0	38	53	5	0	0	0	0	2	99		
		AM	101	0	153	118	9	0	0	0	0	26	92	Developments "A", "B"	
		PM	112	0	95	107	16	0	0	0	0	4	83		
		SAT	113	0	157	122	25	0	0	0	0	25	111		
		AM	-10	9	1	0	34	19	45	15	68	22	44	-2	Development "C" 100%
		PM	-9	13	-4	0	56	43	46	34	41	64	55	-9	
		SAT	-14	14	0	0	58	37	51	36	59	60	72	-9	
	2030	AM	220	9	222	167	327	19	45	15	68	22	283	132	Total Background Volumes 2030
	2030	PM	193	13	146	201	298	44	46	34	41	64	363	210	
	2030	SAT	201	14	218	202	321	37	51	36	59	60	338	214	

Volumes at AM and PM Peak Hours

CR10 / Centennial Lane			Eastbound			Northbound			Westbound			Southbound			Volume Type
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
April	2017	AM													Registered Volumes
April	2017	PM													
August	2017	SAT													
Annual Growth Rate 2.00%															
	2021	AM	25	1	27	16	209	9	10	1	15	18	145	28	Existing Volumes (Projected)
	2021	PM	11	1	12	4	180	14	8	1	15	20	240	8	
	2021	SAT	5	1	6	2	198	14	7	1	15	15	197	7	
		AM	0	0	0	0	16	0	0	0	0	0	49	0	Tower Hills South Trips
		PM	0	0	0	0	55	0	0	0	0	0	32	0	
		SAT	0	0	0	0	45	0	0	0	0	0	38	0	
		AM	0	0	0	0	20	0	0	0	0	0	10	0	Millbrook Community Centre
		PM	0	0	0	0	20	0	0	0	0	0	20	0	
		SAT	0	0	0	0	13	0	0	0	0	0	9	0	
	2021	AM	25	1	27	16	245	9	10	1	15	18	204	28	Total Existing Volumes
	2021	PM	11	1	12	4	255	14	8	1	15	20	292	8	
	2021	SAT	5	1	6	2	256	14	7	1	15	15	244	7	
	2025	AM	27	1	29	17	226	10	11	1	16	19	157	30	Background Volumes (Projected)
	2025	PM	12	1	13	4	195	15	9	1	16	22	260	9	
	2025	SAT	5	1	6	2	214	15	8	1	16	16	213	8	
		AM	0	0	0	0	211	0	0	0	0	0	304	0	Other Developments
		PM	0	0	0	0	275	0	0	0	0	0	222	0	
		SAT	0	0	0	0	290	0	0	0	0	0	330	0	
	2025	AM	27	1	29	17	437	10	11	1	16	19	461	30	Total Background Volumes 2025
	2025	PM	12	1	13	4	470	15	9	1	16	22	482	9	
	2025	SAT	5	1	6	2	504	15	8	1	16	16	543	8	
Annual Growth Rate 2.00%															
	2030	AM	30	1	32	19	250	11	12	1	18	22	173	33	Background Volumes (Projected)
	2030	PM	13	1	14	5	215	17	10	1	18	24	287	10	
	2030	SAT	6	1	7	2	237	17	8	1	18	18	235	8	
		AM	0	0	0	0	216	0	0	0	0	0	321	0	Other Developments
		PM	0	0	0	0	297	0	0	0	0	0	234	0	
		SAT	0	0	0	0	300	0	0	0	0	0	345	0	
	2030	AM	30	1	32	19	466	11	12	1	18	22	494	33	Total Background Volumes 2030
	2030	PM	13	1	14	5	512	17	10	1	18	24	521	10	
	2030	SAT	6	1	7	2	537	17	8	1	18	18	580	8	

Volumes at AM and PM Peak Hours

CR10 / CR21 / Distillery			Eastbound			Northbound			Westbound			Southbound			Volume Type
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
July	2018	AM	34	28	1	2	9	6	6	33	78	62	11	50	Registered Volumes
July	2018	PM	80	65	3	2	24	14	8	48	103	184	8	86	
July	2018	SAT													
Annual Growth Rate 2.00%															
	2021	AM	36	30	1	2	10	6	6	35	83	66	12	53	Existing Volumes (Projected)
	2021	PM	85	69	3	2	25	15	8	51	109	195	8	91	
	2021	SAT	32	27	1	2	9	5	5	31	73	76	15	60	
		AM	5	0	0	0	1	0	0	0	10	25	2	22	Tower Hills South Trips
		PM	21	0	0	0	6	0	0	0	28	21	1	10	
		SAT	13	0	0	0	3	0	0	0	29	19	4	15	
		AM	6	0	0	0	1	0	0	0	13	5	1	4	Millbrook Community Centre
		PM	8	0	0	0	2	0	0	0	1	13	1	6	
		SAT	4	0	0	0	1	0	0	0	8	5	0	4	
	2021	AM	47	30	1	2	12	6	6	35	106	96	15	79	Total Existing Volumes
	2021	PM	114	69	3	2	33	15	8	51	138	229	10	107	
	2021	SAT	49	27	1	2	13	5	5	31	110	100	19	79	
	2025	AM	39	32	1	2	10	7	7	38	90	71	13	57	Background Volumes (Projected)
	2025	PM	92	75	3	2	28	16	9	55	118	211	9	99	
	2025	SAT	35	29	1	2	10	5	5	34	79	82	16	65	
		AM	59	0	0	0	17	0	0	0	135	152	24	128	Other Developments
		PM	110	0	0	0	33	0	0	0	132	147	7	69	
		SAT	84	0	0	0	20	0	0	0	186	168	30	132	
	2025	AM	98	32	1	2	27	7	7	38	225	223	37	185	Total Background Volumes 2025
	2025	PM	202	75	3	2	61	16	9	55	250	358	16	168	
	2025	SAT	119	29	1	2	30	5	5	34	265	251	46	197	
Annual Growth Rate 2.00%															
	2030	AM	43	36	1	3	11	8	8	42	99	79	14	63	Background Volumes (Projected)
	2030	PM	101	82	4	3	30	18	10	61	131	233	10	109	
	2030	SAT	38	32	1	2	11	6	6	37	87	91	18	72	
		AM	60	0	0	0	17	0	0	0	138	161	26	135	Other Developments
		PM	119	0	0	0	36	0	0	0	143	154	7	73	
		SAT	87	0	0	0	21	0	0	0	192	176	31	138	
	2030	AM	104	36	1	3	29	8	8	42	237	239	40	198	Total Background Volumes 2030
	2030	PM	220	82	4	3	66	18	10	61	273	388	17	182	
	2030	SAT	125	32	1	2	32	6	6	37	279	267	49	210	

Appendix C

Synchro Reports

Existing Conditions Year 2025

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Existing Volumes - 2021

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	4	17	10	2	10	6	326	20	5	208	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	4	18	11	2	11	7	354	22	5	226	3
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	629	628	228	638	618	365	229			376		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	629	628	228	638	618	365	229			376		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	98	97	99	98	100			100		
cM capacity (veh/h)	384	396	769	374	401	680	1339			1182		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	50	24	383	235								
Volume Left	27	11	7	5								
Volume Right	18	11	22	3								
cSH	473	474	1339	1182								
Volume to Capacity	0.11	0.05	0.00	0.00								
Queue Length 95th (m)	2.7	1.2	0.1	0.1								
Control Delay (s)	13.5	13.0	0.2	0.2								
Lane LOS	B	B	A	A								
Approach Delay (s)	13.5	13.0	0.2	0.2								
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			31.5%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

6: Fallis Line & CR10

Existing Volumes - 2021

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	0	65	0	0	0	46	239	0	0	178	41
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	138	0	71	0	0	0	50	260	0	0	193	45
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	553	553	193	589	598	260	238			260		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	553	553	193	589	598	260	238			260		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	68	100	92	100	100	100	96			100		
cM capacity (veh/h)	431	424	848	374	400	779	1329			1305		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	209	0	50	260	193	45						
Volume Left	138	0	50	0	0	0						
Volume Right	71	0	0	0	0	45						
cSH	651	1700	1329	1700	1305	1700						
Volume to Capacity	0.32	0.00	0.04	0.15	0.00	0.03						
Queue Length 95th (m)	10.5	0.0	0.9	0.0	0.0	0.0						
Control Delay (s)	14.7	0.0	7.8	0.0	0.0	0.0						
Lane LOS	B	A	A									
Approach Delay (s)	14.7	0.0	1.3		0.0							
Approach LOS	B	A										
Intersection Summary												
Average Delay			4.6									
Intersection Capacity Utilization			39.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10 & Centennial Rd

Existing Volumes - 2021
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	1	27	10	1	15	16	245	9	18	204	28
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	1	29	11	1	16	17	266	10	20	222	30
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	599	587	237	612	597	271	252			276		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	599	587	237	612	597	271	252			276		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	93	100	96	97	100	98	99			98		
cM capacity (veh/h)	395	409	802	381	404	767	1215			1287		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	58	28	293	272								
Volume Left	27	11	17	20								
Volume Right	29	16	10	30								
cSH	533	539	1215	1287								
Volume to Capacity	0.11	0.05	0.01	0.02								
Queue Length 95th (m)	2.7	1.3	0.3	0.4								
Control Delay (s)	12.6	12.1	0.6	0.7								
Lane LOS	B	B	A	A								
Approach Delay (s)	12.6	12.1	0.6	0.7								
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.2									
Intersection Capacity Utilization			29.2%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Existing Volumes - 2021
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	47	30	1	6	35	106	2	12	6	96	15	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	33	1	7	38	115	2	13	7	104	16	86
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	85	160	22	104	102							
Volume Left (vph)	51	7	2	104	0							
Volume Right (vph)	1	115	7	0	86							
Hadj (s)	0.18	-0.36	-0.13	0.55	-0.54							
Departure Headway (s)	4.8	4.2	4.7	5.6	4.5							
Degree Utilization, x	0.11	0.19	0.03	0.16	0.13							
Capacity (veh/h)	702	808	713	608	753							
Control Delay (s)	8.4	8.2	7.8	8.5	7.0							
Approach Delay (s)	8.4	8.2	7.8	7.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.0									
HCM Level of Service			A									
Intersection Capacity Utilization			34.9%			ICU Level of Service			A			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	14.4	17.9	11.9	16.1	13.2
Average Queue (m)	10.2	11.5	5.9	11.6	10.3
95th Queue (m)	14.9	20.2	14.5	16.9	14.9
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				4	3
Queuing Penalty (veh)				4	3

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Existing Volumes - 2021

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	1	14	14	1	3	17	249	11	9	361	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	1	15	15	1	3	18	271	12	10	392	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	735	737	398	747	736	277	403			283		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	735	737	398	747	736	277	403			283		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	98	95	100	100	98			99		
cM capacity (veh/h)	327	338	652	315	338	762	1155			1280		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	20	20	301	413								
Volume Left	3	15	18	10								
Volume Right	15	3	12	11								
cSH	536	351	1155	1280								
Volume to Capacity	0.04	0.06	0.02	0.01								
Queue Length 95th (m)	0.9	1.3	0.4	0.2								
Control Delay (s)	12.0	15.9	0.6	0.3								
Lane LOS	B	C	A	A								
Approach Delay (s)	12.0	15.9	0.6	0.3								
Approach LOS	B	C										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			32.4%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

6: Fallis Line & CR10

Existing Volumes - 2021
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	89	0	51	0	0	0	90	190	1	0	255	134
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	97	0	55	0	0	0	98	207	1	0	277	146
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	679	680	277	708	826	207	423			208		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	679	680	277	708	826	207	423			208		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	72	100	93	100	100	100	91			100		
cM capacity (veh/h)	341	341	762	303	281	833	1136			1363		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	152	0	98	208	277	146						
Volume Left	97	0	98	0	0	0						
Volume Right	55	0	0	1	0	146						
cSH	537	1700	1136	1700	1363	1700						
Volume to Capacity	0.28	0.00	0.09	0.12	0.00	0.09						
Queue Length 95th (m)	8.8	0.0	2.1	0.0	0.0	0.0						
Control Delay (s)	16.2	0.0	8.5	0.0	0.0	0.0						
Lane LOS	C	A	A									
Approach Delay (s)	16.2	0.0	2.7		0.0							
Approach LOS	C	A										
Intersection Summary												
Average Delay			3.7									
Intersection Capacity Utilization			38.4%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10 & Centennial Rd

