Appendix D:
Synchro Analysis Output

Table 1: Operational Analysis Summary – Home Road and Limestone Street

		Overall Int.	Eastbound Home Road			Westbound Home Road			Northbound Limestone Street			Southbound Limestone Street		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2016 Existing Conditions	LOS	C	D	D		C	D	C	B	B		B	B	
	Delay (s)	25.7	35.2	47.7		33.3	37.1	29.0	14.9	17.7		13.4	18.6	
	v/c		0.35	0.76		0.69	0.56	0.16	0.04	0.22		0.19	0.44	
	Queue (ft)		73	172		9	213	32	16	92		68	243	
			D – 43.1			C – 34.2			B – 17.5			B – 18.0		
2040 No Build Conditions	LOS	C	C	D		C	D	C	B	C		B	C	
	Delay (s)	29.5	32.8	51.6		34.0	35.7	26.5	18.3	21.5		16.4	25.9	
	v/c		0.41	0.81		0.77	0.62	0.16	0.09	0.30		0.25	0.62	
	Queue (ft)		90	215		184	22	0	21	117		75	317	
			D – 44.8			C – 33.8			C – 21.5			C – 24.8		
2040 Build Conditions	LOS	C	C	D		C	D		B	C		B	C	
	Delay (s)	30.6	33.8	51.2		32.8	42.0		18.4	21.6		16.5	26.0	
	v/c		0.49	0.80		0.77	0.82		0.09	0.30		0.25	0.62	
	Queue (ft)		90	215		91	259		21	117		75	317	
			D – 44.8			D – 37.7			C – 21.5			C – 24.9		
PM Peak Hour														
2016 Existing Conditions	LOS	C	C	D		C	D	C	B	C		B	C	
	Delay (s)	31.0	31.3	46.4		32.3	41.3	28.8	18.8	27.5		19.3	26.1	
	v/c		0.68	0.82		0.72	0.75	0.23	0.13	0.52		0.36	0.52	
	Queue (ft)		150	264		237	282	88	37	240		86	267	
			D – 39.6			D – 35.8			C – 27.0			C – 25.2		
2040 No Build Conditions	LOS	D	D	D		D	D	C	C	D		C	D	
	Delay (s)	40.2	37.7	52.0		36.6	45.8	25.9	24.4	41.0		25.4	39.0	
	v/c		0.82	0.88		0.83	0.84	0.22	0.24	0.76		0.53	0.76	
	Queue (ft)		255	378		277	359	3	44	302		96	372	
			D – 45.5			D – 39.4			D – 40.1			D – 37.2		
2040 Build Conditions	LOS	D	D	D		C	D		C	D		C	D	
	Delay (s)	45.5	51.7	36.0		26.2	44.0		27.5	51.8		32.8	52.0	
	v/c		0.92	0.72		0.73	0.89		0.29	0.85		0.64	0.87	
	Queue (ft)		304	321		182	357		48	353		142	437	
			D – 43.2			D – 37.0			D – 50.4			D – 49.5		

Table 2: Operational Analysis Summary – Home Road and Grube Street

		Overall Int.	Eastbound Home Road			Westbound Home Road			Northbound Grube Street			Southbound Kroger		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2016 Existing Conditions	LOS	D	C	D		C	D		A			A	A	
	Delay (s)	37.4	34.4	39.8		32.7	39.0		7.7			7.6	7.6	
	v/c		0.02	0.60		0.14	0.67		0.03			0.01	0.01	
	Queue (ft)		6	181		8	167		16			13	0	
			D – 39.8			D – 38.6			A – 7.7			A – 7.6		
2040 No Build Conditions	LOS	C	C	D		C	D		A			A	A	
	Delay (s)	34.0	30.2	35.6		28.9	36.3		10.0			9.7	9.8	
	v/c		0.06	0.57		0.14	0.69		0.05			0.01	0.03	
	Queue (ft)		14	180		21	233		27			14	0	
			D – 35.5			D – 35.9			A – 10.0			A – 9.8		
2040 Build Conditions	LOS	C	C	C		C	C		B			B	B	
	Delay (s)	27.7	22.7	27.1		20.2	29.9		17.9			17.5	17.6	
	v/c		0.06	0.67		0.11	0.83		0.06			0.02	0.03	
	Queue (ft)		7	304		24	469		41			21	0	
			C – 27.0			C – 29.4			B – 17.9			B – 17.6		
PM Peak Hour														
2016 Existing Conditions	LOS	C	C	C		C	C		B			B	B	
	Delay (s)	30.1	27.3	35.0		27.1	31.6		12.7			11.9	12.0	
	v/c		0.06	0.68		0.24	0.56		0.14			0.05	0.06	
	Queue (ft)		9	229		42	242		56			34	23	
			C – 34.8			C – 31.2			B – 12.7			B – 12.0		
2040 No Build Conditions	LOS	C	C	C		C	C		B			B	B	
	Delay (s)	28.0	23.8	31.5		24.1	29.1		16.0			14.8	15.0	
	v/c		0.09	0.69		0.26	0.60		0.18			0.06	0.08	
	Queue (ft)		10	230		55	291		79			42	32	
			C – 31.3			C – 28.6			B – 16.0			B – 14.9		
2040 Build Conditions	LOS	C	B	C		B	C		C			C	C	
	Delay (s)	23.4	15.8	24.8		18.2	20.8		29.7			27.2	27.5	
	v/c		0.08	0.83		0.25	0.74		0.29			0.10	0.14	
	Queue (ft)		5	318		19	482		118			59	45	
			C – 24.6			C – 20.6			C – 29.7			C – 27.4		

