

CARACTÉRISTIQUES DES RUES

**PROGRAMMATION DES FEUX DE
CIRCULATION**



Dessins de référence :

Notes

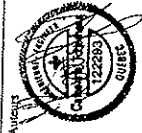
Un système sonore de type Novax DS-2000 doit être installé sur la traverse Est.

No	Four exécution	Révision	Date
0			2005-08-23

Programmation du contrôleur
FLETCHER / SHERBROOKE



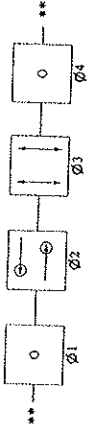
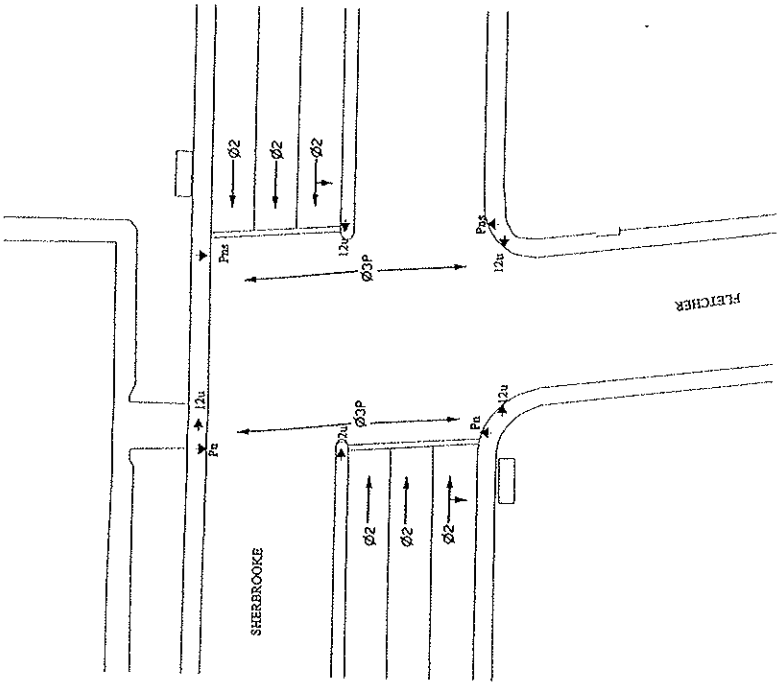
M. Petit, dessinateur
C. Thémère, ing.



Autres signaux



Projet no : PE-1093
Dossier no : 1-460
Dessin no :
Échelle :



Informations complémentaires
Type de contrôleur : ECONOLITE, NEMA TS 2, t 1
Le maître du réseau est situé à l'intersection:
Liebert / Sherbrooke
Mode de coordination : Horloge interne
Phases de coordination : 2
Démarage : a) alignement tout rouge : 5 s
b) tout rouge phase 2 : 5 s

Programme	1	2	3
Journalier	Journalier	Journalier	Journalier
Hrc	00:00	00:00	00:00
Fin	05:30	05:30	05:30
CDR	311	311	311

Programme	1	2	3
Journalier	Journalier	Journalier	Journalier
Hrc	00:00	00:00	00:00
Fin	05:30	05:30	05:30
CDR	311	311	311

Programme	1	2	3
Journalier	Journalier	Journalier	Journalier
Hrc	00:00	00:00	00:00
Fin	05:30	05:30	05:30
CDR	311	311	311

Phases (Ø)	1 2 3 4 5 6 7 8							
	V min (s)	52	15					
Ambre (s)	5							
Rouge (s)	5							
V max.1 (s)	53	23						
V max.2 (s)								
V max.3 (s)								
Mode d'opération - véhicules	rpp	plé						
Tempo d'inter-verts (s)		seul						
Silhouette (s)		9						
Min d'ignomane (s)		18						
Mode d'opération - piétons	app							
Cycle	Répétition (s)							
no durée (s)	1	2	3					
1	1	90	59	59	59	58	32	
2	1	90	59	59	59	58	32	
3	1	90	59	59	59	58	32	

VILLE DE MONTREAL-EST
SERVICES TECHNIQUES

DATE : 98 Février 08

FEUX DE CIRCULATION
FICHE DE PROGRAMMATION

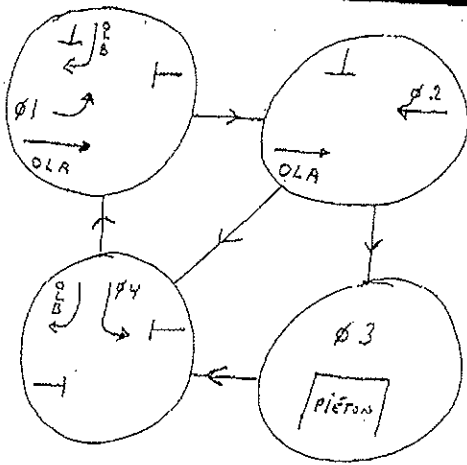
RUE : SHERBROOKE

INTERSECTION : GEORGE-V

PROGRAMMATION -Nouvelle
Modifiée

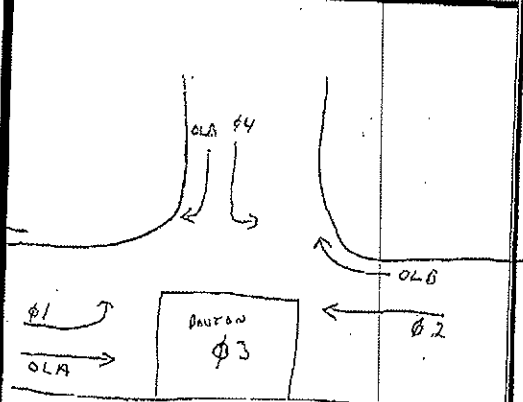
REMARQUE : _____

PROGRAMMATION EXISTANTE



OLA : $\phi 1 + \phi 2$
OLB : $\phi 1 + \phi 4$

PROGRAMMATION PROJETEE



Phase	Signal	Durée	Notes
phi 1	VERT	12	LOCK
	JAUNE	4.0	
	ALL RED	1.0	
phi 2	VERT	5	MAX 8
	JAUNE	4.0	
	ALL RED	1.0	
	MAX I	28	
phi 3	WALK	8	001
	RED CLR	12	
phi 4	VERT	15	LOCK
	JAUNE	4.0	
	ALL RED	1.0	
	VEH EXT	5.0	
	MAX I	22	
TOTAL			

EN DATE DU : 98-02-18

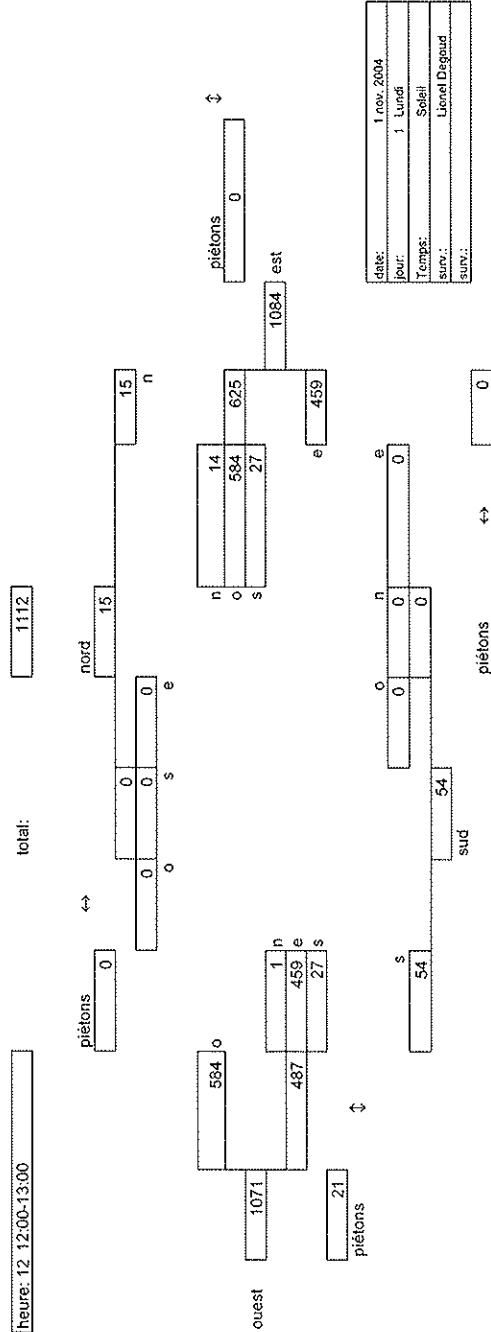
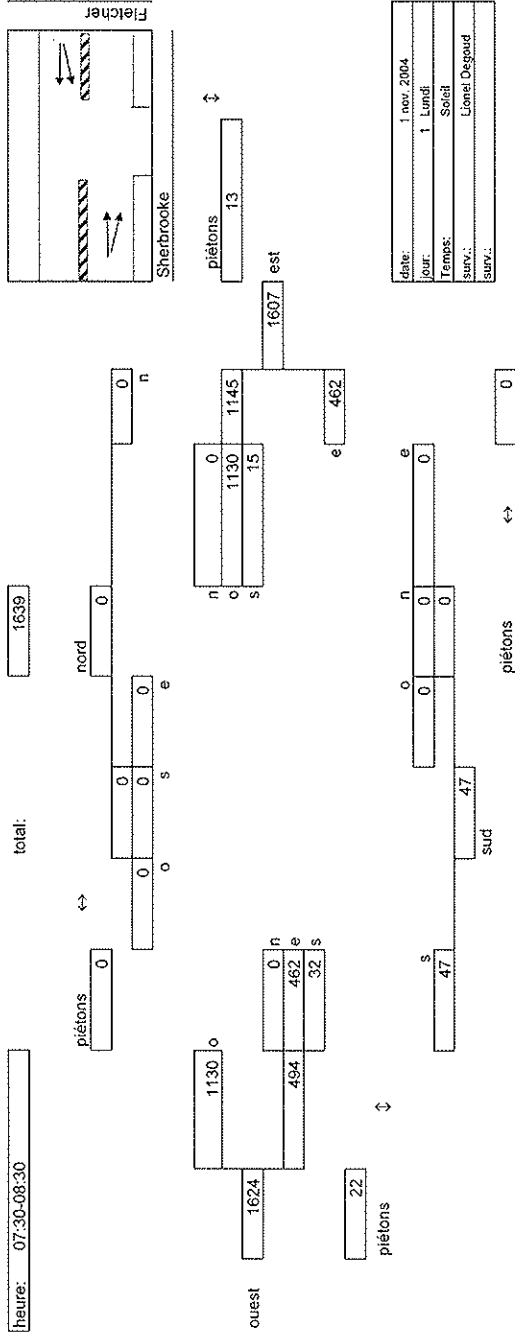
RÉALISÉ LE : _____