Existing Volumes - 2021

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	1	12	8	1	15	4	255	14	20	292	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	1	13	9	1	16	4	277	15	22	317	9
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	676	666	322	672	663	285	326			292		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	676	666	322	672	663	285	326			292		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	98	98	100	98	100			98		
cM capacity (veh/h)	353	372	719	356	374	754	1234			1269		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	26	26	297	348								
Volume Left	12	9	4	22								
Volume Right	13	16	15	9								
cSH	475	533	1234	1269								
Volume to Capacity	0.05	0.05	0.00	0.02								
Queue Length 95th (m)	1.3	1.2	0.1	0.4								
Control Delay (s)	13.0	12.1	0.1	0.6								
Lane LOS	B	B	A	A								
Approach Delay (s)	13.0	12.1	0.1	0.6								
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			37.5%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Existing Volumes - 2021
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	114	69	3	8	51	138	2	33	15	229	10	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	124	75	3	9	55	150	2	36	16	249	11	116
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	202	214	54	249	127							
Volume Left (vph)	124	9	2	249	0							
Volume Right (vph)	3	150	16	0	116							
Hadj (s)	0.15	-0.38	-0.14	0.53	-0.61							
Departure Headway (s)	5.5	5.0	5.6	6.2	5.1							
Degree Utilization, x	0.31	0.30	0.08	0.43	0.18							
Capacity (veh/h)	610	669	563	552	672							
Control Delay (s)	11.0	10.1	9.1	12.7	8.0							
Approach Delay (s)	11.0	10.1	9.1	11.1								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay			10.7									
HCM Level of Service			B									
Intersection Capacity Utilization			51.1%	ICU Level of Service					A			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	18.5	17.6	12.0	27.4	18.0
Average Queue (m)	13.8	12.5	9.2	19.0	11.2
95th Queue (m)	20.9	18.9	15.1	29.8	19.9
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				15	4
Queuing Penalty (veh)				18	9

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Existing Volumes - 2021

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	3	15	16	6	4	16	266	14	4	291	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	3	16	17	7	4	17	289	15	4	316	14
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	671	671	323	682	671	297	330			304		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	671	671	323	682	671	297	330			304		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	98	95	98	99	99			100		
cM capacity (veh/h)	358	371	718	349	371	743	1229			1256		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	36	28	322	335								
Volume Left	16	17	17	4								
Volume Right	16	4	15	14								
cSH	466	386	1229	1256								
Volume to Capacity	0.08	0.07	0.01	0.00								
Queue Length 95th (m)	1.9	1.8	0.3	0.1								
Control Delay (s)	13.4	15.1	0.6	0.1								
Lane LOS	B	C	A	A								
Approach Delay (s)	13.4	15.1	0.6	0.1								
Approach LOS	B	C										
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			34.5%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

6: Fallis Line & CR10

Existing Volumes - 2021

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	0	57	0	0	0	76	200	0	0	202	110
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	110	0	62	0	0	0	83	217	0	0	220	120
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	602	602	220	633	722	217	339			217		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	602	602	220	633	722	217	339			217		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	72	100	92	100	100	100	93			100		
cM capacity (veh/h)	390	385	820	344	329	822	1220			1352		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	172	0	83	217	220	120						
Volume Left	110	0	83	0	0	0						
Volume Right	62	0	0	0	0	120						
cSH	610	1700	1220	1700	1352	1700						
Volume to Capacity	0.28	0.00	0.07	0.13	0.00	0.07						
Queue Length 95th (m)	8.7	0.0	1.7	0.0	0.0	0.0						
Control Delay (s)	14.9	0.0	8.2	0.0	0.0	0.0						
Lane LOS	B	A	A									
Approach Delay (s)	14.9	0.0	2.2		0.0							
Approach LOS	B	A										
Intersection Summary												
Average Delay			4.0									
Intersection Capacity Utilization			36.8%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10 & Centennial Rd

Existing Volumes - 2021

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	1	6	7	1	15	2	256	14	15	244	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	7	8	1	16	2	278	15	16	265	8
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	609	599	269	599	596	286	273			293		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	609	599	269	599	596	286	273			293		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	98	100	98	100			99		
cM capacity (veh/h)	393	409	770	405	411	753	1290			1268		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	25	296	289								
Volume Left	5	8	2	16								
Volume Right	7	16	15	8								
cSH	523	580	1290	1268								
Volume to Capacity	0.02	0.04	0.00	0.01								
Queue Length 95th (m)	0.6	1.0	0.0	0.3								
Control Delay (s)	12.1	11.5	0.1	0.6								
Lane LOS	B	B	A	A								
Approach Delay (s)	12.1	11.5	0.1	0.6								
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			33.5%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Existing Volumes - 2021
SAT Peak Hour

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Sign Control		Stop			Stop			Stop			Stop								
Volume (vph)	49	27	1	5	31	110	2	13	5	100	19	79							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	53	29	1	5	34	120	2	14	5	109	21	86							
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2														
Volume Total (vph)	84	159	22	109	107														
Volume Left (vph)	53	5	2	109	0														
Volume Right (vph)	1	120	5	0	86														
Hadj (s)	0.15	-0.41	-0.10	0.53	-0.53														
Departure Headway (s)	4.8	4.2	4.7	5.6	4.5														
Degree Utilization, x	0.11	0.18	0.03	0.17	0.13														
Capacity (veh/h)	703	813	708	611	753														
Control Delay (s)	8.4	8.1	7.9	8.6	7.1														
Approach Delay (s)	8.4	8.1	7.9	7.8															
Approach LOS	A	A	A	A															
Intersection Summary																			
Delay				8.0															
HCM Level of Service				A															
Intersection Capacity Utilization				35.1%	ICU Level of Service	A													
Analysis Period (min)				15															

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	9.3	15.2	9.2	17.0	22.2
Average Queue (m)	8.9	11.4	4.3	11.1	13.3
95th Queue (m)	11.9	17.2	11.6	18.0	23.0
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				4	5
Queuing Penalty (veh)				4	5

Appendix D

Synchro Reports

Background Horizon Year 2025

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Background Volumes - 2025

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	5	40	27	2	11	36	625	45	6	317	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	5	43	29	2	12	39	679	49	7	345	4
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	1155	1166	347	1188	1144	704	349			728		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1155	1166	347	1188	1144	704	349			728		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	97	93	80	99	97	97			99		
cM capacity (veh/h)	163	186	657	146	192	437	1210			875		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	78	43	767	355								
Volume Left	29	29	39	7								
Volume Right	43	12	49	4								
cSH	284	182	1210	875								
Volume to Capacity	0.28	0.24	0.03	0.01								
Queue Length 95th (m)	8.3	6.8	0.8	0.2								
Control Delay (s)	22.4	31.0	0.8	0.3								
Lane LOS	C	D	A	A								
Approach Delay (s)	22.4	31.0	0.8	0.3								
Approach LOS	C	D										
Intersection Summary												
Average Delay			3.1									
Intersection Capacity Utilization			66.1%		ICU Level of Service				C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis6: Fallis Line & CR10

Background Volumes - 2025

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	219	9	221	28	9	43	166	301	14	12	263	132
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	238	10	240	30	10	47	180	327	15	13	286	143
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1052	1015	286	1133	1151	335	429			342		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1052	1015	286	1133	1151	335	429			342		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	95	68	70	94	93	84			99		
cM capacity (veh/h)	159	198	753	103	165	707	1130			1217		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	488	87	180	342	299	143						
Volume Left	238	30	180	0	13	0						
Volume Right	240	47	0	15	0	143						
cSH	271	206	1130	1700	1217	1700						
Volume to Capacity	1.80	0.42	0.16	0.20	0.01	0.08						
Queue Length 95th (m)	248.6	14.7	4.3	0.0	0.2	0.0						
Control Delay (s)	406.2	34.6	8.8	0.0	0.4	0.0						
Lane LOS	F	D	A		A							
Approach Delay (s)	406.2	34.6	3.0		0.3							
Approach LOS	F	D										
Intersection Summary												
Average Delay			131.8									
Intersection Capacity Utilization			60.5%		ICU Level of Service				B			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Background Volumes - 2025

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	1	29	11	1	16	17	437	10	19	461	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1	32	12	1	17	18	475	11	21	501	33
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	1094	1082	517	1108	1092	480	534			486		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1094	1082	517	1108	1092	480	534			486		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	84	99	94	93	99	97	98			98		
cM capacity (veh/h)	180	209	558	171	206	586	949			1077		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	62	30	504	554								
Volume Left	29	12	18	21								
Volume Right	32	17	11	33								
cSH	275	290	949	1077								
Volume to Capacity	0.23	0.10	0.02	0.02								
Queue Length 95th (m)	6.4	2.6	0.5	0.4								
Control Delay (s)	21.8	18.9	0.6	0.5								
Lane LOS	C	C	A	A								
Approach Delay (s)	21.8	18.9	0.6	0.5								
Approach LOS	C	C										
Intersection Summary												
Average Delay			2.2									
Intersection Capacity Utilization			44.9%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Background Volumes - 2025
AM Peak Hour

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Sign Control		Stop			Stop			Stop			Stop								
Volume (vph)	98	32	1	7	38	225	2	27	7	223	37	185							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	107	35	1	8	41	245	2	29	8	242	40	201							
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2														
Volume Total (vph)	142	293	39	242	241														
Volume Left (vph)	107	8	2	242	0														
Volume Right (vph)	1	245	8	0	201														
Hadj (s)	0.22	-0.43	-0.07	0.55	-0.54														
Departure Headway (s)	5.9	5.0	5.9	6.3	5.2														
Degree Utilization, x	0.23	0.41	0.06	0.42	0.35														
Capacity (veh/h)	570	678	537	549	664														
Control Delay (s)	10.6	11.4	9.2	12.7	9.8														
Approach Delay (s)	10.6	11.4	9.2	11.2															
Approach LOS	B	B	A	B															
Intersection Summary																			
Delay				11.1															
HCM Level of Service				B															
Intersection Capacity Utilization				52.5%	ICU Level of Service	A													
Analysis Period (min)				15															

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	17.0	25.6	12.1	19.1	21.0
Average Queue (m)	11.2	16.2	7.9	13.9	15.7
95th Queue (m)	18.1	26.9	15.1	21.0	24.2
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				9	11
Queuing Penalty (veh)				21	24

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Background Volumes - 2025

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	1	37	30	1	4	33	492	22	9	483	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	40	33	1	4	36	535	24	10	525	12
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	1174	1181	531	1210	1175	547	537			559		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1174	1181	531	1210	1175	547	537			559		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	99	93	77	99	99	97			99		
cM capacity (veh/h)	161	182	548	142	183	537	1031			1012		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	46	38	595	547								
Volume Left	4	33	36	10								
Volume Right	40	4	24	12								
cSH	429	156	1031	1012								
Volume to Capacity	0.11	0.24	0.03	0.01								
Queue Length 95th (m)	2.7	6.9	0.8	0.2								
Control Delay (s)	14.4	35.3	0.9	0.3								
Lane LOS	B	E	A	A								
Approach Delay (s)	14.4	35.3	0.9	0.3								
Approach LOS	B	E										
Intersection Summary												
Average Delay			2.2									
Intersection Capacity Utilization			60.6%		ICU Level of Service				B			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 6: Fallis Line & CR10

Background Volumes - 2025
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	193	13	144	34	25	30	198	274	25	33	334	209
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	210	14	157	37	27	33	215	298	27	36	363	227
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1209	1190	363	1262	1404	311	590			325		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1209	1190	363	1262	1404	311	590			325		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	90	77	57	74	96	78			97		
cM capacity (veh/h)	100	142	682	85	106	729	985			1235		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	380	97	215	325	399	227						
Volume Left	210	37	215	0	36	0						
Volume Right	157	33	0	27	0	227						
cSH	159	132	985	1700	1235	1700						
Volume to Capacity	2.39	0.73	0.22	0.19	0.03	0.13						
Queue Length 95th (m)	244.0	32.1	6.3	0.0	0.7	0.0						
Control Delay (s)	689.8	84.8	9.7	0.0	1.0	0.0						
Lane LOS	F	F	A		A							
Approach Delay (s)	689.8	84.8	3.9		0.6							
Approach LOS	F	F										
Intersection Summary												
Average Delay			166.2									
Intersection Capacity Utilization			63.4%		ICU Level of Service				B			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Background Volumes - 2025