Table 3: Operational Analysis Summary – Home Road and N High School Place

		Overall Int.	Eastbound Home Road		Westbound Home Road		Northbound N High School Place	
			TH	RT	LT	TH	LT	RT
AM Peak Hour								
2016 Existing Conditions	LOS	C	D		C	C	B	B
	Delay (s)	28.0	39.1		28.2	22.6	12.7	13.9
	v/c		0.67		0.63	0.34	0.06	0.18
	Queue (ft)		211		152	137	43	38
			D – 39.1		C – 24.4		B – 13.6	
2040 No Build Conditions	LOS	C	D		C	B	B	B
	Delay (s)	26.6	37.4		26.3	19.6	15.7	17.6
	v/c		0.70		0.71	0.37	0.08	0.24
	Queue (ft)		252		207	150	59	45
			D – 37.4		C – 21.8		B – 17.1	
2040 Build Conditions	LOS	C	C		C	B	C	C
	Delay (s)	24.6	33.7		24.3	14.9	23.5	26.7
	v/c		0.84		0.79	0.54	0.11	0.33
	Queue (ft)		382		159	235	72	54
			C – 33.7		B – 18.0		C – 25.8	
PM Peak Hour								
2016 Existing Conditions	LOS	C	C		C	C	B	B
	Delay (s)	25.6	32.3		23.8	21.9	14.5	15.7
	v/c		0.68		0.31	0.45	0.09	0.20
	Queue (ft)		282		47	148	60	39
			C – 32.3		C – 22.1		B – 15.3	
2040 No Build Conditions	LOS	C	C		C	B	B	C
	Delay (s)	23.5	29.3		21.4	18.6	18.4	20.6
	v/c		0.70		0.38	0.49	0.12	0.28
	Queue (ft)		272		61	183	78	48
			C – 29.3		B - 18.9		B – 19.9	
2040 Build Conditions	LOS	C	C		B	B	C	D
	Delay (s)	20.5	23.5		19.2	10.3	34.2	44.9
	v/c		0.87		0.38	0.64	0.23	0.62
	Queue (ft)		121		45	228	98	61
			C – 23.5		B – 11.3		D – 41.5	

Table 4: Operational Analysis Summary – Home Road and Northmoor Drive

		Overall Int.	Eastbound Home Road		Westbound Home Road		Southbound Northmoor Drive	
			LT	TH	TH	RT	LT	RT
AM Peak Hour								
2016 Existing Conditions	LOS	B	B	B	B		A	A
	Delay (s)	14.0	17.6	13.8	14.7		7.9	8.2
	v/c		0.09	0.45	0.54		0.03	0.07
	Queue (ft)		10	55	135		14	16
			B – 14.0		B – 14.7		A – 8.1	
2040 No Build Conditions	LOS	B	B	B	B		A	B
	Delay (s)	12.5	16.7	12.1	13.0		9.7	10.2
	v/c		0.11	0.47	0.57		0.05	0.11
	Queue (ft)		6	37	92		22	20
			B – 12.3		B – 13.0		B – 10.0	
2040 Build Conditions	LOS	B	B	B	B		B	B
	Delay (s)	12.7	19.5	10.6	13.9		14.2	15.0
	v/c		0.14	0.67	0.83		0.07	0.16
	Queue (ft)		8	275	275		24	22
			B – 11.0		B – 13.9		B – 14.8	
PM Peak Hour								
2016 Existing Conditions	LOS	B	B	B	B		A	A
	Delay (s)	12.9	16.1	13.2	12.8		9.4	9.8
	v/c		0.12	0.60	0.51		0.04	0.08
	Queue (ft)		15	285	93		18	19
			B – 13.3		B – 12.8		A – 9.7	
2040 No Build Conditions	LOS	B	B	B	B		B	B
	Delay (s)	11.6	15.3	11.7	11.1		11.5	12.1
	v/c		0.17	0.64	0.54		0.05	0.12
	Queue (ft)		20	144	89		23	21
			B – 11.9		B – 11.1		B – 11.9	
2040 Build Conditions	LOS	B	C	B	B		C	C
	Delay (s)	16.7	26.5	17.4	13.9		28.1	29.2
	v/c		0.20	0.84	0.73		0.07	0.15
	Queue (ft)		12	238	587		48	39
			B – 17.9		B – 13.9		C – 28.8	