COMPTAGES

Comptages de véhicules EQUIVALENTS et de piétons

SITE: Fletcher / Sherbrooke

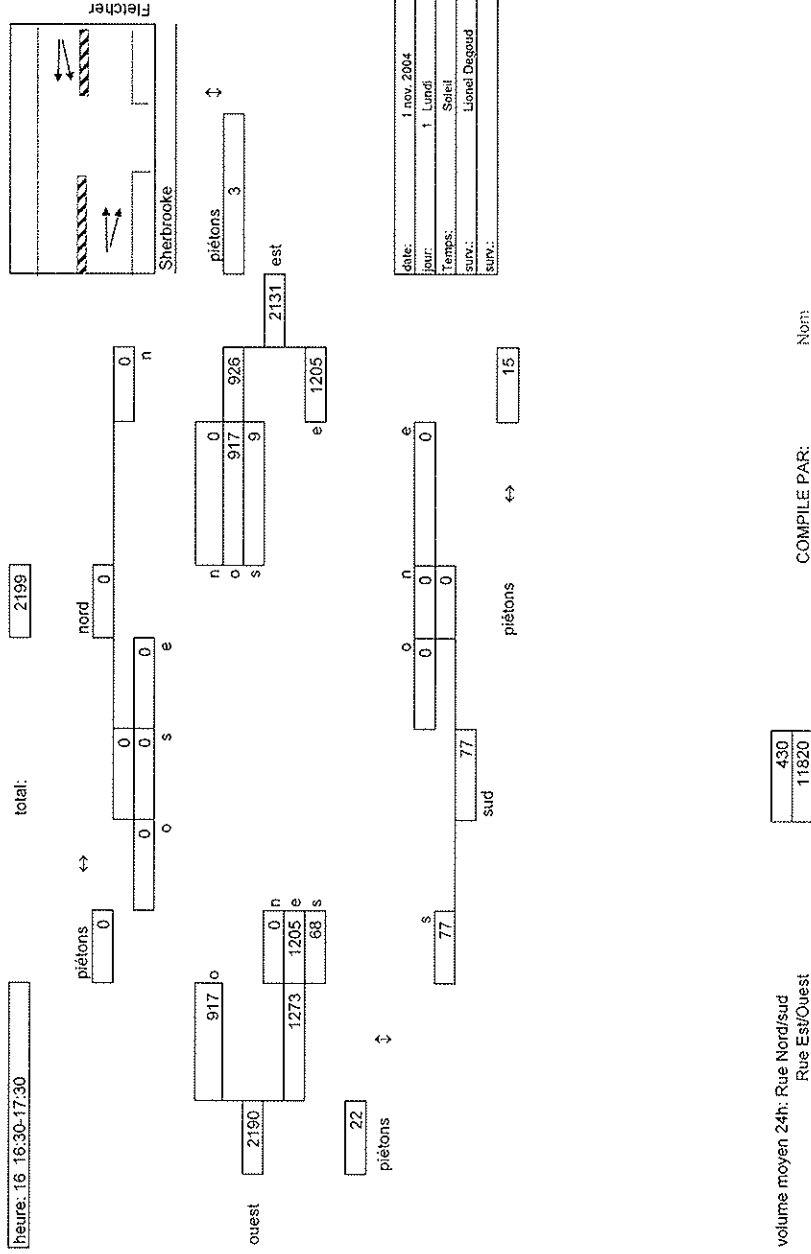
Zone: _____ Stat.: _____



Comptages de véhicules ÉQUIVALENTS et de piétons

SITE: Fletcher / Sherbrooke

Zone: _____ Stat.: _____



Comptages AUTOS

SITE: Fletcher / Sherbrooke

JOUR ET DATE 1 novembre, 2004

TEMPERATURE: Soleil

OBSERVATEUR(S): Lionel Degaud

VENANT VERS	DU NORD				DE L'EST				DU SUD				DE L'OUEST				TOTAL VEH		
	OUEST		EST		NORD		SUD		EST		NORD		OUEST		SUD			EST	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
07-30-08-30	0	0	0	0	302	10	312	0	0	0	0	0	0	2	109	0	111	0	423
	0	0	0	0	238	3	241	0	0	0	0	0	0	9	111	0	120	0	361
	0	0	0	0	248	1	249	0	0	0	0	0	0	5	121	0	126	0	375
	0	0	0	0	230	1	231	0	0	0	0	0	0	16	89	0	105	0	336
TOTAL	0	0	0	0	1016	15	1033	0	0	0	0	0	0	32	430	0	462	0	1485
	0	0	0	0															
	0	0	0	0															
	0	0	0	0															
12-00-13-00	0	0	0	0	130	3	134	0	0	0	0	0	0	1	109	0	110	0	244
	0	0	0	0	150	3	153	0	0	0	0	0	0	10	102	0	112	0	265
	0	0	0	0	13	98	130	0	0	0	0	0	0	9	93	0	102	0	232
	0	0	0	0	150	2	152	0	0	0	0	0	0	7	111	1	119	1	271
TOTAL	0	0	0	0	526	27	569	0	0	0	0	0	0	27	415	1	443	1	1012
	0	0	0	0															
	0	0	0	0															
16-30-17-30	0	0	0	0	224	1	225	0	0	0	0	0	0	18	291	0	309	0	534
	0	0	0	0	189	4	193	0	0	0	0	0	0	13	330	0	343	0	536
	0	0	0	0	251	3	254	0	0	0	0	0	0	19	292	0	311	0	565
	0	0	0	0	209	1	210	0	0	0	0	0	0	16	272	0	288	0	488
TOTAL	0	0	0	0	873	9	892	0	0	0	0	0	0	66	1185	0	1251	0	2133
TOTAL	0	0	0	0	14	2419	51	2494	0	0	0	0	0	125	2030	1	2156	1	4640

Comptages Véhicules lourds

SITE: Fletcher / Sherbrooke

JOUR ET DATE

1 novembre, 2004

TEMPÉRATURE

Soleil

OBSERVATEUR(S):

Lionel Degaud

VENANT VERS	DU NORD		DE L'EST		DU SUD		DE L'OUEST		TOTAL VÉH
	EST	SUD	NORD	EST	NORD	SUD	EST	NORD	
07:30-08:30	0	0	0	17	0	17	0	0	20
	0	0	0	10	0	10	0	0	13
	0	0	0	20	0	20	0	1	21
	0	0	0	9	0	9	0	0	9
TOTAL	0	0	0	56	0	56	0	16	72
12:00-13:00	0	0	0	7	0	7	0	0	9
	0	0	0	7	0	7	0	0	12
	0	0	0	3	0	3	0	0	14
	0	0	0	6	0	6	0	0	15
TOTAL	0	0	0	28	0	28	0	22	50
16:30-17:30	0	0	0	7	0	7	0	0	8
	0	0	0	4	0	4	0	0	8
	0	0	0	7	0	7	0	0	11
	0	0	0	4	0	4	0	0	6
TOTAL	0	0	0	22	0	22	0	11	33
TOTAL	0	0	0	156	0	156	0	48	155

Comptages véhicules équivalents et piétons
1 novembre, 2004

SITE: Sherbrooke / Tailon

JOUR ET DATE:

TEMPÉRATURE: Soleil

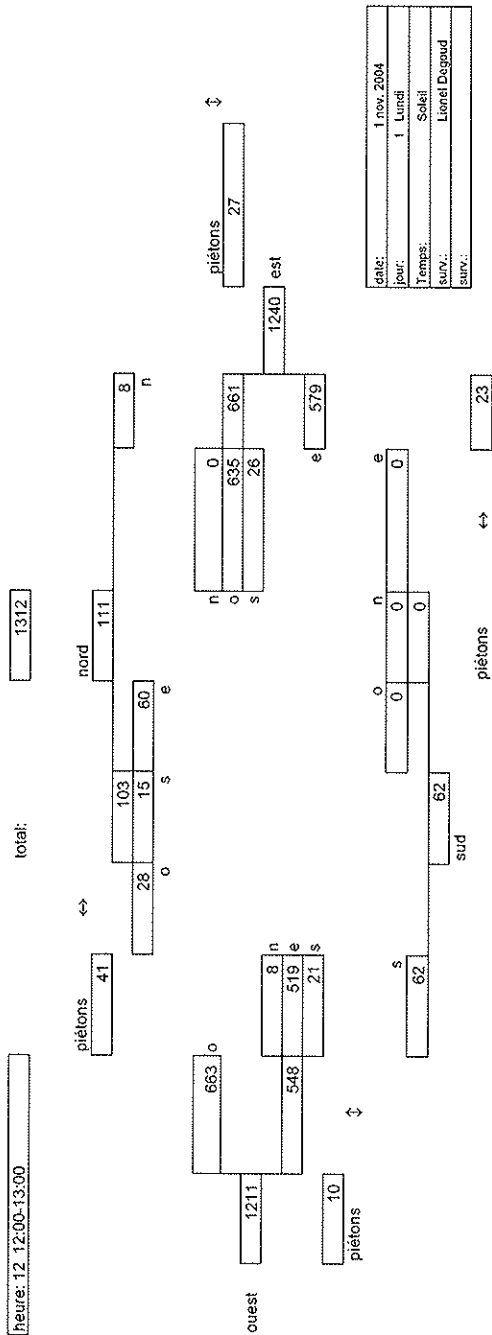
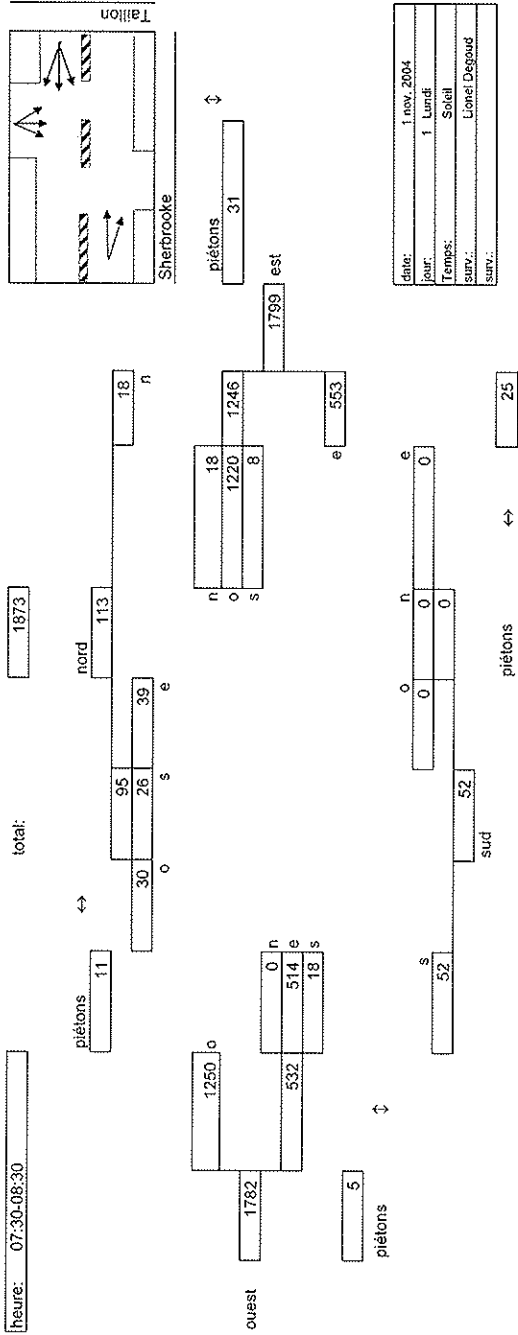
OBSERVATEUR(S): Léonél Desjard

VENANT VERS	DU NORD			DE L'EST			DU SUD			DE L'OUEST			TOTAL	
	P	A	TOTAL	P	A	TOTAL	P	A	TOTAL	P	A	TOTAL	VEH.	PIET.
07:30-08:30	1	0	27	16	14	360	3	0	0	5	0	132	519	14
	4	0	32	10	13	305	0	0	0	2	5	132	474	23
	1	0	24	7	7	302	0	0	0	1	3	113	442	18
	5	0	12	4	7	279	5	0	0	0	10	137	438	17
TOTAL	11	0	95	31	41	1246	25	0	0	5	18	514	1873	72
PHF	0.55	0.00	0.74	0.78	0.73	0.92	0.60	0.00	0.00	0.42	0.45	0.94	0.90	0.78
12:00-13:00	10	0	30	2	1	162	4	0	0	3	2	7	327	19
	11	0	19	6	3	179	2	0	0	2	0	6	314	21
	6	0	30	4	3	162	7	0	0	2	3	5	337	21
	12	0	24	15	1	158	10	0	0	3	3	149	334	40
TOTAL	41	0	103	27	8	681	23	0	0	10	8	21	1312	101
PHF	0.35	0.00	0.86	0.45	0.67	0.92	0.58	0.00	0.00	0.23	0.67	0.87	0.97	0.63
16:30-17:30	7	0	69	16	5	245	9	0	0	5	7	1	649	37
	8	4	35	11	6	208	3	0	0	4	9	325	577	28
	9	0	38	14	4	269	3	0	0	5	11	297	619	31
	5	0	44	10	7	246	0	0	0	4	6	360	660	19
TOTAL	32	0	186	51	21	974	15	0	0	17	21	27	2505	115
PHF	0.73	0.00	0.67	0.80	0.75	0.89	0.42	0.00	0.00	0.35	0.75	0.91	0.95	0.78
TOTAL	84	0	384	109	70	2814	63	0	0	32	38	66	5690	268

Comptages de véhicules EQUIVALENTS et de piétons

SITE: Sherbrooke / Taillon

Zone: _____ Stat.: _____



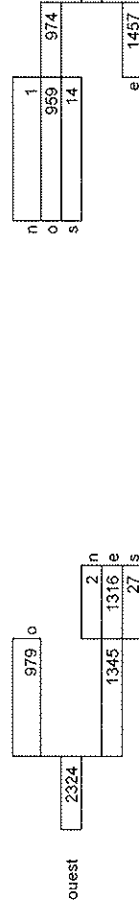
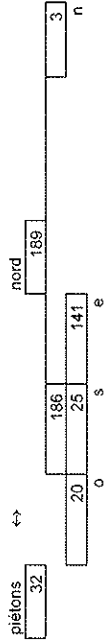
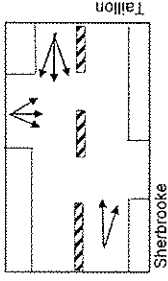
Comptages de véhicules ÉQUIVALENTS et de piétons

SITE: Sherbrooke / Tailion

Zone: _____ Stat.: _____

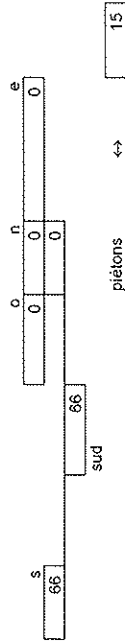
heure: 16:30-17:30

total: 2505



17 piétons

date:	1 nov. 2004
jour:	1 Lundi
Temps:	Soleil
surv.:	Lionel Desgoud
surv.:	



volume moyen 24h: Rue Nord/sud
Rue Est/Ouest

997
13200

COMPTE PAR:

Nbr:

Comptages AUTOS

SITE: Sherbrooke / Faillon

JOUR ET DATE 1 novembre, 2004

TEMPERATURE: Soleil

OBSERVATEUR(S): Lionel Desjard

VENANT VERS	DU NORD		DU SUD		DE L'EST		DE L'OUEST		DU SUD		DU NORD		DE L'OUEST		TOTAL				
	OUEST	SUD	EST	TOTAL	NORD	SUD	TOTAL	EST	OUEST	TOTAL	SUD	NORD	TOTAL	EST	OUEST	TOTAL			
07:30-08:30	9	10	8	27	0	342	4	346	0	0	0	0	0	0	130	0	130	563	
	7	10	15	32	18	277	2	295	0	0	0	5	130	0	135	0	135	462	
	9	5	10	24	0	278	2	280	0	0	0	3	113	0	116	0	116	420	
	5	1	6	12	0	265	0	265	0	0	0	10	135	0	145	0	145	422	
TOTAL	30	26	39	95	16	1162	8	1186	0	0	0	13	538	0	526	0	526	1807	
12:00-13:00	12	9	13	30	0	142	2	144	0	0	0	0	0	0	7	116	4	127	301
	2	3	14	19	0	160	9	169	0	0	0	0	0	0	6	106	2	114	302
	3	4	18	25	0	137	11	148	0	0	0	5	130	0	135	0	135	313	
	6	3	15	24	0	140	4	144	0	0	0	3	139	0	142	0	142	310	
TOTAL	23	15	60	103	0	579	26	605	0	0	0	21	491	6	518	0	518	1226	
16:30-17:30	3	9	52	69	0	237	0	237	0	0	0	0	0	0	1	334	0	335	641
	4	4	27	35	0	196	2	198	0	0	0	9	325	0	334	0	334	567	
	1	4	33	38	1	257	3	261	0	0	0	11	293	0	304	0	304	603	
	7	8	29	44	0	233	9	242	0	0	0	6	363	2	365	2	367	652	
TOTAL	20	25	141	185	1	923	14	928	0	0	0	27	1310	2	1339	2	1339	2463	
TOTAL	73	66	240	364	17	2664	48	2729	0	0	0	66	2299	8	2383	8	2383	5496	

Georges V & Sherbrooke

Comptage effectué 03-avr-07
 Observateur: Maria Guglielmino

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
auto												
07:30		96	8	36	341		14		39			
07:45		92	17	39	297		16		30			
08:00		96	9	40	248		12		22			
08:15		96	8	24	224		17		23			
Total	0	380	42	139	1110	0	59	0	114	0	0	0
véhicules lourds												
07:30		6	0	2	9		2		3			
07:45		7	2	4	7		1		1			
08:00		8	1	2	9		0		4			
08:15		6	1	2	8		1		2			
Total		27	4	10	33		4		10			
pourcentage v.l.		7%	9%	7%	3%		6%		8%			

Georges V & Sherbrooke

Comptage effectué 02-avr-07
 Observateur: Moez Gmach

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
auto												
04:30		310	21	45	218		19		42			
04:45		283	21	35	171		11		22			
05:00		294	19	25	186		19		23			
05:15		320	20	29	174		17		29			
Total	0	1207	81	134	749	0	66	0	116	0	0	0
véhicules lourds												
04:30		7	2	2	6		1		2			
04:45		6	4	4	4		1		1			
05:00		9	4	1	3		2		2			
05:15		9	1	3	5		1		4			
Total		31	11	10	18		5		9			
pourcentage v.l.		3%	12%	7%	2%		7%		7%			