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1	13	9	1	16	4	470	15	22	482	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	1	14	10	1	17	4	511	16	24	524	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	1122	1112	529	1119	1109	519	534			527		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1122	1112	529	1119	1109	519	534			527		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	99	97	94	99	97	100			98		
cM capacity (veh/h)	173	203	550	175	204	557	1034			1040		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	28	28	532	558								
Volume Left	13	10	4	24								
Volume Right	14	17	16	10								
cSH	265	305	1034	1040								
Volume to Capacity	0.11	0.09	0.00	0.02								
Queue Length 95th (m)	2.7	2.3	0.1	0.5								
Control Delay (s)	20.2	18.0	0.1	0.6								
Lane LOS	C	C	A	A								
Approach Delay (s)	20.2	18.0	0.1	0.6								
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			50.4%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Background Volumes - 2025
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	202	75	3	9	55	250	2	61	16	358	16	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	220	82	3	10	60	272	2	66	17	389	17	183
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	304	341	86	389	200							
Volume Left (vph)	220	10	2	389	0							
Volume Right (vph)	3	272	17	0	183							
Hadj (s)	0.17	-0.44	-0.08	0.53	-0.61							
Departure Headway (s)	6.8	6.1	7.4	7.3	6.1							
Degree Utilization, x	0.57	0.58	0.18	0.79	0.34							
Capacity (veh/h)	497	555	414	389	563							
Control Delay (s)	18.4	17.3	11.9	31.4	11.1							
Approach Delay (s)	18.4	17.3	11.9	24.5								
Approach LOS	C	C	B	C								
Intersection Summary												
Delay			20.4									
HCM Level of Service			C									
Intersection Capacity Utilization			70.6%			ICU Level of Service			C			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	22.0	22.2	14.4	25.2	20.1
Average Queue (m)	14.7	16.9	10.1	20.6	12.7
95th Queue (m)	23.5	25.6	16.2	27.0	20.7
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				24	7
Queuing Penalty (veh)				44	26

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Background Volumes - 2025

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	4	38	32	7	5	39	600	31	5	452	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	4	41	35	8	5	42	652	34	5	491	15
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None								None			
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1273	1280	499	1307	1271	669	507	686				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1273	1280	499	1307	1271	669	507	686				
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	87	97	93	71	95	99	96	99				
cM capacity (veh/h)	133	158	572	120	160	458	1058	908				
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	63	48	728	512								
Volume Left	17	35	42	5								
Volume Right	41	5	34	15								
cSH	273	137	1058	908								
Volume to Capacity	0.23	0.35	0.04	0.01								
Queue Length 95th (m)	6.6	10.9	1.0	0.1								
Control Delay (s)	22.1	44.9	1.0	0.2								
Lane LOS	C	E	A	A								
Approach Delay (s)	22.1	44.9	1.0	0.2								
Approach LOS	C	E										
Intersection Summary												
Average Delay			3.2									
Intersection Capacity Utilization			70.4%	ICU Level of Service					C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis6: Fallis Line & CR10

Background Volumes - 2025

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	14	216	36	27	42	200	299	27	28	316	213
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	217	15	235	39	29	46	217	325	29	30	343	232
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type							None				None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1224	1193	343	1304	1410	340	575			354		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1224	1193	343	1304	1410	340	575			354		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	89	66	43	72	94	78			97		
cM capacity (veh/h)	94	142	699	69	105	703	998			1204		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	467	114	217	354	374	232						
Volume Left	217	39	217	0	30	0						
Volume Right	235	46	0	29	0	232						
cSH	172	125	998	1700	1204	1700						
Volume to Capacity	2.71	0.91	0.22	0.21	0.03	0.14						
Queue Length 95th (m)	312.7	44.8	6.3	0.0	0.6	0.0						
Control Delay (s)	828.4	124.8	9.6	0.0	0.9	0.0						
Lane LOS	F	F	A		A							
Approach Delay (s)	828.4	124.8	3.7		0.6							
Approach LOS	F	F										
Intersection Summary												
Average Delay			229.6									
Intersection Capacity Utilization			64.0%	ICU Level of Service					C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Background Volumes - 2025

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	1	6	8	1	16	2	504	15	16	543	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	7	9	1	17	2	548	16	17	590	9
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	1208	1198	595	1197	1194	556	599			564		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1208	1198	595	1197	1194	556	599			564		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	99	99	94	99	97	100			98		
cM capacity (veh/h)	152	182	504	158	183	531	978			1007		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	27	566	616								
Volume Left	5	9	2	17								
Volume Right	7	17	16	9								
cSH	238	289	978	1007								
Volume to Capacity	0.05	0.09	0.00	0.02								
Queue Length 95th (m)	1.3	2.3	0.1	0.4								
Control Delay (s)	21.0	18.7	0.1	0.5								
Lane LOS	C	C	A	A								
Approach Delay (s)	21.0	18.7	0.1	0.5								
Approach LOS	C	C										
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			50.7%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Background Volumes - 2025

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	119	29	1	5	34	265	2	30	5	251	46	197
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	129	32	1	5	37	288	2	33	5	273	50	214
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	162	330	40	273	264							
Volume Left (vph)	129	5	2	273	0							
Volume Right (vph)	1	288	5	0	214							
Hadj (s)	0.19	-0.49	-0.04	0.53	-0.53							
Departure Headway (s)	6.1	5.1	6.2	6.5	5.4							
Degree Utilization, x	0.27	0.47	0.07	0.49	0.40							
Capacity (veh/h)	552	664	499	536	643							
Control Delay (s)	11.3	12.6	9.7	14.3	10.7							
Approach Delay (s)	11.3	12.6	9.7	12.5								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay			12.3									
HCM Level of Service			B									
Intersection Capacity Utilization			57.2%			ICU Level of Service			B			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	18.8	25.2	9.3	22.8	23.0
Average Queue (m)	13.4	17.0	5.8	16.1	17.0
95th Queue (m)	20.6	28.1	13.1	23.7	24.1
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				12	11
Queuing Penalty (veh)				28	27

Appendix E

Synchro Reports

Background Horizon Year 2030

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Background Volumes - 2030

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	5	41	28	3	12	38	673	47	6	346	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	5	45	30	3	13	41	732	51	7	376	4
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	1246	1257	378	1278	1233	757	380			783		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1246	1257	378	1278	1233	757	380			783		
tC, single (s)	7.1	6.5	6.4	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.5	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	77	97	93	76	98	97	96			99		
cM capacity (veh/h)	139	164	630	125	169	407	1178			835		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	83	47	824	387								
Volume Left	33	30	41	7								
Volume Right	45	13	51	4								
cSH	244	159	1178	835								
Volume to Capacity	0.34	0.29	0.04	0.01								
Queue Length 95th (m)	10.9	8.8	0.8	0.2								
Control Delay (s)	27.1	36.8	0.9	0.2								
Lane LOS	D	E	A	A								
Approach Delay (s)	27.1	36.8	0.9	0.2								
Approach LOS	D	E										
Intersection Summary												
Average Delay			3.6									
Intersection Capacity Utilization			70.7%		ICU Level of Service				C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 6: Fallis Line & CR10

Background Volumes - 2030

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	220	9	222	45	15	68	167	327	19	22	283	132
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	239	10	241	49	16	74	182	355	21	24	308	143
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1156	1095	308	1210	1228	366	451			376		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1156	1095	308	1210	1228	366	451			376		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	94	67	45	89	89	84			98		
cM capacity (veh/h)	122	175	732	88	146	679	1109			1182		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	490	139	182	376	332	143						
Volume Left	239	49	182	0	24	0						
Volume Right	241	74	0	21	0	143						
cSH	213	180	1109	1700	1182	1700						
Volume to Capacity	2.30	0.77	0.16	0.22	0.02	0.08						
Queue Length 95th (m)	298.9	38.9	4.4	0.0	0.5	0.0						
Control Delay (s)	636.0	72.1	8.9	0.0	0.8	0.0						
Lane LOS	F	F	A		A							
Approach Delay (s)	636.0	72.1	2.9		0.5							
Approach LOS	F	F										
Intersection Summary												
Average Delay			194.8									
Intersection Capacity Utilization			63.8%	ICU Level of Service						B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Background Volumes - 2030

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1	32	12	1	18	19	466	11	22	494	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	1	35	13	1	20	21	507	12	24	537	36
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	1177	1162	555	1192	1174	512	573			518		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1177	1162	555	1192	1174	512	573			518		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	79	99	93	91	99	97	98			98		
cM capacity (veh/h)	156	186	531	147	183	562	917			1048		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	68	34	539	597								
Volume Left	33	13	21	24								
Volume Right	35	20	12	36								
cSH	244	261	917	1048								
Volume to Capacity	0.28	0.13	0.02	0.02								
Queue Length 95th (m)	8.5	3.3	0.5	0.5								
Control Delay (s)	25.4	20.9	0.6	0.6								
Lane LOS	D	C	A	A								
Approach Delay (s)	25.4	20.9	0.6	0.6								
Approach LOS	D	C										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			48.4%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Background Volumes - 2030
AM Peak Hour

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Sign Control		Stop			Stop			Stop			Stop								
Volume (vph)	104	36	1	8	42	237	3	29	8	239	40	198							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	113	39	1	9	46	258	3	32	9	260	43	215							
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2														
Volume Total (vph)	153	312	43	260	259														
Volume Left (vph)	113	9	3	260	0														
Volume Right (vph)	1	258	9	0	215														
Hadj (s)	0.21	-0.42	-0.07	0.55	-0.53														
Departure Headway (s)	6.0	5.1	6.0	6.4	5.3														
Degree Utilization, x	0.26	0.45	0.07	0.46	0.38														
Capacity (veh/h)	556	662	516	540	651														
Control Delay (s)	11.1	12.2	9.5	13.6	10.4														
Approach Delay (s)	11.1	12.2	9.5	12.0															
Approach LOS	B	B	A	B															
Intersection Summary																			
Delay				11.8															
HCM Level of Service				B															
Intersection Capacity Utilization				54.9%	ICU Level of Service	A													
Analysis Period (min)				15															

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	19.3	26.2	9.2	25.8	20.8
Average Queue (m)	14.1	18.3	5.0	17.2	15.7
95th Queue (m)	21.6	28.4	12.4	27.1	24.4
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				13	12
Queuing Penalty (veh)				31	28

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Background Volumes - 2030

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	1	39	31	1	4	36	549	24	10	435	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	42	34	1	4	39	597	26	11	473	13
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	1194	1202	479	1232	1196	610	486			623		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1194	1202	479	1232	1196	610	486			623		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	99	93	75	99	99	96			99		
cM capacity (veh/h)	155	176	586	137	177	495	1077			958		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	48	39	662	497								
Volume Left	4	34	39	11								
Volume Right	42	4	26	13								
cSH	449	150	1077	958								
Volume to Capacity	0.11	0.26	0.04	0.01								
Queue Length 95th (m)	2.7	7.5	0.9	0.3								
Control Delay (s)	14.0	37.3	1.0	0.3								
Lane LOS	B	E	A	A								
Approach Delay (s)	14.0	37.3	1.0	0.3								
Approach LOS	B	E										
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			64.0%	ICU Level of Service					C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

6: Fallis Line & CR10

Background Volumes - 2030

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	193	13	146	46	34	41	201	298	44	64	363	210
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	210	14	159	50	37	45	218	324	48	70	395	228
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1358	1342	395	1405	1547	348	623			372		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1358	1342	395	1405	1547	348	623			372		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	87	76	21	55	94	77			94		
cM capacity (veh/h)	62	110	655	63	83	695	958			1187		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	383	132	218	372	464	228						
Volume Left	210	50	218	0	70	0						
Volume Right	159	45	0	48	0	228						
cSH	102	101	958	1700	1187	1700						
Volume to Capacity	3.74	1.30	0.23	0.22	0.06	0.13						
Queue Length 95th (m)	Err	69.6	6.7	0.0	1.4	0.0						
Control Delay (s)	Err	266.7	9.9	0.0	1.8	0.0						
Lane LOS	F	F	A		A							
Approach Delay (s)	Err	266.7	3.7		1.2							
Approach LOS	F	F										
Intersection Summary												
Average Delay			2150.4									
Intersection Capacity Utilization			69.0%		ICU Level of Service					C		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Background Volumes - 2030