Table 5: Operational Analysis Summary – Home Road and Derr Road

		Overall Int.	Eastbound Home Road			Westbound Home Road			Northbound Driveway			Southbound Derr Road		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2016 Existing Conditions	LOS	C	C	C		C	D		B			B		B
	Delay (s)	26.7	29.6	27.5		32.3	41.7		10.9			13.0		10.0
	v/c		0.57	0.24		0.00	0.75		0.00			0.20		0.36
	Queue (ft)		105	92		0	178		0			147		102
			C – 28.3			D – 41.7			B – 10.9			B – 11.0		
2040 No Build Conditions	LOS	C	C	C		A*	D		A*			B		B
	Delay (s)	26.2	28.0	20.6		0.0	41.4		0.0			15.1		12.5
	v/c		0.64	0.23		0.00	0.76		0.00			0.20		0.45
	Queue (ft)		164	97		0	212		0			142		117
			C – 23.5			D – 41.4			A – 0.0			B – 13.2		
2040 Build Conditions	LOS	C	C	B		A*	D	C	A*			B	C	
	Delay (s)	27.9	27.3	18.8		0.0	39.9	28.3	0.0			17.8	25.5	
	v/c		0.68	0.37		0.00	0.84	0.31	0.00			0.18	0.61	
	Queue (ft)		113	161		0	334	50	0			125	116	
			C – 22.1			D – 37.1			A – 0.0			C – 23.5		
PM Peak Hour														
2016 Existing Conditions	LOS	C	C	A		A*	C		A*			B		B
	Delay (s)	21.5	31.9	7.4		0.0	29.8		0.0			19.5		13.4
	v/c		0.85	0.24		0.00	0.82		0.00			0.49		0.46
	Queue (ft)		114	45		0	81		0			145		50
			B – 18.1			C – 29.8			A – 0.0			B – 16.2		
2040 No Build Conditions	LOS	C	C	A		A*	D		A*			C		B
	Delay (s)	24.4	25.8	6.8		0.0	41.6		0.0			20.8		15.0
	v/c		0.88	0.29		0.00	0.92		0.00			0.49		0.56
	Queue (ft)		327	7		0	150		0			131		104
			B – 14.9			D – 41.6			A – 0.0			B – 17.3		
2040 Build Conditions	LOS	C	D	B		A*	D	C	A*			C	C	
	Delay (s)	31.0	37.0	16.4		0.0	44.1	33.7	0.0			24.9	31.2	
	v/c		0.92	0.55		0.00	0.88	0.66	0.00			0.33	0.63	
	Queue (ft)		246	159		0	362	97	0			199	54	
			C – 25.1			D – 40.1			A – 0.0			C – 28.7		