Roi-René & Yves-Prévost

Comptage effectué 30-mai-05
Observateur: Moez Gmach

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
auto												
07:30	11	17	0	4	91	14	20	30	0	7	46	31
07:45	9	19	5	6	82	10	24	29	1	9	55	36
08:00	8	14	4	2	79	11	18	32	2	10	48	32
08:15	8	12	2	5	55	7	17	24	0	4	47	25
Total	36	62	11	17	307	42	79	115	3	30	196	124
véhicules lourds												
07:30					1							1
07:45								1				1
08:00			1									1
08:15												1
Total			1		1			1				4
pourcentage v.l.			8%		0%			1%				3%

Roi-René & Yves-Prévost

Comptage effectué 02-avr-07
Observateur: Maria Guglielmino

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
auto												
04:30	8	31	8	18	72	27	21	83	12	11	37	10
04:45	5	29	8	21	73	20	15	64	7	11	34	4
05:00	4	21	11	26	81	23	17	80	9	12	26	1
05:15	3	21	6	19	59	26	21	60	13	8	35	7
Total	20	102	33	84	285	96	74	287	41	42	132	22
véhicules lourds												
04:30				1								
04:45				1	2						1	
05:00		1		1								
05:15				1								1
Total		1		4	2						2	
pourcentage v.l.		1%		5%	1%						1%	

ANALYSE SYNCHRO

HCM Signalized Intersection Capacity Analysis
 Existant

7:30 am
 3446- Site Contrecoeur



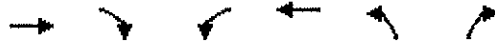
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑↑	↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Fr't	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3374	1482		4987	1703	1495
Flt Permitted	1.00	1.00		0.78	0.95	1.00
Satd. Flow (perm)	3374	1482		3927	1703	1495
Volume (vph)	454	51	166	1274	70	138
Peak-hour factor, PHF	0.98	0.61	0.87	0.82	0.88	0.74
Adj. Flow (vph)	463	84	191	1554	80	186
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	463	84	0	1745	80	186
Heavy Vehicles (%)	7%	9%	7%	3%	6%	8%
Turn Type		custom	pm+pt			custom
Protected Phases	2	2 4	1	1 2	4	4 1
Permitted Phases		2 4	1 2			4 1
Actuated Green, G (s)	28.0	55.0		40.0	22.0	39.0
Effective Green, g (s)	29.0	56.0		42.0	23.0	40.0
Actuated g/C Ratio	0.38	0.73		0.55	0.30	0.52
Clearance Time (s)	5.0				5.0	
Vehicle Extension (s)	3.0				5.0	
Lane Grp Cap (vph)	1271	1078		2321	509	777
v/s Ratio Prot	0,14	0,06		c0,13	0,05	c0,12
v/s Ratio Perm				c0,28		
v/c Ratio	0.36	0.08		0.75	0.16	0.24
Uniform Delay, d1	17.3	3.0		13.5	19.9	10.2
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.1		2.3	0.7	0.7
Delay (s)	18.1	3.2		15.8	20.5	10.9
Level of Service	B	A		B	C	B
Approach Delay (s)	15.8			15.8	13.8	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	15,6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	77,0	Sum of lost time (s)	12,0
Intersection Capacity Utilization	63,0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 Existant

7:30 am
 3446- Site Contrecoeur



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		
Lane Util. Factor	0.91			0.91		
Frt	0.98			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	4799			4763		
Flt Permitted	1.00			0.90		
Satd. Flow (perm)	4799			4316		
Volume (vph)	490	35	16	1219	0	0
Peak-hour factor, PHF	0.94	0.50	0.38	0.84	0.92	0.92
Adj. Flow (vph)	521	70	42	1451	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	591	0	0	1493	0	0
Heavy Vehicles (%)	7%	0%	0%	9%	0%	0%
Turn Type			Perm			
Protected Phases	2			2		
Permitted Phases			2		3	
Actuated Green, G (s)	74.6			74.6		
Effective Green, g (s)	75.6			75.6		
Actuated g/C Ratio	0.84			0.84		
Clearance Time (s)	5.0			5.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	4031			3625		
v/s Ratio Prot	0,12					
v/s Ratio Perm				0,35		
v/c Ratio	0.15			0.41		
Uniform Delay, d1	1.3			1.8		
Progression Factor	0.71			1.00		
Incremental Delay, d2	0.1			0.3		
Delay (s)	1.0			2.1		
Level of Service	A			A		
Approach Delay (s)	1.0			2.1	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	1,8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	14,4
Intersection Capacity Utilization	47,5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

7:30 am

Existant

3446- Site Contrecoeur



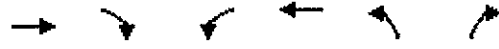
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↓↑						↓↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		0.91			0.95						0.95	
Frpb, ped/bikes		1.00			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.99			1.00						0.95	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		5031			3406						3279	
Flt Permitted		1.00			0.94						0.98	
Satd. Flow (perm)		5031			3217						3279	
Volume (vph)	0	562	20	9	1310	0	0	0	0	43	29	33
Peak-hour factor, PHF	0.92	0.94	0.45	0.50	0.86	0.25	0.92	0.92	0.92	0.83	0.65	0.65
Adj. Flow (vph)	0	598	44	18	1523	0	0	0	0	52	45	51
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	642	0	0	1541	0	0	0	0	0	148	0
Confl. Peds. (#/hr)			25	25						31		5
Heavy Vehicles (%)	0%	2%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Perm							Perm	
Protected Phases		2			2							4
Permitted Phases				2							4	
Actuated Green, G (s)		54.0			54.0							26.0
Effective Green, g (s)		55.0			55.0							27.0
Actuated g/C Ratio		0.61			0.61							0.30
Clearance Time (s)		5.0			5.0							5.0
Lane Grp Cap (vph)		3075			1966							984
v/s Ratio Prot		0,13										
v/s Ratio Perm					c0,48							0,05
v/c Ratio		0.21			0.78							0.15
Uniform Delay, d1		7.8			13.1							23.1
Progression Factor		1.00			0.98							1.00
Incremental Delay, d2		0.2			3.1							0.3
Delay (s)		8.0			15.9							23.4
Level of Service		A			B							C
Approach Delay (s)		8.0			15.9			0.0				23.4
Approach LOS		A			B			A				C

Intersection Summary			
HCM Average Control Delay	14,2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	70,0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
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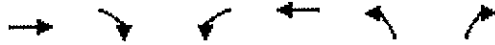
7:30 am
3446 - Site Contrecoeur



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3374	1482		4992	1703	1495
Flt Permitted	1.00	1.00		0.72	0.95	1.00
Satd. Flow (perm)	3374	1482		3595	1703	1495
Volume (vph)	690	51	166	1437	70	138
Peak-hour factor, PHF	0.98	0.61	0.87	0.82	0.88	0.74
Adj. Flow (vph)	704	84	191	1752	80	186
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	704	84	0	1943	80	186
Heavy Vehicles (%)	7%	9%	7%	3%	6%	8%
Turn Type		custom	pm+pt		custom	
Protected Phases	2	2 4	1	1 2	4	4 1
Permitted Phases		2 4	1 2			4 1
Actuated Green, G (s)	28.0	55.0		40.0	22.0	39.0
Effective Green, g (s)	29.0	56.0		42.0	23.0	40.0
Actuated g/C Ratio	0.38	0.73		0.55	0.30	0.52
Clearance Time (s)	5.0				5.0	
Vehicle Extension (s)	3.0				5.0	
Lane Grp Cap (vph)	1271	1078		2197	509	777
v/s Ratio Prot	0,21	0,06		c0,15	0,05	c0,12
v/s Ratio Perm				c0,33		
v/c Ratio	0.55	0.08		0.88	0.16	0.24
Uniform Delay, d1	18.9	3.0		15.4	19.9	10.2
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.7	0.1		5.7	0.7	0.7
Delay (s)	20.6	3.2		21.0	20.5	10.9
Level of Service	C	A		C	C	B
Approach Delay (s)	18.8			21.0	13.8	
Approach LOS	B			C	B	

Intersection Summary			
HCM Average Control Delay	19,8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	77,0	Sum of lost time (s)	12,0
Intersection Capacity Utilization	72,7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		
Lane Util. Factor	0.91			0.91		
Frt	0.98			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	4803			4763		
Flt Permitted	1.00			0.90		
Satd. Flow (perm)	4803			4298		
Volume (vph)	546	35	16	1219	0	0
Peak-hour factor, PHF	0.94	0.50	0.38	0.84	0.92	0.92
Adj. Flow (vph)	581	70	42	1451	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	651	0	0	1493	0	0
Heavy Vehicles (%)	7%	0%	0%	9%	0%	0%
Turn Type			Perm			
Protected Phases	2			2		
Permitted Phases			2		3	
Actuated Green, G (s)	74.6			74.6		
Effective Green, g (s)	75.6			75.6		
Actuated g/C Ratio	0.84			0.84		
Clearance Time (s)	5.0			5.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	4035			3610		
v/s Ratio Prot	0,14					
v/s Ratio Perm				c0,35		
v/c Ratio	0.16			0.41		
Uniform Delay, d1	1.3			1.8		
Progression Factor	0.70			1.00		
Incremental Delay, d2	0.1			0.4		
Delay (s)	1.0			2.1		
Level of Service	A			A		
Approach Delay (s)	1.0			2.1	0.0	
Approach LOS	A			A	A	

Intersection Summary

HCM Average Control Delay	1,8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	14,4
Intersection Capacity Utilization	47,5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