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	1	14	10	1	18	5	512	17	24	521	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	1	15	11	1	20	5	557	18	26	566	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1221	1210	572	1216	1206	566	577			575		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1221	1210	572	1216	1206	566	577			575		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	99	97	93	99	96	99			97		
cM capacity (veh/h)	147	177	520	149	178	524	996			998		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	30	32	580	603								
Volume Left	14	11	5	26								
Volume Right	15	20	18	11								
cSH	231	271	996	998								
Volume to Capacity	0.13	0.12	0.01	0.03								
Queue Length 95th (m)	3.4	3.0	0.1	0.6								
Control Delay (s)	22.9	20.1	0.2	0.7								
Lane LOS	C	C	A	A								
Approach Delay (s)	22.9	20.1	0.2	0.7								
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			53.4%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Background Volumes - 2030
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	220	82	4	10	61	273	3	66	18	388	17	182
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	239	89	4	11	66	297	3	72	20	422	18	198
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	333	374	95	422	216							
Volume Left (vph)	239	11	3	422	0							
Volume Right (vph)	4	297	20	0	198							
Hadj (s)	0.17	-0.44	-0.08	0.53	-0.61							
Departure Headway (s)	7.2	6.5	8.0	7.7	6.5							
Degree Utilization, x	0.66	0.68	0.21	0.90	0.39							
Capacity (veh/h)	478	522	394	462	543							
Control Delay (s)	23.0	22.1	13.1	47.2	12.4							
Approach Delay (s)	23.0	22.1	13.1	35.4								
Approach LOS	C	C	B	E								
Intersection Summary												
Delay			27.6									
HCM Level of Service			D									
Intersection Capacity Utilization			75.5%	ICU Level of Service					D			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	23.8	23.7	14.3	34.2	37.4
Average Queue (m)	19.5	20.1	10.9	25.7	19.2
95th Queue (m)	27.5	29.4	16.6	40.2	42.9
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				36	8
Queuing Penalty (veh)				71	32

HCM Unsignalized Intersection Capacity Analysis

3: Larmer Line & CR10

Background Volumes - 2030

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	4	41	35	8	5	42	636	33	5	502	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	4	45	38	9	5	46	691	36	5	546	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1376	1384	554	1412	1374	709	563			727		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1376	1384	554	1412	1374	709	563			727		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	97	92	62	94	99	95			99		
cM capacity (veh/h)	111	136	532	99	138	434	1008			876		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	68	52	773	568								
Volume Left	20	38	46	5								
Volume Right	45	5	36	17								
cSH	234	114	1008	876								
Volume to Capacity	0.29	0.46	0.05	0.01								
Queue Length 95th (m)	8.9	15.3	1.1	0.1								
Control Delay (s)	26.6	61.1	1.2	0.2								
Lane LOS	D	F	A	A								
Approach Delay (s)	26.6	61.1	1.2	0.2								
Approach LOS	D	F										
Intersection Summary												
Average Delay			4.1									
Intersection Capacity Utilization			75.4%	ICU Level of Service						D		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

6: Fallis Line & CR10

Background Volumes - 2030

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	201	14	218	51	36	59	202	321	37	60	338	214
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	218	15	237	55	39	64	220	349	40	65	367	233
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)			4									
Median type							None				None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1370	1326	367	1432	1539	369	600			389		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1370	1326	367	1432	1539	369	600			389		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	87	65	0	54	91	78			94		
cM capacity (veh/h)	58	114	678	52	85	677	977			1169		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	471	159	220	389	433	233						
Volume Left	218	55	220	0	65	0						
Volume Right	237	64	0	40	0	233						
cSH	111	98	977	1700	1169	1700						
Volume to Capacity	4.24	1.62	0.22	0.23	0.06	0.14						
Queue Length 95th (m)	Err	94.2	6.5	0.0	1.3	0.0						
Control Delay (s)	Err	396.9	9.7	0.0	1.7	0.0						
Lane LOS	F	F	A		A							
Approach Delay (s)	9999.0	396.9	3.5		1.1							
Approach LOS	F	F										
Intersection Summary												
Average Delay			2507.2									
Intersection Capacity Utilization			68.8%		ICU Level of Service		C					
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Background Volumes - 2030

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	1	7	8	1	18	2	537	17	18	580	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	1	8	9	1	20	2	584	18	20	630	9
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	1291	1280	635	1279	1276	593	639			602		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1291	1280	635	1279	1276	593	639			602		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	98	94	99	96	100			98		
cM capacity (veh/h)	132	162	479	137	163	506	945			975		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	15	29	604	659								
Volume Left	7	9	2	20								
Volume Right	8	20	18	9								
cSH	211	270	945	975								
Volume to Capacity	0.07	0.11	0.00	0.02								
Queue Length 95th (m)	1.8	2.7	0.1	0.5								
Control Delay (s)	23.4	19.9	0.1	0.5								
Lane LOS	C	C	A	A								
Approach Delay (s)	23.4	19.9	0.1	0.5								
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			54.2%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Background Volumes - 2030
SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	125	32	1	6	37	279	2	32	6	267	49	210
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	136	35	1	7	40	303	2	35	7	290	53	228
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	172	350	43	290	282							
Volume Left (vph)	136	7	2	290	0							
Volume Right (vph)	1	303	7	0	228							
Hadj (s)	0.19	-0.48	-0.05	0.53	-0.53							
Departure Headway (s)	6.2	5.3	6.4	6.6	5.5							
Degree Utilization, x	0.30	0.51	0.08	0.53	0.43							
Capacity (veh/h)	539	650	482	527	631							
Control Delay (s)	11.8	13.7	9.9	15.6	11.4							
Approach Delay (s)	11.8	13.7	9.9	13.5								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay			13.2									
HCM Level of Service			B									
Intersection Capacity Utilization			59.6%			ICU Level of Service			B			
Analysis Period (min)			15									

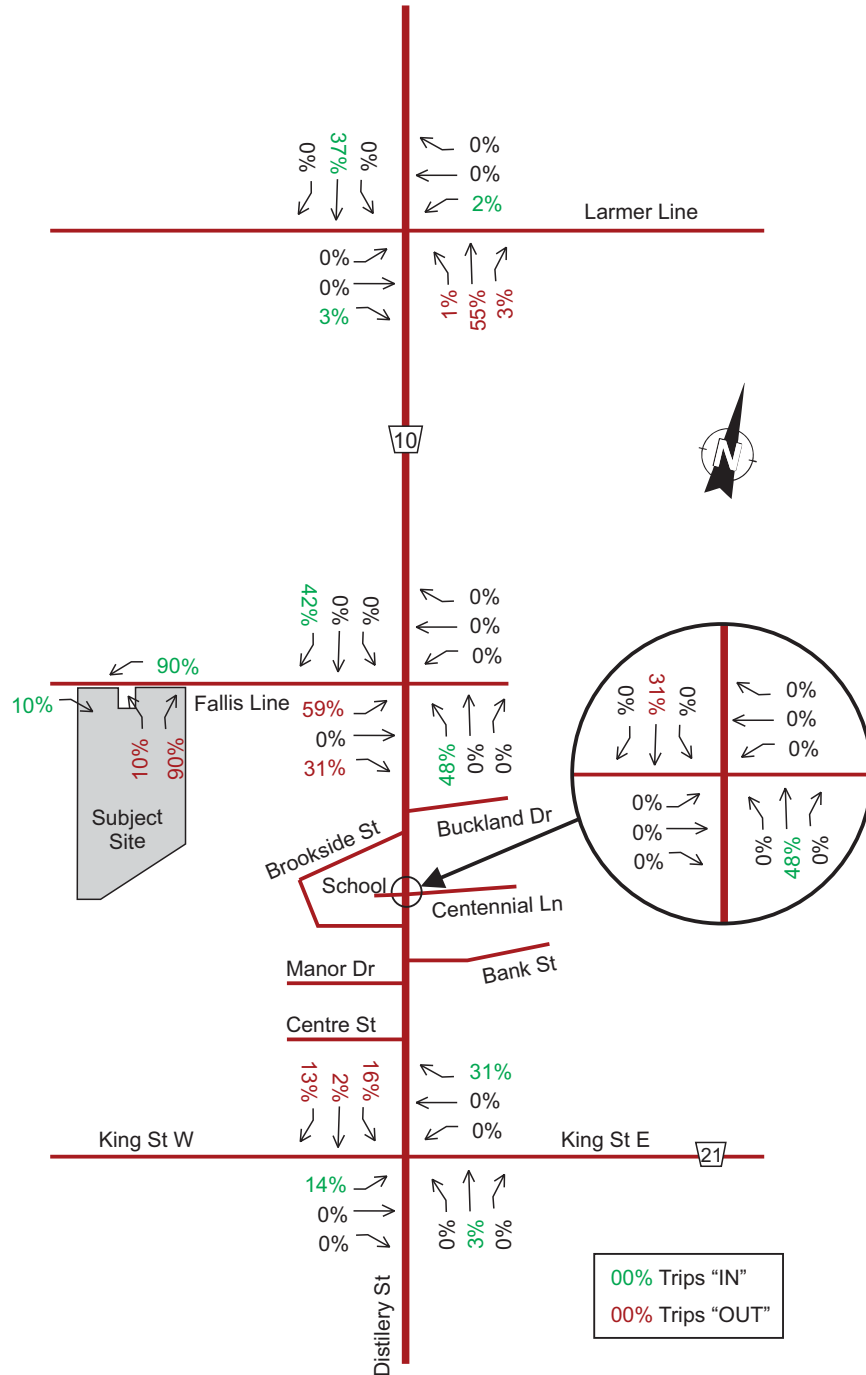
Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	19.5	29.0	9.2	22.2	23.3
Average Queue (m)	13.5	19.9	5.4	16.5	17.0
95th Queue (m)	21.9	32.1	12.7	24.9	24.0
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				12	14
Queuing Penalty (veh)				32	37