*Based on 0 volume

Table 6: Operational Analysis Summary – Home Road and Belmont Avenue

		Overall Int.	Eastbound Home Road		Westbound Home Road		Northbound Belmont Avenue	
			TH	RT	LT	TH	LT	RT
AM Peak Hour								
2016 Existing Conditions	LOS	B	B		B		A	A
	Delay (s)	13.4	16.4		15.8		7.3	5.8
	v/c		0.37		0.29		0.25	0.02
	Queue (ft)		33		56		65	6
			B – 16.4		B – 15.8		A – 7.2	
2040 No Build Conditions	LOS	B	B		B		A	A
	Delay (s)	14.3	17.0		16.5		7.2	5.9
	v/c		0.45		0.42		0.25	0.03
	Queue (ft)		91		68		74	8
			B – 17.0		B – 16.5		A – 7.1	
2040 Build Conditions	LOS	B	B		B	B	A	A
	Delay (s)	14.2	16.3		19.9	14.5	9.8	7.9
	v/c		0.67		0.16	0.52	0.29	0.03
	Queue (ft)		137		13	111	92	11
			B – 16.3		B – 15.2		A – 9.6	
PM Peak Hour								
2016 Existing Conditions	LOS	B	B		B		A	A
	Delay (s)	14.2	17.8		16.3		8.1	6.0
	v/c		0.55		0.41		0.35	0.05
	Queue (ft)		66		65		104	11
			B – 17.8		B – 16.3		A – 7.9	
2040 No Build Conditions	LOS	B	B		B		A	A
	Delay (s)	15.0	18.0		16.6		8.8	6.6
	v/c		0.63		0.57		0.37	0.07
	Queue (ft)		74		74		113	14
			B – 18.0		B – 16.6		A – 8.5	
2040 Build Conditions	LOS	B	B		C	B	B	B
	Delay (s)	15.8	18.7		20.6	12.9	15.1	10.7
	v/c		0.80		0.14	0.62	0.50	0.09
	Queue (ft)		218		10	135	138	17
			B – 18.7		B – 13.4		B – 14.5	

Table 7: Operational Analysis Summary – Home Road and Mechanicsburg Road

		Overall Int.	Eastbound Home Road			Westbound Croft Road			Northbound Mechanicsburg Rd			Southbound Mechanicsburg Rd		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2016 Existing Conditions	LOS	B	C	B		B	C		A	A		A	A	
	Delay (s)	11.7	21.7	15.5		16.3	20.1		7.2	6.1		8.9	6.7	
	v/c		0.11	0.22		0.03	0.71		0.03	0.08		0.32	0.17	
	Queue (ft)		22	51		12	98		11	23		97	43	
			B – 16.8			B – 20.0			A – 6.2			A – 7.7		
2040 No Build Conditions	LOS	B	C	B		B	C		B	A		B	A	
	Delay (s)	13.4	22.4	14.5		15.8	23.6		11.2	7.8		13.7	9.5	
	v/c		0.19	0.29		0.05	0.76		0.10	0.18		0.48	0.39	
	Queue (ft)		35	75		17	173		20	40		122	85	
			B – 16.4			C – 23.1			A – 8.2			B – 10.8		
2040 Build Conditions	LOS	B	C	B		B	C		B	A		B	A	
	Delay (s)	13.4	22.3	14.5		15.8	23.6		11.2	7.8		13.7	9.5	
	v/c		0.19	0.29		0.05	0.76		0.10	0.18		0.48	0.39	
	Queue (ft)		26	50		17	173		20	40		122	85	
			B – 16.3			C – 23.1			A – 8.2			B – 10.8		
PM Peak Hour														
2016 Existing Conditions	LOS	B	C	B		B	C		B	B		B	B	
	Delay (s)	15.6	22.1	11.8		13.5	22.5		11.5	10.3		16.3	10.7	
	v/c		0.22	0.31		0.07	0.81		0.06	0.18		0.45	0.23	
	Queue (ft)		43	99		21	159		17	40		110	45	
			B – 13.9			C – 21.9			B – 10.4			B – 13.1		
2040 No Build Conditions	LOS	C	C	B		B	D		B	B		C	B	
	Delay (s)	22.1	27.2	12.1		15.0	38.4		18.0	13.3		33.4	14.6	
	v/c		0.52	0.46		0.13	0.95		0.24	0.42		0.75	0.50	
	Queue (ft)		53	20		28	279		41	91		191	107	
			B – 15.5			D – 36.6			B – 13.9			C – 20.1		
2040 Build Conditions	LOS	C	C	B		B	C		C	B		D	B	
	Delay (s)	20.6	23.8	10.4		13.1	23.3		20.8	15.5		44.5	17.3	
	v/c		0.40	0.42		0.12	0.86		0.27	0.47		0.85	0.56	
	Queue (ft)		20	27		26	265		45	98		202	116	
			B – 13.4			C – 22.5			B – 16.1			C – 25.2		