7:30 am

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3446 - Site Contrecoeur

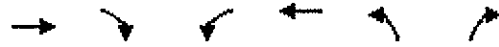


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑						↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		0.91			0.95						0.95	
Frbp, ped/bikes		1.00			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.99			1.00						0.95	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		5033			3406						3279	
Flt Permitted		1.00			0.94						0.98	
Satd. Flow (perm)		5033			3218						3279	
Volume (vph)	0	579	20	9	1423	0	0	0	0	43	29	33
Peak-hour factor, PHF	0.92	0.94	0.45	0.50	0.86	0.25	0.92	0.92	0.92	0.83	0.65	0.65
Adj. Flow (vph)	0	616	44	18	1655	0	0	0	0	52	45	51
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	660	0	0	1673	0	0	0	0	0	148	0
Confl. Peds. (#/hr)			25	25						31		5
Heavy Vehicles (%)	0%	2%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Perm							Perm	
Protected Phases		2			2						4	
Permitted Phases				2							4	
Actuated Green, G (s)		54.0			54.0						26.0	
Effective Green, g (s)		55.0			55.0						27.0	
Actuated g/C Ratio		0.61			0.61						0.30	
Clearance Time (s)		5.0			5.0						5.0	
Lane Grp Cap (vph)		3076			1967						984	
v/s Ratio Prot		0,13										
v/s Ratio Perm					c0,52						0,05	
v/c Ratio		0.21			0.85						0.15	
Uniform Delay, d1		7.8			14.2						23.1	
Progression Factor		1.00			0.97						1.00	
Incremental Delay, d2		0.2			4.7						0.3	
Delay (s)		8.0			18.5						23.4	
Level of Service		A			B						C	
Approach Delay (s)		8.0			18.5			0.0			23.4	
Approach LOS		A			B			A			C	

Intersection Summary

HCM Average Control Delay	16,0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	73,1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3374	1482		4992	1703	1495
Flt Permitted	1.00	1.00		0.74	0.95	1.00
Satd. Flow (perm)	3374	1482		3711	1703	1495
Volume (vph)	690	51	166	1437	70	138
Peak-hour factor, PHF	0.98	0.61	0.87	0.82	0.88	0.74
Adj. Flow (vph)	704	84	191	1752	80	186
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	704	84	0	1943	80	186
Heavy Vehicles (%)	7%	9%	7%	3%	6%	8%
Turn Type		custom	pm+pt		custom	
Protected Phases	2	2 4	1	1 2	4	4 1
Permitted Phases		2 4	1 2			4 1
Actuated Green, G (s)	48.0	68.0		60.0	15.0	32.0
Effective Green, g (s)	49.0	69.0		62.0	16.0	33.0
Actuated g/C Ratio	0.54	0.77		0.69	0.18	0.37
Clearance Time (s)	5.0				5.0	
Vehicle Extension (s)	3.0				5.0	
Lane Grp Cap (vph)	1837	1136		2742	303	548
v/s Ratio Prot	0,21	0,06		c0,10	0,05	c0,12
v/s Ratio Perm				c0,39		
v/c Ratio	0.38	0.07		0.71	0.26	0.34
Uniform Delay, d1	11.8	2.6		8.5	31.9	20.6
Progression Factor	0.56	1.50		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1		1.6	2.1	1.7
Delay (s)	7.2	4.0		10.1	34.0	22.3
Level of Service	A	A		B	C	C
Approach Delay (s)	6.9			10.1	25.8	
Approach LOS	A			B	C	

Intersection Summary

HCM Average Control Delay	10,6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	12,0
Intersection Capacity Utilization	72,7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
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7:30 am
3446- Site Contrecoeur



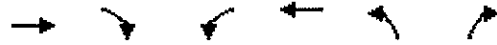
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↕↕↕					↖		↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.95	1.00		0.91					1.00		1.00
Flt		1.00	0.85		0.99					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		3375	1615		4952					1805		1615
Flt Permitted		0.91	1.00		0.93					0.95		1.00
Satd. Flow (perm)		3063	1615		4621					1805		1615
Volume (vph)	10	561	5	14	1490	101	0	0	0	190	0	83
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	610	5	15	1620	110	0	0	0	207	0	90
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	621	5	0	1745	0	0	0	0	207	0	90
Heavy Vehicles (%)	0%	7%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	custom		Perm	D.Pm						custom		custom
Protected Phases	9	4			8							
Permitted Phases	4	9	4	4						2		2
Actuated Green, G (s)		52.5	52.5		52.5					26.5		26.5
Effective Green, g (s)		54.0	54.0		54.0					28.0		28.0
Actuated g/C Ratio		0.60	0.60		0.60					0.31		0.31
Clearance Time (s)		5.5	5.5		5.5					5.5		5.5
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1838	969		2773					562		502
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.00		0.38					0.11		0.06
v/c Ratio		0.34	0.01		0.63					0.37		0.18
Uniform Delay, d1		9.0	7.2		11.6					24.1		22.6
Progression Factor		0.86	0.67		0.61					1.00		1.00
Incremental Delay, d2		0.1	0.0		0.7					1.9		0.8
Delay (s)		7.9	4.8		7.8					26.0		23.4
Level of Service		A	A		A					C		C
Approach Delay (s)		7.9			7.8		0.0				25.2	
Approach LOS		A			A		A				C	

Intersection Summary

HCM Average Control Delay	9,8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	58,0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
Optimisé

7:30 am
3446- Site Contrecoeur



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		
Lane Util. Factor	0.91			0.91		
Frt	0.98			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	4803			4763		
Flt Permitted	1.00			0.90		
Satd. Flow (perm)	4803			4298		
Volume (vph)	546	35	16	1219	0	0
Peak-hour factor, PHF	0.94	0.50	0.38	0.84	0.92	0.92
Adj. Flow (vph)	581	70	42	1451	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	651	0	0	1493	0	0
Heavy Vehicles (%)	7%	0%	0%	9%	0%	0%
Turn Type			Perm			
Protected Phases	2			2		
Permitted Phases			2		3	
Actuated Green, G (s)	74.6			74.6		
Effective Green, g (s)	75.6			75.6		
Actuated g/C Ratio	0.84			0.84		
Clearance Time (s)	5.0			5.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	4035			3610		
v/s Ratio Prot	0,14					
v/s Ratio Perm				0,35		
v/c Ratio	0.16			0.41		
Uniform Delay, d1	1.3			1.8		
Progression Factor	0.89			0.34		
Incremental Delay, d2	0.1			0.3		
Delay (s)	1.3			0.9		
Level of Service	A			A		
Approach Delay (s)	1.3			0.9	0.0	
Approach LOS	A			A	A	

Intersection Summary

HCM Average Control Delay	1,0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	14,4
Intersection Capacity Utilization	47,5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
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3446- Site Contrecoeur



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑						↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		0.91			0.95						0.95	
Frbp, ped/bikes		1.00			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.99			1.00						0.95	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		5033			3406						3279	
Flt Permitted		1.00			0.94						0.98	
Satd. Flow (perm)		5033			3218						3279	
Volume (vph)	0	579	20	9	1423	0	0	0	0	43	29	33
Peak-hour factor, PHF	0.92	0.94	0.45	0.50	0.86	0.25	0.92	0.92	0.92	0.83	0.65	0.65
Adj. Flow (vph)	0	616	44	18	1655	0	0	0	0	52	45	51
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	660	0	0	1673	0	0	0	0	0	148	0
Confl. Peds. (#/hr)			25	25						31		5
Heavy Vehicles (%)	0%	2%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Perm							Perm	
Protected Phases		2			2							4
Permitted Phases				2							4	
Actuated Green, G (s)		54.0			54.0							26.0
Effective Green, g (s)		55.0			55.0							27.0
Actuated g/C Ratio		0.61			0.61							0.30
Clearance Time (s)		5.0			5.0							5.0
Lane Grp Cap (vph)		3076			1967							984
v/s Ratio Prot		0,13										
v/s Ratio Perm					c0,52							0,05
v/c Ratio		0.21			0.85							0.15
Uniform Delay, d1		7.8			14.2							23.1
Progression Factor		1.00			0.40							1.00
Incremental Delay, d2		0.2			4.7							0.3
Delay (s)		8.0			10.3							23.4
Level of Service		A			B							C
Approach Delay (s)		8.0			10.3			0.0				23.4
Approach LOS		A			B			A				C

Intersection Summary			
HCM Average Control Delay	10,5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	73,1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
Optimis 

7:30 am
3446- Site Contrecoeur



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		0.95			0.95	
Fr�	1.00	1.00	0.85	1.00	1.00	0.85		1.00			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.99	
Satd. Flow (prot)	1805	1900	1495	1805	1900	1615		3501			3367	
Flt Permitted	0.35	1.00	1.00	0.68	1.00	1.00		0.67			0.84	
Satd. Flow (perm)	659	1900	1495	1296	1900	1615		2398			2864	
Volume (vph)	41	95	14	103	412	47	89	131	3	67	221	144
Peak-hour factor, PHF	0.82	0.82	0.55	0.71	0.84	0.75	0.82	0.91	0.38	0.75	0.89	0.86
Adj. Flow (vph)	50	116	25	145	490	63	109	144	8	89	248	167
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	50	116	25	145	490	63	0	261	0	0	504	0
Heavy Vehicles (%)	0%	0%	8%	0%	0%	0%	0%	1%	0%	0%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm				Perm	
Protected Phases		2			2			4				4
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	25.9	25.9	25.9	25.9	25.9	25.9		21.7			21.7	
Effective Green, g (s)	28.0	28.0	28.0	28.0	28.0	28.0		24.0			24.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47	0.47		0.40			0.40	
Clearance Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.3			6.3	
Lane Grp Cap (vph)	308	887	698	605	887	754		959			1146	
v/s Ratio Prot		0,06			c0,26							
v/s Ratio Perm	0,08		0,02	0,11		0,04		0,11			c0,18	
v/c Ratio	0.16	0.13	0.04	0.24	0.55	0.08		0.27			0.44	
Uniform Delay, d1	9.2	9.1	8.7	9.6	11.5	8.9		12.1			13.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.1	0.3	0.1	0.9	2.5	0.2		0.7			1.2	
Delay (s)	10.4	9.4	8.8	10.5	14.0	9.1		12.8			14.3	
Level of Service	B	A	A	B	B	A		B			B	
Approach Delay (s)		9.6			12.8			12.8			14.3	
Approach LOS		A			B			B			B	