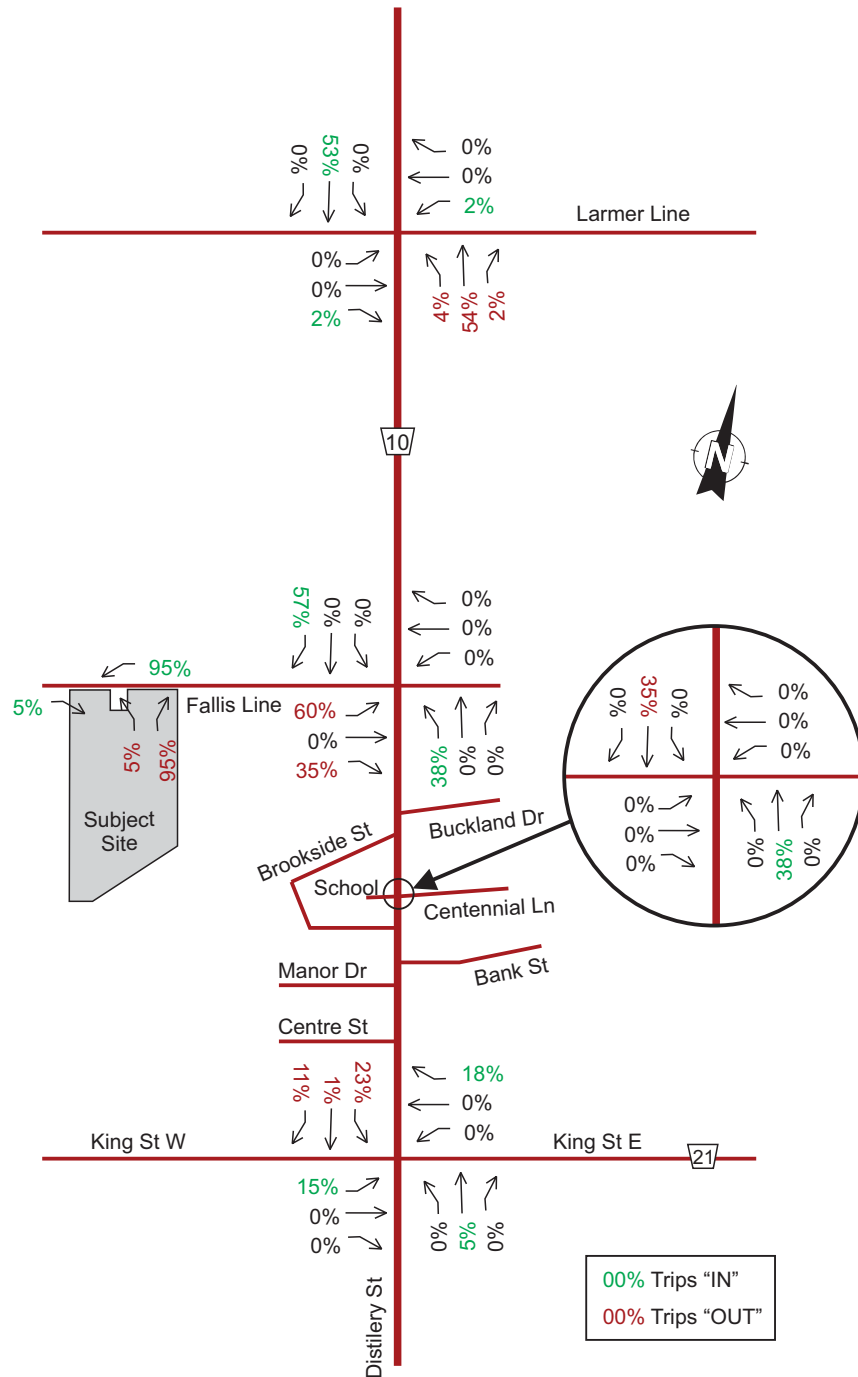
Appendix F

Trip Distribution

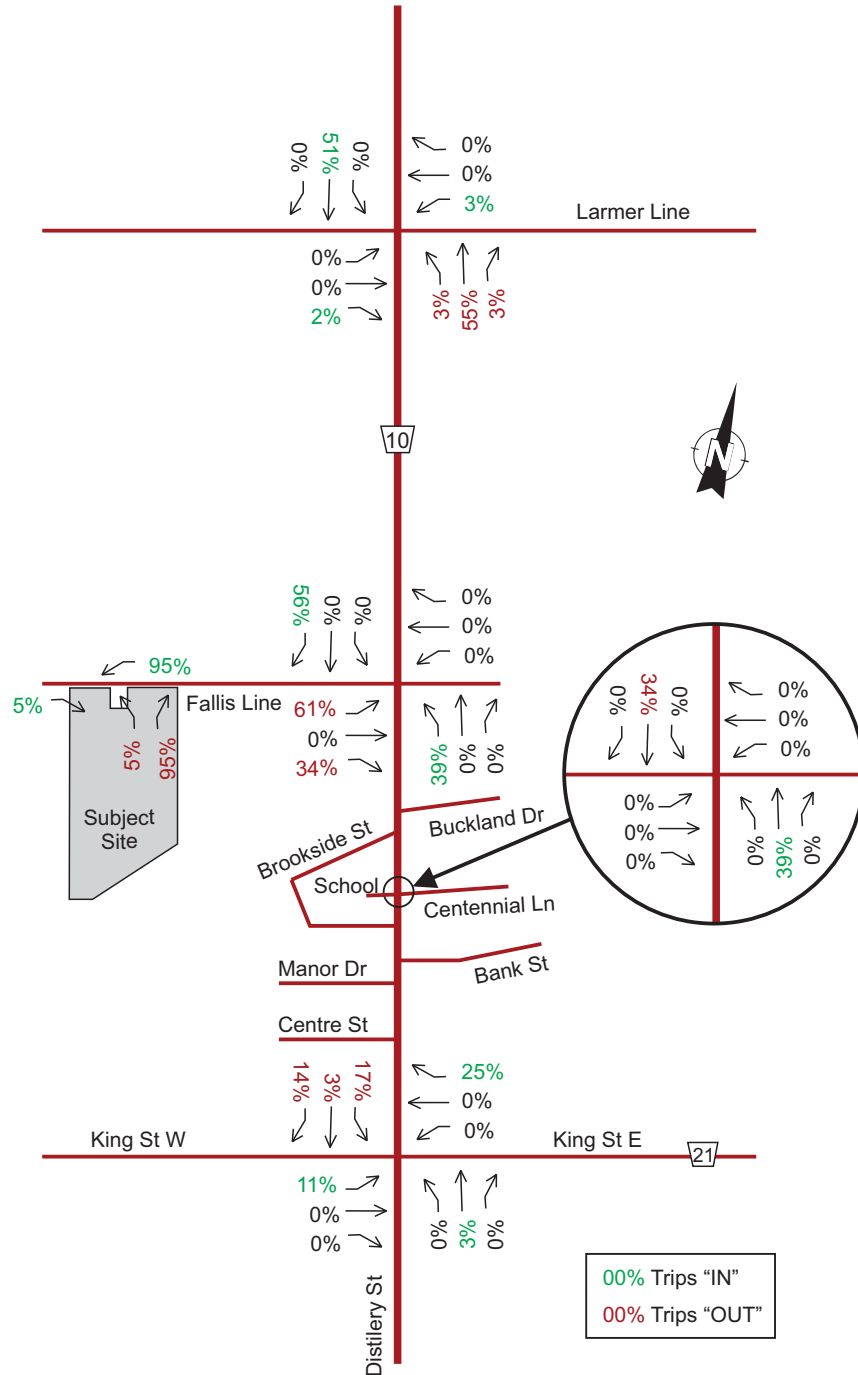
AM Distribution of Trips



PM Distribution of Trips



SAT Distribution of Trips



Appendix G

Synchro Reports - Total Horizon Year 2025

HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2025

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	9	268	28	9	43	190	301	14	12	263	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		30.0	60.0		15.0	30.0		15.0	75.0		75.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	60.0		30.0	60.0		45.0	100.0		45.0	70.0		70.0
Satd. Flow (prot)	1789	1610	0	1789	1650	0	1789	1830	1601	1789	1847	1601
Flt Permitted	0.720			0.417			0.470			0.563		
Satd. Flow (perm)	1356	1610	0	785	1650	0	885	1830	1601	1060	1847	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		291			47				10			166
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		694.5			153.4			101.1			1058.2	
Travel Time (s)		41.7			9.2			6.1			63.5	
Lane Group Flow (vph)	336	301	0	30	57	0	207	327	15	13	286	166
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	20.7	20.7		20.7	20.7		10.0	20.7	20.7	10.0	20.7	20.7
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	19.0	44.0	44.0	10.0	35.0	35.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	21.1%	48.9%	48.9%	11.1%	38.9%	38.9%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	1.0		1.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
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)	4.7	4.7	4.0	4.7	4.7	4.0	3.0	4.7	4.7	3.0	4.7	4.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effect Green (s)	24.0	24.0		24.0	24.0		46.4	42.9	42.9	39.9	31.1	31.1
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.59	0.55	0.55	0.51	0.40	0.40
v/c Ratio	0.81	0.43		0.12	0.11		0.32	0.33	0.02	0.02	0.39	0.23
Control Delay	41.1	5.2		21.0	8.3		10.0	13.0	8.2	9.0	21.0	4.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	5.2		21.0	8.3		10.0	13.0	8.2	9.0	21.0	4.3
LOS	D	A		C	A		A	B	A	A	C	A
Approach Delay		24.1			12.6			11.7			14.7	
Approach LOS		C			B			B			B	
Queue Length 50th (m)	44.7	1.0		3.1	1.0		13.2	24.0	0.3	0.8	30.1	0.0
Queue Length 95th (m)	#81.8	17.5		9.6	8.7		27.3	58.7	3.9	3.3	58.8	12.2
Internal Link Dist (m)		670.5			129.4			77.1			1034.2	
Turn Bay Length (m)	60.0			60.0			30.0		15.0	75.0		75.0
Base Capacity (vph)	551	827		319	698		712	1004	883	607	735	737
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	0.61	0.36		0.09	0.08		0.29	0.33	0.02	0.02	0.39	0.23

HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2025

AM Peak Hour

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 78.2

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 17.1

Intersection LOS: B

Intersection Capacity Utilization 59.3%

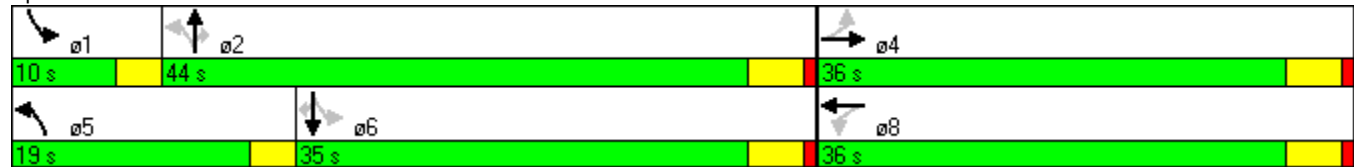
ICU Level of Service B

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 6: Fallis Line & CR10



HCM Signalized Intersection Capacity Analysis

3: Larmer Line & CR10

Total Volumes - 2025

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	5	41	27	2	11	36	709	45	6	336	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	60.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5		2.5	2.5		2.5	100.0		2.5	100.0		2.5
Satd. Flow (prot)	0	1551	0	0	1752	0	1789	1800	0	1789	1840	0
Flt Permitted		0.881			0.778		0.542			0.311		
Satd. Flow (perm)	0	1392	0	0	1410	0	1021	1800	0	586	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			12			8			1	
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		276.5			293.3			1058.2			361.6	
Travel Time (s)		19.9			21.1			47.6			16.3	
Lane Group Flow (vph)	0	79	0	0	43	0	39	820	0	7	369	0
Turn Type	Perm			Perm			Perm			Perm		
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)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	20.3	20.3		20.3	20.3		20.7	20.7		20.7	20.7	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	65.0	65.0	0.0	65.0	65.0	0.0
Total Split (%)	27.8%	27.8%	0.0%	27.8%	27.8%	0.0%	72.2%	72.2%	0.0%	72.2%	72.2%	0.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	4.3	4.0	4.3	4.3	4.0	4.7	4.7	4.0	4.7	4.7	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effect Green (s)		8.5			8.5		69.6	69.6		69.6	69.6	
Actuated g/C Ratio		0.10			0.10		0.83	0.83		0.83	0.83	
v/c Ratio		0.44			0.28		0.05	0.55		0.01	0.24	
Control Delay		25.6			30.9		2.4	5.0		2.5	2.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		25.6			30.9		2.4	5.0		2.5	2.7	
LOS		C			C		A	A		A	A	
Approach Delay		25.6			30.9			4.8			2.7	
Approach LOS		C			C			A			A	
Queue Length 50th (m)		5.3			4.8		0.9	33.1		0.2	10.2	
Queue Length 95th (m)		16.6			13.1		3.3	71.2		1.0	22.1	
Internal Link Dist (m)		252.5			269.3			1034.2			337.6	
Turn Bay Length (m)							60.0			60.0		
Base Capacity (vph)		379			359		849	1498		487	1530	
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		0.21			0.12		0.05	0.55		0.01	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 83.7

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 6.3

Intersection LOS: A

Intersection Capacity Utilization 53.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Larmer Line & CR10



HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Total Volumes - 2025

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	1	29	11	1	16	17	461	10	19	508	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1	32	12	1	17	18	501	11	21	552	33
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	1171	1159	568	1185	1170	507	585			512		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1171	1159	568	1185	1170	507	585			512		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	81	99	94	92	99	97	98			98		
cM capacity (veh/h)	159	188	522	150	185	566	907			1053		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	62	30	530	605								
Volume Left	29	12	18	21								
Volume Right	32	17	11	33								
cSH	247	262	907	1053								
Volume to Capacity	0.25	0.12	0.02	0.02								
Queue Length 95th (m)	7.3	3.0	0.5	0.5								
Control Delay (s)	24.4	20.5	0.6	0.5								
Lane LOS	C	C	A	A								
Approach Delay (s)	24.4	20.5	0.6	0.5								
Approach LOS	C	C										
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			47.6%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Total Volumes - 2025
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	116	32	1	7	38	265	2	28	7	247	40	205
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	126	35	1	8	41	288	2	30	8	268	43	223
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	162	337	40	268	266							
Volume Left (vph)	126	8	2	268	0							
Volume Right (vph)	1	288	8	0	223							
Hadj (s)	0.23	-0.44	-0.07	0.55	-0.54							
Departure Headway (s)	6.1	5.2	6.2	6.5	5.4							
Degree Utilization, x	0.28	0.49	0.07	0.49	0.40							
Capacity (veh/h)	547	659	498	532	640							
Control Delay (s)	11.4	13.0	9.7	14.3	10.8							
Approach Delay (s)	11.4	13.0	9.7	12.6								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay			12.4									
HCM Level of Service			B									
Intersection Capacity Utilization			57.3%	ICU Level of Service					B			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	18.6	22.7	10.4	25.4	18.9
Average Queue (m)	12.7	17.6	8.0	17.8	15.5
95th Queue (m)	19.9	24.4	13.5	27.2	21.0
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				13	11
Queuing Penalty (veh)				31	28