Table 8: Operational Analysis Summary – Derr Road and Providence Avenue

		Overall Int.	Westbound Providence Ave		Northbound Derr Road		Southbound Derr Road	
			LT	RT	TH	RT	LT	TH
AM Peak Hour								
2016 Existing Conditions	LOS	A	B		A		A	A
	Delay (s)	8.2	17.9		5.9		6.3	5.9
	v/c		0.44		0.15		0.03	0.19
	Queue (ft)		61		80		4	22
			B – 17.9		A – 5.9		A - 6.0	
2040 No Build Conditions	LOS	A	B		A		A	A
	Delay (s)	9.0	18.3		6.3		6.9	6.4
	v/c		0.55		0.17		0.05	0.20
	Queue (ft)		68		12		8	28
			B – 18.3		A – 6.3		A – 6.4	
2040 Build Conditions	LOS	B	B		A		A	A
	Delay (s)	10.1	18.3		7.4		8.4	8.0
	v/c		0.55		0.33		0.05	0.39
	Queue (ft)		70		133		7	46
			B – 18.3		A – 7.4		A – 8.0	
PM Peak Hour								
2016 Existing Conditions	LOS	A	B		A		A	A
	Delay (s)	7.9	17.9		6.5		8.6	6.1
	v/c		0.43		0.29		0.16	0.24
	Queue (ft)		53		93		16	32
			B – 17.9		A – 6.5		A – 6.5	
2040 No Build Conditions	LOS	A	B		A		B	A
	Delay (s)	8.6	18.2		6.8		10.5	6.6
	v/c		0.53		0.33		0.24	0.26
	Queue (ft)		59		60		46	64
			B – 18.2		A – 6.8		A – 7.3	
2040 Build Conditions	LOS	B	B		B		B	A
	Delay (s)	11.5	18.2		10.3		16.7	9.0
	v/c		0.53		0.64		0.32	0.50
	Queue (ft)		60		284		28	95
			B – 18.2		B – 10.3		B – 10.5	

Table 9: Operational Analysis Summary – Derr Road and Northland Plaza Shopping Center

		Overall Int.	Eastbound Northland Plaza			Westbound Northland Plaza			Northbound Derr Road			Southbound Derr Road		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2016 Existing Conditions	LOS	B	D	D		D	D		A	A		A	A	
	Delay (s)	13.9	41.5	42.9		39.3	39.1		7.1	8.0		7.5	8.4	
	v/c		0.03	0.12		0.23	0.12		0.02	0.11		0.01	0.10	
	Queue (ft)		11	19		61	24		4	34		3	48	
			D – 42.5			D – 39.2			A – 8.0			A – 8.4		
2040 No Build Conditions	LOS	B	D	D		D	D		A	A		A	A	
	Delay (s)	16.0	38.9	41.6		37.5	37.7		8.1	9.6		8.5	10.0	
	v/c		0.05	0.21		0.27	0.14		0.03	0.13		0.02	0.12	
	Queue (ft)		18	35		71	33		7	60		9	70	
			D – 40.9			D – 37.6			A – 9.5			A – 9.9		
2040 Build Conditions	LOS	B	D	D		D	D		A	B		A	B	
	Delay (s)	16.8	38.9	41.6		37.5	37.7		8.3	10.7		8.7	10.9	
	v/c		0.05	0.21		0.27	0.14		0.03	0.26		0.02	0.23	
	Queue (ft)		19	35		73	34		7	104		9	145	
			D – 40.9			D – 37.6			B – 10.6			B – 10.8		
PM Peak Hour														
2016 Existing Conditions	LOS	B	D	D		D	D		A	B		B	B	
	Delay (s)	17.0	36.4	42.1		36.6	39.1		9.1	10.6		10.0	12.2	
	v/c		0.13	0.39		0.27	0.16		0.15	0.18		0.02	0.16	
	Queue (ft)		44	44		65	32		62	83		10	105	
			D – 40.1			D – 37.4			B – 10.3			B – 12.1		
2040 No Build Conditions	LOS	B	D	D		D	D		A	B		A	B	
	Delay (s)	17.9	36.2	43.3		36.8	39.4		9.4	11.3		10.0	12.6	
	v/c		0.18	0.51		0.32	0.17		0.19	0.20		0.04	0.18	
	Queue (ft)		54	54		71	34		74	90		14	133	
			D – 40.8			D – 37.6			B – 10.9			B – 12.4		
2040 Build Conditions	LOS	B	D	D		D	D		A	B		B	B	
	Delay (s)	19.2	36.2	43.3		36.8	39.4		9.9	13.3		10.4	14.4	
	v/c		0.18	0.51		0.32	0.17		0.21	0.39		0.04	0.34	
	Queue (ft)		58	54		76	35		42	237		8	269	
			D – 40.8			D – 37.6			B – 12.5			B – 14.1		