Intersection Summary

HCM Average Control Delay	12,9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	60,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	71,9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 Existant

4:30 pm
 3446-Site Contrecoeur

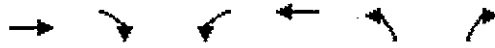


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Fr _t	1.00	0.85		1.00	1.00	0.85
Fit Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3505	1442		4999	1687	1509
Fit Permitted	1.00	1.00		0.69	0.95	1.00
Satd. Flow (perm)	3505	1442		3470	1687	1509
Volume (vph)	1450	108	169	898	83	146
Peak-hour factor, PHF	0.94	0.92	0.77	0.86	0.85	0.70
Adj. Flow (vph)	1543	117	219	1044	98	209
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1543	117	0	1263	98	209
Heavy Vehicles (%)	3%	12%	7%	2%	7%	7%
Turn Type	custom		pm+pt		custom	
Protected Phases	2	2 4	1	1 2	4	4 1
Permitted Phases		2 4	1 2			1 4
Actuated Green, G (s)	28.0	49.6		40.0	16.6	33.6
Effective Green, g (s)	29.0	50.6		42.0	17.6	34.6
Actuated g/C Ratio	0.41	0.71		0.59	0.25	0.48
Clearance Time (s)	5.0				5.0	
Vehicle Extension (s)	3.0				5.0	
Lane Grp Cap (vph)	1420	1019		2313	415	729
v/s Ratio Prot	c0,44	0,08		c0,10	0,06	c0,14
v/s Ratio Perm				0,22		
v/c Ratio	1.09	0.11		0.55	0.24	0.29
Uniform Delay, d1	21.3	3.4		9.0	21.6	11.1
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	51.1	0.1		0.3	0.6	0.5
Delay (s)	72.4	3.5		9.3	22.2	11.6
Level of Service	E	A		A	C	B
Approach Delay (s)	67.5			9.3	15.0	
Approach LOS	E			A	B	

Intersection Summary				
HCM Average Control Delay		39,8	HCM Level of Service	D
HCM Volume to Capacity ratio		0.74		
Actuated Cycle Length (s)		71,6	Sum of lost time (s)	12,0
Intersection Capacity Utilization		83,4%	ICU Level of Service	E
Analysis Period (min)		15		
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
 Existant

4:30 pm
 3446-Site Contrecoeur



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑↑	↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		
Lane Util. Factor	0.95	1.00		0.91		
Frbp, ped/bikes	1.00	0.97		1.00		
Flpb, ped/bikes	1.00	1.00		1.00		
Frt	1.00	0.85		1.00		
Flt Protected	1.00	1.00		1.00		
Satd. Flow (prot)	3471	1553		4987		
Flt Permitted	1.00	1.00		0.90		
Satd. Flow (perm)	3471	1553		4507		
Volume (vph)	1314	74	10	984	0	0
Peak-hour factor, PHF	0.90	0.89	0.56	0.87	0.92	0.92
Adj. Flow (vph)	1460	83	18	1131	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1460	83	0	1149	0	0
Confl. Peds. (#/hr)		15	15			
Heavy Vehicles (%)	4%	1%	0%	4%	0%	0%
Turn Type		Perm	Perm			
Protected Phases	2			2		
Permitted Phases		2	2		3	
Actuated Green, G (s)	74.6	74.6		74.6		
Effective Green, g (s)	75.6	75.6		75.6		
Actuated g/C Ratio	0.84	0.84		0.84		
Clearance Time (s)	5.0	5.0		5.0		
Vehicle Extension (s)	3.0	3.0		3.0		
Lane Grp Cap (vph)	2916	1305		3786		
v/s Ratio Prot	c0,42					
v/s Ratio Perm		0,05		0,25		
v/c Ratio	0.50	0.06		0.30		
Uniform Delay, d1	2.0	1.2		1.5		
Progression Factor	0.48	0.72		1.00		
Incremental Delay, d2	0.4	0.1		0.2		
Delay (s)	1.4	0.9		1.8		
Level of Service	A	A		A		
Approach Delay (s)	1.4			1.8	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	1,5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	14,4
Intersection Capacity Utilization	95,0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

4:30 pm

Existant

3446-Site Contrecoeur



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑↑						↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		0.95			0.91						0.95	
Frbp, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			1.00						0.98	
Flt Protected		1.00			1.00						0.96	
Satd. Flow (prot)		3525			4986						3418	
Flt Permitted		1.00			0.80						0.96	
Satd. Flow (perm)		3525			4008						3418	
Volume (vph)	0	1444	30	15	1035	0	0	0	0	155	27	22
Peak-hour factor, PHF	0.92	0.91	0.61	0.39	0.89	0.92	0.92	0.92	0.92	0.68	0.69	0.63
Adj. Flow (vph)	0	1587	49	38	1163	0	0	0	0	228	39	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1636	0	0	1201	0	0	0	0	0	302	0
Confl. Peds. (#/hr)	15					15	51		17			
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Perm							Perm	
Protected Phases		2			2							4
Permitted Phases				2							4	
Actuated Green, G (s)		54.0			54.0							26.0
Effective Green, g (s)		55.0			55.0							27.0
Actuated g/C Ratio		0.61			0.61							0.30
Clearance Time (s)		5.0			5.0							5.0
Lane Grp Cap (vph)		2154			2449							1025
v/s Ratio Prot		c0,46										
v/s Ratio Perm					0,30							0,09
v/c Ratio		0.76			0.49							0.29
Uniform Delay, d1		12.7			9.7							24.2
Progression Factor		1.00			0.93							1.00
Incremental Delay, d2		2.6			0.7							0.7
Delay (s)		15.3			9.8							24.9
Level of Service		B			A							C
Approach Delay (s)		15.3			9.8			0.0				24.9
Approach LOS		B			A			A				C

Intersection Summary

HCM Average Control Delay	14,1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	68,4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Fr't	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3505	1442		5024	1687	1509
Flt Permitted	1.00	1.00		0.67	0.95	1.00
Satd. Flow (perm)	3505	1442		3393	1687	1509
Volume (vph)	1640	108	169	1340	83	146
Peak-hour factor, PHF	0.94	0.92	0.77	0.86	0.85	0.70
Adj. Flow (vph)	1745	117	219	1558	98	209
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1745	117	0	1777	98	209
Heavy Vehicles (%)	3%	12%	7%	2%	7%	7%
Turn Type	custom		pm+pt		custom	
Protected Phases	2	2 4	1	1 2	4	4 1
Permitted Phases		2 4	1 2			1 4
Actuated Green, G (s)	28.0	49.6		40.0	16.6	33.6
Effective Green, g (s)	29.0	50.6		42.0	17.6	34.6
Actuated g/C Ratio	0.41	0.71		0.59	0.25	0.48
Clearance Time (s)	5.0				5.0	
Vehicle Extension (s)	3.0				5.0	
Lane Grp Cap (vph)	1420	1019		2286	415	729
v/s Ratio Prot	c0,50	0,08		c0,14	0,06	c0,14
v/s Ratio Perm				0,31		
v/c Ratio	1.23	0.11		0.78	0.24	0.29
Uniform Delay, d1	21.3	3.4		11.2	21.6	11.1
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	109.4	0.1		1.7	0.6	0.5
Delay (s)	130.7	3.5		13.0	22.2	11.6
Level of Service	F	A		B	C	B
Approach Delay (s)	122.7			13.0	15.0	
Approach LOS	F			B	B	

Intersection Summary			
HCM Average Control Delay	64,9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	71,6	Sum of lost time (s)	12,0
Intersection Capacity Utilization	97,2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑↑	↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		
Lane Util. Factor	0.95	1.00		0.91		
Frpb, ped/bikes	1.00	0.97		1.00		
Flpb, ped/bikes	1.00	1.00		1.00		
Frnt	1.00	0.85		1.00		
Flt Protected	1.00	1.00		1.00		
Satd. Flow (prot)	3471	1553		4987		
Flt Permitted	1.00	1.00		0.90		
Satd. Flow (perm)	3471	1553		4496		
Volume (vph)	1371	74	10	984	0	0
Peak-hour factor, PHF	0.90	0.89	0.56	0.87	0.92	0.92
Adj. Flow (vph)	1523	83	18	1131	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1523	83	0	1149	0	0
Confl. Peds. (#/hr)		15	15			
Heavy Vehicles (%)	4%	1%	0%	4%	0%	0%
Turn Type		Perm	Perm			
Protected Phases	2			2		
Permitted Phases		2	2		3	
Actuated Green, G (s)	74.6	74.6		74.6		
Effective Green, g (s)	75.6	75.6		75.6		
Actuated g/C Ratio	0.84	0.84		0.84		
Clearance Time (s)	5.0	5.0		5.0		
Vehicle Extension (s)	3.0	3.0		3.0		
Lane Grp Cap (vph)	2916	1305		3777		
v/s Ratio Prot	c0,44					
v/s Ratio Perm		0,05		0,26		
v/c Ratio	0.52	0.06		0.30		
Uniform Delay, d1	2.1	1.2		1.5		
Progression Factor	0.53	0.81		1.00		
Incremental Delay, d2	0.5	0.1		0.2		
Delay (s)	1.5	1.1		1.8		
Level of Service	A	A		A		
Approach Delay (s)	1.5			1.8	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	1,6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	14,4
Intersection Capacity Utilization	95,0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