HCM Signalized Intersection Capacity Analysis

3: Larmer Line & CR10

Total Volumes - 2025

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1	40	33	1	4	37	545	24	9	571	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	60.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5		2.5	2.5		2.5	100.0		2.5	100.0		2.5
Satd. Flow (prot)	0	1649	0	0	1781	0	1789	1872	0	1789	1878	0
Flt Permitted		0.967			0.933		0.406			0.414		
Satd. Flow (perm)	0	1601	0	0	1734	0	765	1872	0	780	1878	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			4			5			2	
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		276.5			293.3			1058.2			256.4	
Travel Time (s)		19.9			21.1			47.6			11.5	
Lane Group Flow (vph)	0	48	0	0	41	0	40	618	0	10	633	0
Turn Type	Perm			Perm			Perm			Perm		
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)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	20.7	20.7		20.7	20.7		20.7	20.7		20.7	20.7	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	62.0	62.0	0.0	62.0	62.0	0.0
Total Split (%)	31.1%	31.1%	0.0%	31.1%	31.1%	0.0%	68.9%	68.9%	0.0%	68.9%	68.9%	0.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	4.3	4.0	4.3	4.3	4.0	4.7	4.7	4.0	4.7	4.7	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effect Green (s)		8.1			8.1		70.1	70.1		70.1	70.1	
Actuated g/C Ratio		0.10			0.10		0.87	0.87		0.87	0.87	
v/c Ratio		0.24			0.23		0.06	0.38		0.01	0.39	
Control Delay		15.5			33.8		2.2	2.9		2.2	3.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		15.5			33.8		2.2	2.9		2.2	3.0	
LOS		B			C		A	A		A	A	
Approach Delay		15.5			33.8			2.9			3.0	
Approach LOS		B			C			A			A	
Queue Length 50th (m)		0.8			6.0		1.0	20.5		0.2	21.4	
Queue Length 95th (m)		9.5			13.5		3.2	38.7		1.2	40.4	
Internal Link Dist (m)		252.5			269.3			1034.2			232.4	
Turn Bay Length (m)							60.0			60.0		
Base Capacity (vph)		503			515		666	1630		679	1635	
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		0.10			0.08		0.06	0.38		0.01	0.39	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 80.5

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 4.3

Intersection LOS: A

Intersection Capacity Utilization 47.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Larmer Line & CR10



HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2025

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	252	13	178	34	25	30	261	274	25	33	334	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		30.0	60.0		15.0	30.0		15.0	75.0		75.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	60.0		30.0	60.0		45.0	100.0		45.0	70.0		70.0
Satd. Flow (prot)	1789	1620	0	1789	1727	0	1789	1883	1601	1789	1883	1601
Flt Permitted	0.718			0.544			0.404			0.578		
Satd. Flow (perm)	1352	1620	0	1025	1727	0	761	1883	1601	1089	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		193			33				19			315
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		694.5			159.4			110.3			1058.2	
Travel Time (s)		41.7			9.6			6.6			63.5	
Lane Group Flow (vph)	274	207	0	37	60	0	284	298	27	36	363	315
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	20.7	20.7		20.7	20.7		10.0	20.7	20.7	10.0	20.7	20.7
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	19.0	44.0	44.0	10.0	35.0	35.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	21.1%	48.9%	48.9%	11.1%	38.9%	38.9%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	1.0		1.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
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)	4.7	4.7	4.0	4.7	4.7	4.0	3.0	4.7	4.7	3.0	4.7	4.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effect Green (s)	20.7	20.7		20.7	20.7		48.4	41.3	41.3	41.2	32.3	32.3
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.63	0.54	0.54	0.54	0.42	0.42
v/c Ratio	0.75	0.36		0.13	0.12		0.45	0.30	0.03	0.06	0.46	0.37
Control Delay	39.7	6.1		22.3	12.3		10.0	13.7	7.8	8.1	20.9	4.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	6.1		22.3	12.3		10.0	13.7	7.8	8.1	20.9	4.0
LOS	D	A		C	B		B	B	A	A	C	A
Approach Delay		25.2			16.1			11.7			12.8	
Approach LOS		C			B			B			B	
Queue Length 50th (m)	38.3	1.6		4.3	3.1		16.2	25.7	0.6	1.8	36.4	0.0
Queue Length 95th (m)	63.5	15.5		11.0	11.1		37.4	52.6	5.3	6.5	78.2	16.8
Internal Link Dist (m)		670.5			135.4			86.3			1034.2	
Turn Bay Length (m)	60.0			60.0			30.0		15.0	75.0		75.0
Base Capacity (vph)	560	784		424	734		696	1009	867	647	790	855
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	0.49	0.26		0.09	0.08		0.41	0.30	0.03	0.06	0.46	0.37

HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2025

PM Peak Hour

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 77

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 15.8

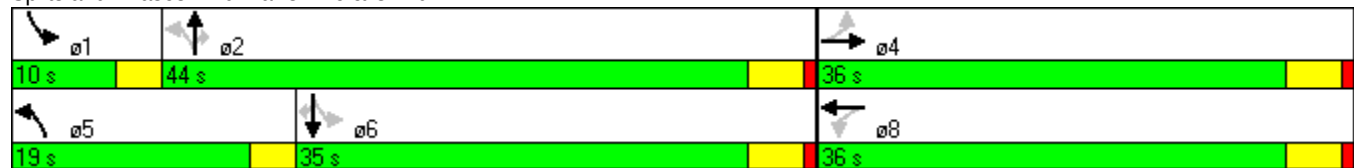
Intersection LOS: B

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Fallis Line & CR10



HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Total Volumes - 2025

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1	13	9	1	16	4	533	15	22	516	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	1	14	10	1	17	4	579	16	24	561	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	1228	1218	566	1224	1215	588	571			596		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1228	1218	566	1224	1215	588	571			596		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	99	97	93	99	97	100			98		
cM capacity (veh/h)	146	175	524	148	176	509	1002			981		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	28	28	600	595								
Volume Left	13	10	4	24								
Volume Right	14	17	16	10								
cSH	230	265	1002	981								
Volume to Capacity	0.12	0.11	0.00	0.02								
Queue Length 95th (m)	3.1	2.7	0.1	0.6								
Control Delay (s)	22.8	20.2	0.1	0.7								
Lane LOS	C	C	A	A								
Approach Delay (s)	22.8	20.2	0.1	0.7								
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			52.5%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Total Volumes - 2025
PM Peak Hour

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Sign Control		Stop			Stop			Stop			Stop								
Volume (vph)	227	75	3	9	55	280	2	69	16	380	17	179							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	247	82	3	10	60	304	2	75	17	413	18	195							
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2														
Volume Total (vph)	332	374	95	413	213														
Volume Left (vph)	247	10	2	413	0														
Volume Right (vph)	3	304	17	0	195														
Hadj (s)	0.18	-0.45	-0.07	0.53	-0.61														
Departure Headway (s)	7.1	6.4	7.9	7.6	6.5														
Degree Utilization, x	0.65	0.67	0.21	0.88	0.38														
Capacity (veh/h)	480	525	394	462	543														
Control Delay (s)	22.5	21.4	12.9	43.2	12.2														
Approach Delay (s)	22.5	21.4	12.9	32.7															
Approach LOS	C	C	B	D															
Intersection Summary																			
Delay				26.1															
HCM Level of Service				D															
Intersection Capacity Utilization				75.1%	ICU Level of Service	D													
Analysis Period (min)				15															

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	26.1	32.7	17.6	33.1	37.1
Average Queue (m)	18.2	20.9	12.1	20.7	20.5
95th Queue (m)	29.1	37.3	18.6	35.0	37.5
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				24	10
Queuing Penalty (veh)				48	37

HCM Signalized Intersection Capacity Analysis

3: Larmer Line & CR10

Total Volumes - 2025

SAT Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	16	4	41	36	7	5	43	668	35	5	522	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	60.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5		2.5	2.5		2.5	100.0		2.5	100.0		2.5
Satd. Flow (prot)	0	1688	0	0	1792	0	1789	1870	0	1789	1876	0
Flt Permitted		0.922			0.822		0.425			0.335		
Satd. Flow (perm)	0	1577	0	0	1528	0	800	1870	0	631	1876	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			5			6			3	
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		276.5			293.3			1058.2			291.7	
Travel Time (s)		19.9			21.1			47.6			13.1	
Lane Group Flow (vph)	0	66	0	0	52	0	47	764	0	5	582	0
Turn Type	Perm			Perm			Perm			Perm		
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)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	20.3	20.3		20.3	20.3		20.7	20.7		20.7	20.7	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	62.0	62.0	0.0	62.0	62.0	0.0
Total Split (%)	31.1%	31.1%	0.0%	31.1%	31.1%	0.0%	68.9%	68.9%	0.0%	68.9%	68.9%	0.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	4.3	4.0	4.3	4.3	4.0	4.7	4.7	4.0	4.7	4.7	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effect Green (s)		8.4			8.4		66.8	66.8		66.8	66.8	
Actuated g/C Ratio		0.10			0.10		0.83	0.83		0.83	0.83	
v/c Ratio		0.32			0.32		0.07	0.49		0.01	0.38	
Control Delay		19.3			35.3		2.6	4.4		2.4	3.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		19.3			35.3		2.6	4.4		2.4	3.4	
LOS		B			D		A	A		A	A	
Approach Delay		19.3			35.3			4.3			3.4	
Approach LOS		B			D			A			A	
Queue Length 50th (m)		3.1			7.1		1.2	29.7		0.1	19.5	
Queue Length 95th (m)		13.0			15.9		3.8	57.7		0.8	37.6	
Internal Link Dist (m)		252.5			269.3			1034.2			267.7	
Turn Bay Length (m)							60.0			60.0		
Base Capacity (vph)		495			453		661	1545		521	1550	
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		0.13			0.11		0.07	0.49		0.01	0.38	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 80.9

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 5.7

Intersection LOS: A

Intersection Capacity Utilization 51.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Larmer Line & CR10



HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2025

SAT Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	276	14	258	36	27	42	253	299	27	28	316	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		30.0	60.0		15.0	30.0		15.0	75.0		75.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	60.0		30.0	60.0		45.0	100.0		45.0	70.0		70.0
Satd. Flow (prot)	1789	1616	0	1789	1710	0	1789	1883	1601	1789	1883	1601
Flt Permitted	0.708			0.411			0.412			0.564		
Satd. Flow (perm)	1333	1616	0	774	1710	0	776	1883	1601	1062	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		280			46				19			318
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		694.5			150.4			99.8			1058.2	
Travel Time (s)		41.7			9.0			6.0			63.5	
Lane Group Flow (vph)	300	295	0	39	75	0	275	325	29	30	343	318
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	20.7	20.7		20.7	20.7		10.0	20.7	20.7	10.0	20.7	20.7
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	19.0	44.0	44.0	10.0	35.0	35.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	21.1%	48.9%	48.9%	11.1%	38.9%	38.9%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	1.0		1.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
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)	4.7	4.7	4.0	4.7	4.7	4.0	3.0	4.7	4.7	3.0	4.7	4.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effect Green (s)	22.7	22.7		22.7	22.7		47.9	42.7	42.7	40.1	31.2	31.2
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.61	0.54	0.54	0.51	0.40	0.40
v/c Ratio	0.78	0.44		0.17	0.14		0.44	0.32	0.03	0.05	0.46	0.38
Control Delay	40.4	5.7		22.8	10.8		10.6	13.8	8.0	8.8	22.3	4.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	5.7		22.8	10.8		10.6	13.8	8.0	8.8	22.3	4.2
LOS	D	A		C	B		B	B	A	A	C	A
Approach Delay		23.2			14.9			12.1			13.4	
Approach LOS		C			B			B			B	
Queue Length 50th (m)	40.8	1.6		4.3	3.1		17.8	23.0	0.6	1.7	38.7	0.0
Queue Length 95th (m)	71.2	18.0		11.9	12.2		36.3	57.8	5.7	5.7	73.5	16.8
Internal Link Dist (m)		670.5			126.4			75.8			1034.2	
Turn Bay Length (m)	60.0			60.0			30.0		15.0	75.0		75.0
Base Capacity (vph)	542	823		315	723		685	1024	880	609	750	829
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	0.55	0.36		0.12	0.10		0.40	0.32	0.03	0.05	0.46	0.38

HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2025

SAT Peak Hour

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 78.4

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 16.0

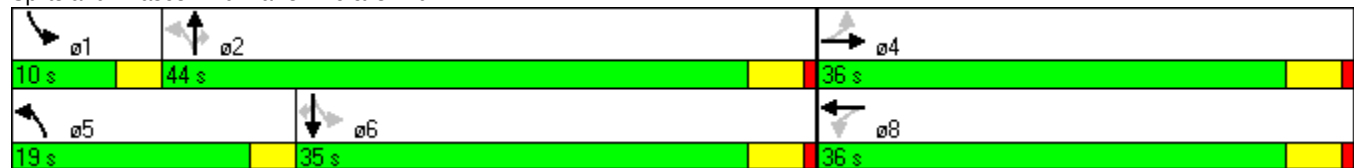
Intersection LOS: B

Intersection Capacity Utilization 68.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Fallis Line & CR10



HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Total Volumes - 2025

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	1	6	8	1	16	2	557	15	16	585	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	7	9	1	17	2	605	16	17	636	9
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	1311	1301	640	1300	1297	614	645			622		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1311	1301	640	1300	1297	614	645			622		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	99	99	93	99	96	100			98		
cM capacity (veh/h)	128	158	475	133	159	492	941			959		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	27	624	662								
Volume Left	5	9	2	17								
Volume Right	7	17	16	9								
cSH	207	253	941	959								
Volume to Capacity	0.06	0.11	0.00	0.02								
Queue Length 95th (m)	1.5	2.7	0.1	0.4								
Control Delay (s)	23.5	20.9	0.1	0.5								
Lane LOS	C	C	A	A								
Approach Delay (s)	23.5	20.9	0.1	0.5								
Approach LOS	C	C										
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			53.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Total Volumes - 2025
SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	134	29	1	5	34	299	2	34	5	272	50	214
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	146	32	1	5	37	325	2	37	5	296	54	233
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	178	367	45	296	287							
Volume Left (vph)	146	5	2	296	0							
Volume Right (vph)	1	325	5	0	233							
Hadj (s)	0.19	-0.49	-0.03	0.53	-0.53							
Departure Headway (s)	6.3	5.3	6.5	6.7	5.6							
Degree Utilization, x	0.31	0.54	0.08	0.55	0.45							
Capacity (veh/h)	531	646	470	520	621							
Control Delay (s)	12.1	14.4	10.1	16.3	11.8							
Approach Delay (s)	12.1	14.4	10.1	14.1								
Approach LOS	B	B	B	B								
Intersection Summary												
Delay			13.7									
HCM Level of Service			B									
Intersection Capacity Utilization			61.3%			ICU Level of Service			B			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	16.4	24.2	9.2	22.9	19.2
Average Queue (m)	11.5	18.2	6.9	18.2	16.0
95th Queue (m)	16.8	24.9	13.3	24.8	22.2
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				15	12
Queuing Penalty (veh)				39	33

Appendix H

Synchro Reports - Total Horizon Year 2030

HCM Signalized Intersection Capacity Analysis

3: Larmer Line & CR10

Total Volumes - 2030

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	5	44	31	3	12	41	840	56	6	383	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	60.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5		2.5	2.5		2.5	100.0		2.5	100.0		2.5
Satd. Flow (prot)	0	1556	0	0	1758	0	1789	1800	0	1789	1843	0
Flt Permitted		0.892			0.754		0.515			0.243		
Satd. Flow (perm)	0	1415	0	0	1370	0	970	1800	0	458	1843	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			13			8			1	
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		276.5			293.3			1058.2			361.6	
Travel Time (s)		19.9			21.1			47.6			16.3	
Lane Group Flow (vph)	0	86	0	0	50	0	45	974	0	7	420	0
Turn Type	Perm			Perm			Perm			Perm		
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)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	20.3	20.3		20.3	20.3		20.7	20.7		20.7	20.7	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	65.0	65.0	0.0	65.0	65.0	0.0
Total Split (%)	27.8%	27.8%	0.0%	27.8%	27.8%	0.0%	72.2%	72.2%	0.0%	72.2%	72.2%	0.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	4.3	4.0	4.3	4.3	4.0	4.7	4.7	4.0	4.7	4.7	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effect Green (s)		8.7			8.7		68.9	68.9		68.9	68.9	
Actuated g/C Ratio		0.10			0.10		0.83	0.83		0.83	0.83	
v/c Ratio		0.45			0.32		0.06	0.65		0.02	0.28	
Control Delay		25.5			32.1		2.5	6.8		2.7	3.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		25.5			32.1		2.5	6.8		2.7	3.0	
LOS		C			C		A	A		A	A	
Approach Delay		25.5			32.1			6.6			2.9	
Approach LOS		C			C			A			A	
Queue Length 50th (m)		5.8			5.6		1.1	47.5		0.2	12.3	
Queue Length 95th (m)		17.7			14.6		3.8	108.0		1.1	26.6	
Internal Link Dist (m)		252.5			269.3			1034.2			337.6	
Turn Bay Length (m)							60.0			60.0		
Base Capacity (vph)		389			351		803	1491		379	1525	
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		0.22			0.14		0.06	0.65		0.02	0.28	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 83.3

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 7.4

Intersection LOS: A

Intersection Capacity Utilization 60.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Larmer Line & CR10



HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2030

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	399	9	315	45	15	68	215	327	19	22	283	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		30.0	60.0		15.0	150.0		15.0	75.0		75.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	60.0		30.0	60.0		45.0	100.0		45.0	70.0		70.0
Satd. Flow (prot)	1789	1608	0	1789	1652	0	1789	1830	1601	1789	1847	1601
Flt Permitted	0.699			0.401			0.401			0.549		
Satd. Flow (perm)	1317	1608	0	755	1652	0	755	1830	1601	1034	1847	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		342			74				12			192
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		694.5			158.4			95.1			1058.2	
Travel Time (s)		41.7			9.5			5.7			63.5	
Lane Group Flow (vph)	434	352	0	49	90	0	234	355	21	24	308	192
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	20.7	20.7		20.7	20.7		10.0	20.7	20.7	10.0	20.7	20.7
Total Split (s)	40.0	40.0	0.0	40.0	40.0	0.0	19.0	40.0	40.0	10.0	31.0	31.0
Total Split (%)	44.4%	44.4%	0.0%	44.4%	44.4%	0.0%	21.1%	44.4%	44.4%	11.1%	34.4%	34.4%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	1.0		1.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
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)	4.7	4.7	4.0	4.7	4.7	4.0	3.0	4.7	4.7	3.0	4.7	4.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effect Green (s)	30.6	30.6		30.6	30.6		43.7	38.4	38.4	35.9	27.1	27.1
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.53	0.47	0.47	0.44	0.33	0.33
v/c Ratio	0.89	0.43		0.17	0.14		0.42	0.42	0.03	0.05	0.50	0.29
Control Delay	46.0	4.3		19.5	6.6		13.9	18.8	10.8	11.4	27.7	5.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	4.3		19.5	6.6		13.9	18.8	10.8	11.4	27.7	5.1
LOS	D	A		B	A		B	B	B	B	C	A
Approach Delay		27.3			11.2			16.6			18.7	
Approach LOS		C			B			B			B	
Queue Length 50th (m)	62.3	1.0		5.0	1.6		21.0	36.0	0.8	1.9	42.6	0.0
Queue Length 95th (m)	#119.1	17.0		13.3	10.5		34.5	70.0	5.3	5.5	70.8	14.4
Internal Link Dist (m)		670.5			134.4			71.1			1034.2	
Turn Bay Length (m)	60.0			60.0			150.0		15.0	75.0		75.0
Base Capacity (vph)	574	894		329	762		607	855	754	518	610	657
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	0.76	0.39		0.15	0.12		0.39	0.42	0.03	0.05	0.50	0.29

HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2030

AM Peak Hour

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 82.1

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 20.9

Intersection LOS: C

Intersection Capacity Utilization 69.8%

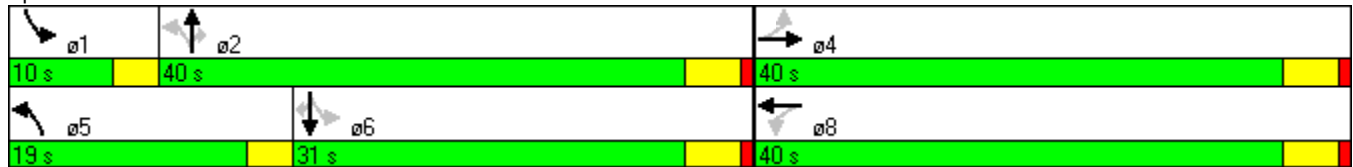
ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 6: Fallis Line & CR10



HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Total Volumes - 2030

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1	32	12	1	18	19	514	11	22	587	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	1	35	13	1	20	21	559	12	24	638	36
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	1330	1316	656	1345	1328	565	674			571		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1330	1316	656	1345	1328	565	674			571		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	73	99	93	89	99	96	98			98		
cM capacity (veh/h)	122	150	465	114	148	525	838			1002		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	68	34	591	698								
Volume Left	33	13	21	24								
Volume Right	35	20	12	36								
cSH	195	212	838	1002								
Volume to Capacity	0.35	0.16	0.02	0.02								
Queue Length 95th (m)	11.2	4.2	0.6	0.6								
Control Delay (s)	33.0	25.2	0.7	0.6								
Lane LOS	D	D	A	A								
Approach Delay (s)	33.0	25.2	0.7	0.6								
Approach LOS	D	D										
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			53.7%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Total Volumes - 2030
AM Peak Hour

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Sign Control		Stop			Stop			Stop			Stop								
Volume (vph)	118	36	1	8	42	268	3	32	8	287	46	237							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	128	39	1	9	46	291	3	35	9	312	50	258							
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2														
Volume Total (vph)	168	346	47	312	308														
Volume Left (vph)	128	9	3	312	0														
Volume Right (vph)	1	291	9	0	258														
Hadj (s)	0.22	-0.43	-0.06	0.55	-0.54														
Departure Headway (s)	6.4	5.4	6.4	6.6	5.5														
Degree Utilization, x	0.30	0.52	0.08	0.57	0.47														
Capacity (veh/h)	528	633	479	526	632														
Control Delay (s)	12.0	14.1	10.0	17.0	12.2														
Approach Delay (s)	12.0	14.1	10.0	14.6															
Approach LOS	B	B	B	B															
Intersection Summary																			
Delay				13.9															
HCM Level of Service				B															
Intersection Capacity Utilization				60.2%	ICU Level of Service	B													
Analysis Period (min)				15															

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	24.9	26.7	9.3	21.2	21.1
Average Queue (m)	14.5	17.2	7.3	17.0	15.0
95th Queue (m)	25.1	28.2	13.3	22.2	22.5
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				15	11
Queuing Penalty (veh)				44	31

HCM Signalized Intersection Capacity Analysis

3: Larmer Line & CR10

Total Volumes - 2030

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1	46	38	1	4	44	655	28	10	609	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	60.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5		2.5	2.5		2.5	100.0		2.5	100.0		2.5
Satd. Flow (prot)	0	1645	0	0	1781	0	1789	1872	0	1789	1878	0
Flt Permitted		0.974			0.899		0.384			0.353		
Satd. Flow (perm)	0	1609	0	0	1673	0	723	1872	0	665	1878	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			4			5			2	
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		276.5			293.3			1058.2			256.4	
Travel Time (s)		19.9			21.1			47.6			11.5	
Lane Group Flow (vph)	0	55	0	0	46	0	48	742	0	11	675	0
Turn Type	Perm			Perm			Perm			Perm		
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)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	20.7	20.7		20.7	20.7		20.7	20.7		20.7	20.7	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	62.0	62.0	0.0	62.0	62.0	0.0
Total Split (%)	31.1%	31.1%	0.0%	31.1%	31.1%	0.0%	68.9%	68.9%	0.0%	68.9%	68.9%	0.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	4.3	4.0	4.3	4.3	4.0	4.7	4.7	4.0	4.7	4.7	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effect Green (s)		8.3			8.3		68.9	68.9		68.9	68.9	
Actuated g/C Ratio		0.10			0.10		0.87	0.87		0.87	0.87	
v/c Ratio		0.26			0.26		0.08	0.46		0.02	0.41	
Control Delay		14.5			34.0		2.5	3.6		2.3	3.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		14.5			34.0		2.5	3.6		2.3	3.3	
LOS		B			C		A	A		A	A	
Approach Delay		14.5			34.0			3.6			3.3	
Approach LOS		B			C			A			A	
Queue Length 50th (m)		0.8			6.7		1.2	28.1		0.3	24.2	
Queue Length 95th (m)		10.0			14.4		3.8	53.7		1.3	46.0	
Internal Link Dist (m)		252.5			269.3			1034.2			232.4	
Turn Bay Length (m)							60.0			60.0		
Base Capacity (vph)		515			502		626	1622		576	1627	
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		0.11			0.09		0.08	0.46		0.02	0.41	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 79.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 4.7

Intersection LOS: A

Intersection Capacity Utilization 53.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Larmer Line & CR10



HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2030

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	13	214	46	34	41	326	298	44	64	363	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		30.0	60.0		15.0	150.0		15.0	75.0		75.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	60.0		30.0	60.0		45.0	100.0		45.0	70.0		70.0
Satd. Flow (prot)	1789	1618	0	1789	1729	0	1789	1883	1601	1789	1883	1601
Flt Permitted	0.704			0.496			0.343			0.564		
Satd. Flow (perm)	1326	1618	0	934	1729	0	646	1883	1601	1062	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		233			45				31			433
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		694.5			154.4			94.1			1058.2	
Travel Time (s)		41.7			9.3			5.6			63.5	
Lane Group Flow (vph)	338	247	0	50	82	0	354	324	48	70	395	433
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	20.7	20.7		20.7	20.7		10.0	20.7	20.7	10.0	20.7	20.7
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	19.0	44.0	44.0	10.0	35.0	35.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	21.1%	48.9%	48.9%	11.1%	38.9%	38.9%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	1.0		1.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
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)	4.7	4.7	4.0	4.7	4.7	4.0	3.0	4.7	4.7	3.0	4.7	4.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effect Green (s)	25.2	25.2		25.2	25.2		49.9	40.5	40.5	40.8	32.0	32.0
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.60	0.49	0.49	0.49	0.39	0.39
v/c Ratio	0.84	0.38		0.18	0.15		0.62	0.35	0.06	0.12	0.54	0.49
Control Delay	46.2	5.5		22.6	11.7		14.5	16.7	7.8	9.6	25.4	4.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	5.5		22.6	11.7		14.5	16.7	7.8	9.6	25.4	4.5
LOS	D	A		C	B		B	B	A	A	C	A
Approach Delay		29.0			15.8			15.0			14.1	
Approach LOS		C			B			B			B	
Queue Length 50th (m)	50.5	1.6		5.9	4.2		27.7	34.2	1.5	4.6	51.4	0.0
Queue Length 95th (m)	#89.2	16.7		14.2	13.5		47.7	57.4	7.6	10.7	86.3	18.9
Internal Link Dist (m)		670.5			130.4			70.1			1034.2	
Turn Bay Length (m)	60.0			60.0			150.0		15.0	75.0		75.0
Base Capacity (vph)	507	763		357	689		612	921	799	585	726	883
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	0.32		0.14	0.12		0.58	0.35	0.06	0.12	0.54	0.49

HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2030

PM Peak Hour

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 82.9

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 18.2

Intersection LOS: B

Intersection Capacity Utilization 75.3%

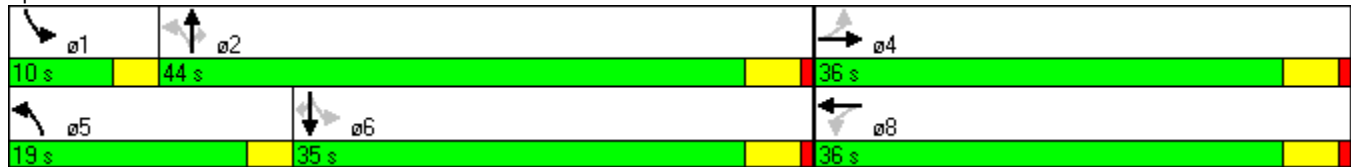
ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 6: Fallis Line & CR10



HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Total Volumes - 2030
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	269	82	4	10	61	332	3	83	18	433	18	204
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	292	89	4	11	66	361	3	90	20	471	20	222
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total (vph)	386	438	113	471	241							
Volume Left (vph)	292	11	3	471	0							
Volume Right (vph)	4	361	20	0	222							
Hadj (s)	0.18	-0.46	-0.06	0.53	-0.61							
Departure Headway (s)	7.6	6.9	8.8	8.3	7.2							
Degree Utilization, x	0.81	0.84	0.27	1.09	0.48							
Capacity (veh/h)	464	508	366	421	498							
Control Delay (s)	36.1	36.7	15.0	97.3	15.4							
Approach Delay (s)	36.1	36.7	15.0	69.5								
Approach LOS	E	E	C	F								
Intersection Summary												
Delay			49.2									
HCM Level of Service			E									
Intersection Capacity Utilization			84.3%	ICU Level of Service		E						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Total Volumes - 2030

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	1	14	10	1	18	5	637	17	24	589	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	1	15	11	1	20	5	692	18	26	640	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1430	1420	646	1426	1416	702	651			711		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1430	1420	646	1426	1416	702	651			711		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	99	97	90	99	96	99			97		
cM capacity (veh/h)	104	132	472	106	132	438	935			889		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	30	32	716	677								
Volume Left	14	11	5	26								
Volume Right	15	20	18	11								
cSH	172	203	935	889								
Volume to Capacity	0.18	0.16	0.01	0.03								
Queue Length 95th (m)	4.7	4.1	0.1	0.7								
Control Delay (s)	30.3	26.0	0.2	0.8								
Lane LOS	D	D	A	A								
Approach Delay (s)	30.3	26.0	0.2	0.8								
Approach LOS	D	D										
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			57.6%	ICU Level of Service					B			
Analysis Period (min)			15									

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	35.2	41.3	19.7	35.8	64.1
Average Queue (m)	23.5	28.9	12.8	29.8	30.5
95th Queue (m)	39.2	49.3	24.2	42.3	66.5
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				48	11
Queuing Penalty (veh)				107	46

HCM Signalized Intersection Capacity Analysis

3: Larmer Line & CR10

Total Volumes - 2030

SAT Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	4	48	42	8	5	49	772	41	5	641	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	60.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5		2.5	2.5		2.5	100.0		2.5	100.0		2.5
Satd. Flow (prot)	0	1688	0	0	1794	0	1789	1868	0	1789	1876	0
Flt Permitted		0.921			0.776		0.357			0.279		
Satd. Flow (perm)	0	1575	0	0	1445	0	672	1868	0	525	1876	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52			5			6			3	
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		276.5			293.3			1058.2			291.7	
Travel Time (s)		19.9			21.1			47.6			13.1	
Lane Group Flow (vph)	0	76	0	0	60	0	53	884	0	5	714	0
Turn Type	Perm			Perm			Perm			Perm		
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)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	20.3	20.3		20.3	20.3		20.7	20.7		20.7	20.7	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	62.0	62.0	0.0	62.0	62.0	0.0
Total Split (%)	31.1%	31.1%	0.0%	31.1%	31.1%	0.0%	68.9%	68.9%	0.0%	68.9%	68.9%	0.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	4.3	4.0	4.3	4.3	4.0	4.7	4.7	4.0	4.7	4.7	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effect Green (s)		8.8			8.8		65.9	65.9		65.9	65.9	
Actuated g/C Ratio		0.11			0.11		0.82	0.82		0.82	0.82	
v/c Ratio		0.35			0.37		0.10	0.58		0.01	0.46	
Control Delay		18.8			36.6		3.0	5.6		2.6	4.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		18.8			36.6		3.0	5.6		2.6	4.3	
LOS		B			D		A	A		A	A	
Approach Delay		18.8			36.6			5.4			4.3	
Approach LOS		B			D			A			A	
Queue Length 50th (m)		3.5			8.1		1.4	40.2		0.1	27.7	
Queue Length 95th (m)		14.3			17.7		4.5	80.5		0.9	54.3	
Internal Link Dist (m)		252.5			269.3			1034.2			267.7	
Turn Bay Length (m)							60.0			60.0		
Base Capacity (vph)		502			431		551	1533		431	1539	
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		0.15			0.14		0.10	0.58		0.01	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 80.4

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 6.6

Intersection LOS: A

Intersection Capacity Utilization 58.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Larmer Line & CR10



HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2030

SAT Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	352	14	302	51	36	59	308	321	37	60	338	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	60.0		30.0	60.0		15.0	150.0		15.0	75.0		75.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	60.0		30.0	60.0		45.0	100.0		45.0	70.0		70.0
Satd. Flow (prot)	1789	1614	0	1789	1708	0	1789	1883	1601	1789	1883	1601
Flt Permitted	0.690			0.378			0.357			0.552		
Satd. Flow (perm)	1300	1614	0	712	1708	0	672	1883	1601	1040	1883	1601
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		328			64				24			407
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		694.5			150.4			85.1			1058.2	
Travel Time (s)		41.7			9.0			5.1			63.5	
Lane Group Flow (vph)	383	343	0	55	103	0	335	349	40	65	367	407
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	20.7	20.7		20.7	20.7		10.0	20.7	20.7	10.0	20.7	20.7
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	19.0	44.0	44.0	10.0	35.0	35.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	21.1%	48.9%	48.9%	11.1%	38.9%	38.9%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	1.0		1.0	1.0		0.0	1.0	1.0	0.0	1.0	1.0
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)	4.7	4.7	4.0	4.7	4.7	4.0	3.0	4.7	4.7	3.0	4.7	4.7
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effect Green (s)	28.2	28.2		28.2	28.2		49.8	40.4	40.4	40.4	31.6	31.6
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.58	0.47	0.47	0.47	0.37	0.37
v/c Ratio	0.90	0.46		0.24	0.17		0.59	0.39	0.05	0.12	0.53	0.48
Control Delay	53.0	5.2		24.1	10.2		14.6	18.1	8.5	10.1	26.2	4.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	5.2		24.1	10.2		14.6	18.1	8.5	10.1	26.2	4.5
LOS	D	A		C	B		B	B	A	B	C	A
Approach Delay		30.4			15.0			16.0			14.4	
Approach LOS		C			B			B			B	
Queue Length 50th (m)	60.5	1.7		6.6	4.5		28.7	40.4	1.5	4.7	50.2	0.0
Queue Length 95th (m)	#109.7	18.9		15.9	14.9		44.8	62.3	7.0	10.1	79.2	18.5
Internal Link Dist (m)		670.5			126.4			61.1			1034.2	
Turn Bay Length (m)	60.0			60.0			150.0		15.0	75.0		75.0
Base Capacity (vph)	478	801		262	669		600	887	767	551	694	847
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	0.80	0.43		0.21	0.15		0.56	0.39	0.05	0.12	0.53	0.48

HCM Signalized Intersection Capacity Analysis

6: Fallis Line & CR10

Total Volumes - 2030

SAT Peak Hour

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 85.8

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 19.7

Intersection LOS: B

Intersection Capacity Utilization 75.3%

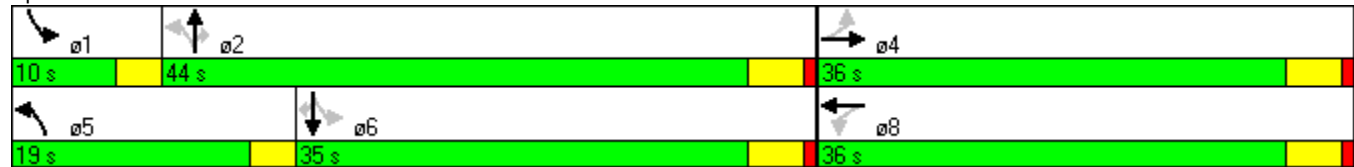
ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 6: Fallis Line & CR10



HCM Unsignalized Intersection Capacity Analysis

9: School Access & CR10

Total Volumes - 2030

SAT Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	1	7	8	1	18	2	643	17	18	664	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	1	8	9	1	20	2	699	18	20	722	9
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	1498	1487	726	1486	1482	708	730			717		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1498	1487	726	1486	1482	708	730			717		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	98	91	99	95	100			98		
cM capacity (veh/h)	94	121	424	98	122	435	874			884		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	15	29	720	750								
Volume Left	7	9	2	20								
Volume Right	8	20	18	9								
cSH	158	206	874	884								
Volume to Capacity	0.10	0.14	0.00	0.02								
Queue Length 95th (m)	2.4	3.7	0.1	0.5								
Control Delay (s)	30.2	25.3	0.1	0.6								
Lane LOS	D	D	A	A								
Approach Delay (s)	30.2	25.3	0.1	0.6								
Approach LOS	D	D										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			58.8%		ICU Level of Service				B			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 12: King St (CR21) & CR10

Total Volumes - 2030
SAT Peak Hour

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Sign Control		Stop			Stop			Stop			Stop								
Volume (vph)	155	32	1	6	37	347	2	40	6	309	56	245							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	168	35	1	7	40	377	2	43	7	336	61	266							
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2														
Volume Total (vph)	204	424	52	336	327														
Volume Left (vph)	168	7	2	336	0														
Volume Right (vph)	1	377	7	0	266														
Hadj (s)	0.20	-0.50	-0.03	0.53	-0.54														
Departure Headway (s)	6.7	5.6	7.1	7.0	6.0														
Degree Utilization, x	0.38	0.66	0.10	0.66	0.54														
Capacity (veh/h)	502	618	425	497	589														
Control Delay (s)	13.8	19.0	10.9	21.3	14.6														
Approach Delay (s)	13.8	19.0	10.9	18.0															
Approach LOS	B	C	B	C															
Intersection Summary																			
Delay				17.4															
HCM Level of Service				C															
Intersection Capacity Utilization				67.8%	ICU Level of Service	C													
Analysis Period (min)				15															

Intersection: 12: King St (CR21) & CR10

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (m)	20.4	25.9	13.6	24.4	23.2
Average Queue (m)	15.0	19.8	7.7	18.0	18.1
95th Queue (m)	23.2	29.8	16.6	28.8	26.2
Link Distance (m)	518.3	494.8	260.2		495.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)				12.0	
Storage Blk Time (%)				17	14
Queuing Penalty (veh)				51	45