Table 10: Operational Analysis Summary – Derr Road and Villa Road

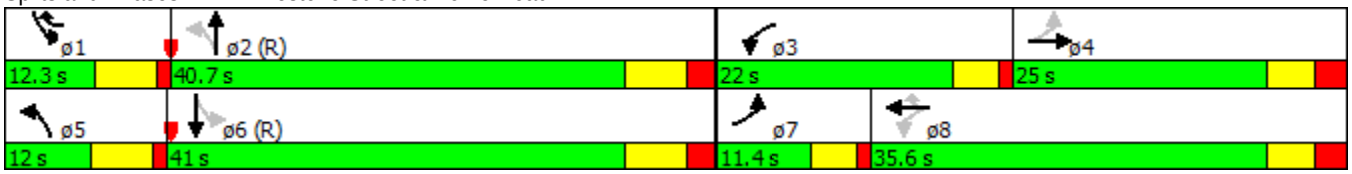
		Overall Int.	Eastbound Villa Road			Westbound Villa Road			Northbound Derr Road			Southbound Derr Road		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2016 Existing Conditions	LOS	C	D	D		D	D		A	B	B	A	B	
	Delay (s)	26.3	37.2	43.2		36.6	42.8		9.1	11.1	10.8	9.0	12.8	
	v/c		0.12	0.51		0.29	0.62		0.10	0.09	0.05	0.06	0.23	
	Queue (ft)		28	74		61	148		14	53	0	32	147	
			D – 42.7			D – 41.0			B – 10.4			B – 12.1		
2040 No Build Conditions	LOS	C	D	D		D	D		A	B	B	A	B	
	Delay (s)	28.3	36.8	43.9		36.2	44.4		9.8	12.1	11.8	9.6	13.8	
	v/c		0.13	0.61		0.38	0.76		0.13	0.10	0.07	0.08	0.24	
	Queue (ft)		25	94		71	189		18	22	0	42	162	
			D – 43.5			D – 42.0			B – 11.2			B – 12.9		
2040 Build Conditions	LOS	C	D	D		D	D		A	B		A	B	
	Delay (s)	28.4	36.8	43.9		36.2	44.4		9.8	12.8		9.7	13.8	
	v/c		0.13	0.61		0.38	0.76		0.13	0.17		0.09	0.24	
	Queue (ft)		25	94		71	189		21	23		42	162	
			D – 43.5			D – 42.0			B – 11.7			B – 12.9		
PM Peak Hour														
2016 Existing Conditions	LOS	C	C	D		C	D		B	B	B	B	B	
	Delay (s)	29.5	34.5	43.6		33.5	41.9		12.9	16.3	15.4	12.7	17.4	
	v/c		0.37	0.71		0.53	0.76		0.18	0.22	0.13	0.10	0.27	
	Queue (ft)		66	134		105	221		34	78	0	42	168	
			D – 42.0			D – 38.9			B – 15.1			B – 16.4		
2040 No Build Conditions	LOS	C	C	D		C	D		B	B	B	B	C	
	Delay (s)	30.3	31.8	41.1		30.5	39.7		15.8	19.6	19.0	15.5	21.1	
	v/c		0.36	0.72		0.60	0.77		0.23	0.25	0.19	0.12	0.31	
	Queue (ft)		61	173		118	269		51	153	0	50	190	
			D – 39.8			D – 36.5			B – 18.4			B – 19.8		
2040 Build Conditions	LOS	C	C	D		C	D		B	C		B	C	
	Delay (s)	32.5	32.5	45.9		31.1	41.7		15.4	22.1		15.7	20.5	
	v/c		0.38	0.75		0.61	0.79		0.23	0.44		0.14	0.30	
	Queue (ft)		63	183		121	267		43	239		48	170	
			D – 44.1			D – 37.9			C – 20.2			B – 19.5		

2016 Existing Conditions
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	157	9	226	193	62	14	204	102	98	463	216
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.992				0.850		0.950			0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1848	0	1787	1881	1599	1703	3235	0	1770	3369	0
Flt Permitted	0.626			0.399			0.334			0.489		
Satd. Flow (perm)	1166	1848	0	751	1881	1599	599	3235	0	911	3369	0
Satd. Flow (RTOR)		3				91		94			84	
Adj. Flow (vph)	103	171	10	246	210	67	15	222	111	107	503	235
Lane Group Flow (vph)	103	181	0	246	210	67	15	333	0	107	738	0
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	11.4	25.0		22.0	35.6	12.3	12.0	40.7		12.3	41.0	
Total Lost Time (s)	4.5	6.1		4.5	6.1	5.6	5.6	6.8		5.6	6.8	
Act Effct Green (s)	23.5	15.1		36.3	25.6	39.1	46.7	39.3		51.9	47.6	
Actuated g/C Ratio	0.24	0.15		0.36	0.26	0.39	0.47	0.39		0.52	0.48	
v/c Ratio	0.33	0.64		0.57	0.44	0.10	0.04	0.25		0.20	0.45	
Control Delay	24.1	49.8		13.7	19.8	8.4	13.6	16.1		14.0	18.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	24.1	49.8		13.7	19.8	8.4	13.6	16.1		14.0	18.5	
LOS	C	D		B	B	A	B	B		B	B	
Approach Delay		40.5			15.5			16.0			17.9	
Approach LOS		D			B			B			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Limestone Street & Home Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	103	181	246	210	67	15	333	107	738
v/c Ratio	0.33	0.64	0.57	0.44	0.10	0.04	0.25	0.20	0.45
Control Delay	24.1	49.8	13.7	19.8	8.4	13.6	16.1	14.0	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	49.8	13.7	19.8	8.4	13.6	16.1	14.0	18.5
Queue Length 50th (ft)	43	108	135	143	16	4	53	32	126
Queue Length 95th (ft)	73	172	9	213	32	16	92	68	243
Internal Link Dist (ft)		429		385			541		559
Turn Bay Length (ft)					50	200		100	
Base Capacity (vph)	316	351	454	554	683	351	1329	537	1647
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.52	0.54	0.38	0.10	0.04	0.25	0.20	0.45