4:30 pm

Futur

3446-Site Contrecoeur



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑↑						↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		0.95			0.91						0.95	
Frbp, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			1.00						0.98	
Flt Protected		1.00			1.00						0.96	
Satd. Flow (prot)		3526			4986						3418	
Flt Permitted		1.00			0.80						0.96	
Satd. Flow (perm)		3526			3989						3418	
Volume (vph)	0	1489	30	15	1170	0	0	0	0	155	27	22
Peak-hour factor, PHF	0.92	0.91	0.61	0.39	0.89	0.92	0.92	0.92	0.92	0.68	0.69	0.63
Adj. Flow (vph)	0	1636	49	38	1315	0	0	0	0	228	39	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1685	0	0	1353	0	0	0	0	0	302	0
Confl. Peds. (#/hr)	15					15	51			17		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type					Perm							Perm
Protected Phases		2				2						4
Permitted Phases					2							4
Actuated Green, G (s)		54.0				54.0						26.0
Effective Green, g (s)		55.0				55.0						27.0
Actuated g/C Ratio		0.61				0.61						0.30
Clearance Time (s)		5.0				5.0						5.0
Lane Grp Cap (vph)		2155				2438						1025
v/s Ratio Prot		c0,48										
v/s Ratio Perm						0,34						0,09
v/c Ratio		0.78				0.55						0.29
Uniform Delay, d1		13.0				10.3						24.2
Progression Factor		1.00				0.93						1.00
Incremental Delay, d2		2.9				0.9						0.7
Delay (s)		15.9				10.5						24.9
Level of Service		B				B						C
Approach Delay (s)		15.9				10.5		0.0				24.9
Approach LOS		B				B		A				C

Intersection Summary

HCM Average Control Delay	14,6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	69,6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3505	1442		5024	1687	1509
Flt Permitted	1.00	1.00		0.65	0.95	1.00
Satd. Flow (perm)	3505	1442		3295	1687	1509
Volume (vph)	1640	108	169	1340	83	146
Peak-hour factor, PHF	0.94	0.92	0.77	0.86	0.85	0.70
Adj. Flow (vph)	1745	117	219	1558	98	209
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1745	117	0	1777	98	209
Heavy Vehicles (%)	3%	12%	7%	2%	7%	7%
Turn Type	custom		pm+pt		custom	
Protected Phases	2	2 4	1	1 2	4	4 1
Permitted Phases		2 4	1 2			1 4
Actuated Green, G (s)	48.0	68.0		60.0	15.0	32.0
Effective Green, g (s)	49.0	69.0		62.0	16.0	33.0
Actuated g/C Ratio	0.54	0.77		0.69	0.18	0.37
Clearance Time (s)	5.0			5.0		
Vehicle Extension (s)	3.0			5.0		
Lane Grp Cap (vph)	1908	1106		2520	300	553
v/s Ratio Prot	c0,50	0,08		c0,10	0,06	c0,14
v/s Ratio Perm				0,38		
v/c Ratio	0.91	0.11		0.71	0.33	0.38
Uniform Delay, d1	18.6	2.7		8.5	32.3	21.0
Progression Factor	0.55	0.29		1.00	1.00	1.00
Incremental Delay, d2	7.2	0.1		0.9	1.3	0.9
Delay (s)	17.5	0.9		9.4	33.6	21.9
Level of Service	B	A		A	C	C
Approach Delay (s)	16.5			9.4	25.6	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	14,0	HCM Level of Service	B
HCM Volume to Capacity ratio	0,78		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	12,0
Intersection Capacity Utilization	97,2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↕↕↕					↖		↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.95	1.00		0.91					1.00		1.00
Frt		1.00	0.85		0.97					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		3606	1615		5030					1805		1615
Flt Permitted		0.87	1.00		0.80					0.95		1.00
Satd. Flow (perm)		3148	1615		4014					1805		1615
Volume (vph)	26	1227	63	52	1174	288	0	0	0	159	0	74
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	1334	68	57	1276	313	0	0	0	173	0	80
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1362	68	0	1646	0	0	0	0	173	0	80
Turn Type	custom		Perm	D.Pm						custom		custom
Protected Phases	9	4			8							
Permitted Phases	4 9		4	4						2		2
Actuated Green, G (s)		52.5	52.5		52.5					26.5		26.5
Effective Green, g (s)		54.0	54.0		54.0					28.0		28.0
Actuated g/C Ratio		0.60	0.60		0.60					0.31		0.31
Clearance Time (s)		5.5	5.5		5.5					5.5		5.5
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		1889	969		2408					562		502
v/s Ratio Prot												
v/s Ratio Perm		0.43	0.04		0.41					0.10		0.05
v/c Ratio		0.72	0.07		0.68					0.31		0.16
Uniform Delay, d1		12.7	7.5		12.2					23.6		22.5
Progression Factor		0.49	0.68		0.74					1.00		1.00
Incremental Delay, d2		1.2	0.1		1.2					1.4		0.7
Delay (s)		7.5	5.2		10.2					25.0		23.1
Level of Service		A	A		B					C		C
Approach Delay (s)		7.4			10.2		0.0				24.4	
Approach LOS		A			B		A				C	

Intersection Summary

HCM Average Control Delay	10,1	HCM Level of Service	B
HCM Volume to Capacity ratio	0,58		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	83,6%	ICU Level of Service	E
Analysis Period (min)	15		
Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
Optimisé

4:30 pm
3446-Site Contrecoeur



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑↑	↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		
Lane Util. Factor	0.95	1.00		0.91		
Frbp, ped/bikes	1.00	0.97		1.00		
Fipb, ped/bikes	1.00	1.00		1.00		
Frt	1.00	0.85		1.00		
Flt Protected	1.00	1.00		1.00		
Satd. Flow (prot)	3471	1553		4987		
Flt Permitted	1.00	1.00		0.90		
Satd. Flow (perm)	3471	1553		4496		
Volume (vph)	1371	74	10	984	0	0
Peak-hour factor, PHF	0.90	0.89	0.56	0.87	0.92	0.92
Adj. Flow (vph)	1523	83	18	1131	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1523	83	0	1149	0	0
Confl. Peds. (#/hr)		15	15			
Heavy Vehicles (%)	4%	1%	0%	4%	0%	0%
Turn Type		Perm	Perm			
Protected Phases	2			2		
Permitted Phases		2	2		3	
Actuated Green, G (s)	74.6	74.6		74.6		
Effective Green, g (s)	75.6	75.6		75.6		
Actuated g/C Ratio	0.84	0.84		0.84		
Clearance Time (s)	5.0	5.0		5.0		
Vehicle Extension (s)	3.0	3.0		3.0		
Lane Grp Cap (vph)	2916	1305		3777		
v/s Ratio Prot	c0,44					
v/s Ratio Perm		0,05		0,26		
v/c Ratio	0.52	0.06		0.30		
Uniform Delay, d1	2.1	1.2		1.5		
Progression Factor	0.39	0.48		0.44		
Incremental Delay, d2	0.5	0.1		0.2		
Delay (s)	1.3	0.7		0.8		
Level of Service	A	A		A		
Approach Delay (s)	1.2			0.8	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	1,1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	14,4
Intersection Capacity Utilization	95,0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑↑						↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		0.95			0.91						0.95	
Frbp, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		1.00			1.00						0.98	
Flt Protected		1.00			1.00						0.96	
Satd. Flow (prot)		3526			4986						3418	
Flt Permitted		1.00			0.80						0.96	
Satd. Flow (perm)		3526			4015						3418	
Volume (vph)	0	1489	30	15	1170	0	0	0	0	155	27	22
Peak-hour factor, PHF	0.92	0.91	0.61	0.39	0.89	0.92	0.92	0.92	0.92	0.68	0.69	0.63
Adj. Flow (vph)	0	1636	49	38	1315	0	0	0	0	228	39	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1685	0	0	1353	0	0	0	0	0	302	0
Confl. Peds. (#/hr)	15					15	51		17			
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type				Perm							Perm	
Protected Phases		2			2							4
Permitted Phases				2							4	
Actuated Green, G (s)		55.0			55.0							25.0
Effective Green, g (s)		56.0			56.0							26.0
Actuated g/C Ratio		0.62			0.62							0.29
Clearance Time (s)		5.0			5.0							5.0
Vehicle Extension (s)		3.0			3.0							3.0
Lane Grp Cap (vph)		2194			2498							987
v/s Ratio Prot		0.48										
v/s Ratio Perm					0.34							0.09
v/c Ratio		0.77			0.54							0.31
Uniform Delay, d1		12.3			9.7							25.0
Progression Factor		1.00			1.48							1.00
Incremental Delay, d2		2.6			0.8							0.2
Delay (s)		14.9			15.2							25.1
Level of Service		B			B							C
Approach Delay (s)		14.9			15.2		0.0					25.1
Approach LOS		B			B		A					C

Intersection Summary			
HCM Average Control Delay	16,0	HCM Level of Service	B
HCM Volume to Capacity ratio	0,62		
Actuated Cycle Length (s)	90,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	69,6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		0.95			0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.98			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1805	1881	1615	1719	1881	1615		3518			3454	
Flt Permitted	0.39	1.00	1.00	0.59	1.00	1.00		0.81			0.61	
Satd. Flow (perm)	733	1881	1615	1069	1881	1615		2876			2165	
Volume (vph)	23	192	39	158	378	112	87	336	48	144	157	26
Peak-hour factor, PHF	0.63	0.83	0.75	0.89	0.89	0.88	0.88	0.86	0.79	0.88	0.91	0.55
Adj. Flow (vph)	37	231	52	178	425	127	99	391	61	164	173	47
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	37	231	52	178	425	127	0	551	0	0	384	0
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	23.9	23.9	23.9	23.9	23.9	23.9		23.7			23.7	
Effective Green, g (s)	26.0	26.0	26.0	26.0	26.0	26.0		26.0			26.0	
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43	0.43		0.43			0.43	
Clearance Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.3			6.3	
Lane Grp Cap (vph)	318	815	700	463	815	700		1246			938	
v/s Ratio Prot		0,12			c0,23							
v/s Ratio Perm	0,05		0,03	0,17		0,08		c0,19			0,18	
v/c Ratio	0.12	0.28	0.07	0.38	0.52	0.18		0.44			0.41	
Uniform Delay, d1	10.1	11.0	10.0	11.6	12.4	10.5		11.9			11.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.7	0.9	0.2	2.4	2.4	0.6		1.1			1.3	
Delay (s)	10.9	11.9	10.2	14.0	14.8	11.0		13.1			13.0	
Level of Service	B	B	B	B	B	B		B			B	
Approach Delay (s)		11.5			14.0			13.1			13.0	
Approach LOS		B			B			B			B	

Intersection Summary

HCM Average Control Delay	13,1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60,0	Sum of lost time (s)	8,0
Intersection Capacity Utilization	79,6%	ICU Level of Service	D
Analysis Period (min)	15		
c - Critical Lane Group			

ANALYSE SIMTRAFFIC

2: Sherbrooke & Georges V Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	2.0	0.0	0.6	2.6	0.3	0.4	5.9
Delay / Veh (s)	15.6	3.1	13.1	7.4	17.9	9.9	10.0

4: Sherbrooke & Contrecoeur Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	0.0	0.0	0.0	0.6	0.6
Delay / Veh (s)	0.3	0.5	4.7	1.5	1.2

7: Sherbrooke & Fletcher Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	0.3	0.0	0.0	1.0	1.4
Delay / Veh (s)	2.0	2.4	4.7	2.6	2.4

9: Sherbrooke & Taillon Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Total Delay (hr)	1.0	0.0	0.0	4.0	0.4	0.1	0.3	5.9
Delay / Veh (s)	6.7	7.4	15.6	10.8	29.0	19.6	23.2	10.5

19: Yves-Prévost & Roi-René Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.2	0.0	0.0	1.4	0.1	0.2	0.3	0.0	0.1	0.6	0.2
Delay / Veh (s)	11.0	9.0	7.3	9.4	14.9	7.6	7.6	8.9	1.7	6.7	9.8	5.9

19: Yves-Prévost & Roi-René Performance by movement

Movement	All
Total Delay (hr)	3.3
Delay / Veh (s)	10.4

Total Network Performance

Total Delay (hr)	19.8
Delay / Veh (s)	18.8

2: Sherbrooke & Georges V Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	3.2	0.0	0.8	3.4	0.3	0.4	8.1
Delay / Veh (s)	16.4	2.9	16.8	8.4	19.2	10.3	11.3

4: Sherbrooke & Contrecoeur Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	All
Total Delay (hr)	0.0	0.1	0.0	0.0	0.8	0.1	1.4	0.1	2.5
Delay / Veh (s)	8.8	0.5	0.3	4.2	2.0	2.1	28.2	4.6	3.8

7: Sherbrooke & Fletcher Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	0.3	0.0	0.0	1.2	1.5
Delay / Veh (s)	1.9	2.0	6.0	2.7	2.5

9: Sherbrooke & Taillon Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Total Delay (hr)	1.0	0.0	0.0	4.6	0.3	0.2	0.2	6.3
Delay / Veh (s)	6.4	6.3	15.2	11.4	26.7	20.3	20.6	10.6

19: Yves-Prévost & Roi-René Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.3	0.0	0.6	2.9	0.2	0.2	0.4	0.0	0.2	0.7	0.3
Delay / Veh (s)	11.8	10.2	7.8	19.3	25.6	16.8	8.9	9.9	3.2	9.3	11.0	7.1

19: Yves-Prévost & Roi-René Performance by movement

Movement	All
Total Delay (hr)	5.8
Delay / Veh (s)	15.5

Total Network Performance

Total Delay (hr)	28.0
Delay / Veh (s)	22.1

2: Sherbrooke & Georges V Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	2.0	0.1	0.4	1.7	0.6	0.7	5.4
Delay/Veh (s)	9.9	5.6	8.9	4.1	32.8	18.5	7.5

4: Sherbrooke & Contrecoeur Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	All
Total Delay (hr)	0.1	1.7	0.0	0.1	5.5	0.4	1.4	0.5	9.6
Delay/Veh (s)	30.3	10.7	7.1	16.5	13.1	12.8	27.4	20.2	14.0

7: Sherbrooke & Fletcher Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	0.4	0.0	0.0	1.2	1.6
Delay/Veh (s)	2.2	2.5	6.8	2.7	2.6

9: Sherbrooke & Taillon Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Total Delay (hr)	1.1	0.0	0.0	2.4	0.3	0.1	0.2	4.2
Delay/Veh (s)	6.5	7.8	10.0	6.0	26.3	18.5	21.1	7.0

19: Yves-Prévost & Roi-René Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.2	0.2	0.1	0.5	1.7	0.2	0.5	0.4	0.0	0.3	0.8	0.5
Delay/Veh (s)	24.0	8.1	15.4	17.2	14.9	13.8	23.1	10.9	9.5	17.4	13.0	13.7

19: Yves-Prévost & Roi-René Performance by movement

Movement	All
Total Delay (hr)	5.6
Delay/Veh (s)	14.6

Total Network Performance

Total Delay (hr)	28.8
Delay/Veh (s)	22.4

2: Sherbrooke & Georges V Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	12.2	0.2	1.0	1.6	0.5	0.4	15.9
Delay / Veh (s)	30.0	5.6	20.6	6.4	23.2	10.6	19.9

4: Sherbrooke & Contrecoeur Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	0.3	0.0	0.1	0.4	0.8
Delay / Veh (s)	0.8	0.9	8.5	1.4	1.2

7: Sherbrooke & Fletcher Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	1.6	0.1	0.0	1.0	2.7
Delay / Veh (s)	3.6	4.9	16.3	3.5	3.7

9: Sherbrooke & Taillon Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Total Delay (hr)	4.5	0.1	0.1	2.3	1.3	0.2	0.2	8.6
Delay / Veh (s)	11.1	11.4	27.5	7.8	29.5	22.0	25.6	11.2

19: Yves-Prévost & Roi-René Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.4	0.1	0.3	1.6	0.3	0.2	1.0	0.1	0.1	0.4	0.0
Delay / Veh (s)	11.6	11.3	8.3	12.5	16.6	9.8	9.2	10.7	4.8	8.0	9.6	4.9

19: Yves-Prévost & Roi-René Performance by movement

Movement	All
Total Delay (hr)	4.6
Delay / Veh (s)	11.6

Total Network Performance

Total Delay (hr)	35.4
Delay / Veh (s)	25.4

2: Sherbrooke & Georges V Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	27.7	0.7	1.1	3.1	0.5	0.4	33.6
Delay / Veh (s)	62.0	24.5	24.7	8.2	22.7	10.2	35.1

4: Sherbrooke & Contrecoeur Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	All
Total Delay (hr)	0.1	1.6	0.1	0.2	0.9	0.2	1.4	0.1	4.5
Delay / Veh (s)	12.7	4.6	3.1	12.8	2.7	2.7	29.7	3.2	5.1

7: Sherbrooke & Fletcher Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	1.7	0.1	0.0	0.9	2.8
Delay / Veh (s)	4.0	4.2	16.8	2.5	3.4

9: Sherbrooke & Taillon Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Total Delay (hr)	4.6	0.1	0.2	2.8	1.3	0.2	0.1	9.3
Delay / Veh (s)	11.2	11.4	27.8	8.6	31.7	21.3	20.1	11.5

19: Yves-Prévost & Roi-René Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	1.0	0.1	1.6	4.4	0.9	0.3	1.4	0.1	0.6	0.5	0.1
Delay / Veh (s)	15.3	17.4	10.4	35.4	40.6	29.7	13.9	14.5	8.2	13.9	11.7	6.3

19: Yves-Prévost & Roi-René Performance by movement

Movement	All
Total Delay (hr)	11.1
Delay / Veh (s)	22.8

Total Network Performance

Total Delay (hr)	64.7
Delay / Veh (s)	37.8

2: Sherbrooke & Georges V Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Total Delay (hr)	4.5	0.1	1.2	2.1	0.7	0.8	9.4
Delay / Veh (s)	9.7	3.0	27.5	5.8	31.2	20.6	9.8

4: Sherbrooke & Contrecoeur Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	All
Total Delay (hr)	0.2	5.8	0.3	0.8	6.0	1.2	1.2	0.5	16.0
Delay / Veh (s)	34.1	16.1	14.6	59.6	18.0	16.1	26.9	22.2	18.3

7: Sherbrooke & Fletcher Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Total Delay (hr)	1.7	0.1	0.1	0.8	2.7
Delay / Veh (s)	3.8	3.9	21.4	2.3	3.2

9: Sherbrooke & Taillon Performance by movement

Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Total Delay (hr)	4.5	0.1	0.2	4.8	1.2	0.1	0.2	11.1
Delay / Veh (s)	10.8	11.7	42.8	14.8	30.0	23.1	23.4	13.7

19: Yves-Prévost & Roi-René Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.6	0.2	1.0	2.0	0.6	0.4	1.2	0.1	0.9	0.5	0.1
Delay / Veh (s)	23.6	12.1	14.9	24.6	19.9	18.7	18.0	12.4	10.6	23.8	11.3	11.0

19: Yves-Prévost & Roi-René Performance by movement

Movement	All
Total Delay (hr)	7.8
Delay / Veh (s)	16.8

Total Network Performance

Total Delay (hr)	49.8
Delay / Veh (s)	29.3

CD