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	157	9	226	193	62	14	204	102	98	463	216
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1881	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	103	171	10	246	210	67	15	222	111	107	503	235
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	2	2	2
Cap, veh/h	297	225	13	358	376	410	343	998	482	574	1137	529
Arrive On Green	0.07	0.13	0.13	0.14	0.20	0.20	0.02	0.45	0.45	0.06	0.48	0.48
Sat Flow, veh/h	1774	1743	102	1792	1881	1599	1707	2230	1076	1774	2348	1092
Grp Volume(v), veh/h	103	0	181	246	210	67	15	168	165	107	379	359
Grp Sat Flow(s),veh/h/ln	1774	0	1845	1792	1881	1599	1707	1703	1603	1774	1770	1670
Q Serve(g_s), s	5.0	0.0	9.5	11.4	10.1	3.3	0.5	6.0	6.4	3.2	14.0	14.1
Cycle Q Clear(g_c), s	5.0	0.0	9.5	11.4	10.1	3.3	0.5	6.0	6.4	3.2	14.0	14.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.67	1.00		0.65
Lane Grp Cap(c), veh/h	297	0	238	358	376	410	343	762	718	574	857	809
V/C Ratio(X)	0.35	0.00	0.76	0.69	0.56	0.16	0.04	0.22	0.23	0.19	0.44	0.44
Avail Cap(c_a), veh/h	303	0	349	427	555	563	418	762	718	592	857	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	0.0	42.1	30.4	36.1	28.8	14.8	16.9	17.0	13.3	16.9	16.9
Incr Delay (d2), s/veh	0.7	0.0	5.6	2.8	1.0	0.1	0.1	0.7	0.7	0.2	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	5.2	5.8	5.4	1.5	0.2	3.0	3.0	1.6	7.2	6.9
LnGrp Delay(d),s/veh	35.2	0.0	47.7	33.3	37.1	29.0	14.9	17.6	17.8	13.4	18.6	18.7
LnGrp LOS	D		D	C	D	C	B	B	B	B	B	B
Approach Vol, veh/h		284			523			348			845	
Approach Delay, s/veh		43.1			34.2			17.5			18.0	
Approach LOS		D			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	51.6	18.1	19.0	7.6	55.2	11.1	26.1
Change Period (Y+Rc), s	5.6	* 6.8	4.5	6.1	5.6	* 6.8	4.5	6.1
Max Green Setting (Gmax), s	6.7	* 34	17.5	18.9	6.4	* 34	6.9	29.5
Max Q Clear Time (g_c+I1), s	5.2	8.4	13.4	11.5	2.5	16.1	7.0	12.1
Green Ext Time (p_c), s	0.0	7.3	0.3	1.4	0.0	6.4	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

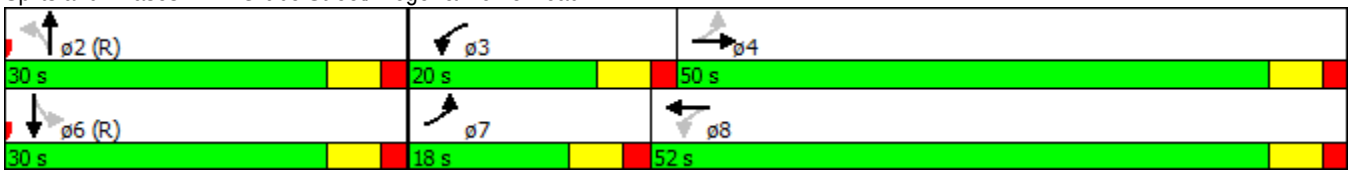
Notes

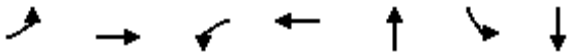
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	324	21	28	449	10	7	1	15	10	0	13
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.997			0.914			0.850	
Flt Protected	0.950			0.950				0.984		0.950		
Satd. Flow (prot)	1770	3507	0	1787	3564	0	0	1643	0	1736	1553	0
Flt Permitted	0.382			0.369				0.956		0.741		
Satd. Flow (perm)	712	3507	0	694	3564	0	0	1596	0	1354	1553	0
Satd. Flow (RTOR)		8			3			16			449	
Adj. Flow (vph)	3	352	23	30	488	11	8	1	16	11	0	14
Lane Group Flow (vph)	3	375	0	30	499	0	0	25	0	11	14	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	18.0	50.0		20.0	52.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Act Effct Green (s)	21.4	17.8		25.2	23.5			62.1		62.1	62.1	
Actuated g/C Ratio	0.21	0.18		0.25	0.24			0.62		0.62	0.62	
v/c Ratio	0.01	0.59		0.12	0.59			0.03		0.01	0.01	
Control Delay	27.3	45.5		9.6	20.2			6.6		10.9	0.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	27.3	45.5		9.6	20.2			6.6		10.9	0.0	
LOS	C	D		A	C			A		B	A	
Approach Delay		45.4			19.6			6.6			4.8	
Approach LOS		D			B			A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 90 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 29.1	Intersection LOS: C
Intersection Capacity Utilization 42.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Grube Street/Kroger & Home Road





Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	3	375	30	499	25	11	14
v/c Ratio	0.01	0.59	0.12	0.59	0.03	0.01	0.01
Control Delay	27.3	45.5	9.6	20.2	6.6	10.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	45.5	9.6	20.2	6.6	10.9	0.0
Queue Length 50th (ft)	2	128	4	32	2	3	0
Queue Length 95th (ft)	m6	181	8	167	16	13	0
Internal Link Dist (ft)		385		1749	320		103
Turn Bay Length (ft)	50		50				
Base Capacity (vph)	305	1547	332	1641	996	840	1134
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.24	0.09	0.30	0.03	0.01	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	324	21	28	449	10	7	1	15	10	0	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1900	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	3	352	23	30	488	11	8	1	16	11	0	14
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	4	4	4
Cap, veh/h	149	584	38	210	723	16	321	59	591	910	0	952
Arrive On Green	0.00	0.17	0.17	0.03	0.20	0.20	0.61	0.61	0.61	0.61	0.00	0.61
Sat Flow, veh/h	1774	3374	220	1792	3574	80	446	97	964	1364	0	1553
Grp Volume(v), veh/h	3	184	191	30	244	255	25	0	0	11	0	14
Grp Sat Flow(s),veh/h/ln	1774	1770	1824	1792	1787	1867	1507	0	0	1364	0	1553
Q Serve(g_s), s	0.1	9.6	9.7	1.4	12.6	12.6	0.0	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.1	9.6	9.7	1.4	12.6	12.6	0.6	0.0	0.0	0.2	0.0	0.4
Prop In Lane	1.00		0.12	1.00		0.04	0.32		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	149	307	316	210	362	378	971	0	0	910	0	952
V/C Ratio(X)	0.02	0.60	0.60	0.14	0.67	0.68	0.03	0.00	0.00	0.01	0.00	0.01
Avail Cap(c_a), veh/h	353	779	803	400	822	859	971	0	0	910	0	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.97	0.97	0.97	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.3	38.1	38.2	32.4	36.8	36.8	7.6	0.0	0.0	7.5	0.0	7.6
Incr Delay (d2), s/veh	0.0	1.6	1.6	0.3	2.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.8	5.0	0.7	6.4	6.7	0.3	0.0	0.0	0.1	0.0	0.2
LnGrp Delay(d),s/veh	34.4	39.8	39.8	32.7	39.0	38.9	7.7	0.0	0.0	7.6	0.0	7.6
LnGrp LOS	C	D	D	C	D	D	A			A		A
Approach Vol, veh/h		378			529			25			25	
Approach Delay, s/veh		39.8			38.6			7.7			7.6	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		67.3	9.4	23.3		67.3	6.5	26.2
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		24.0	14.0	44.0		24.0	12.0	46.0
Max Q Clear Time (g_c+I1), s		2.6	3.4	11.7		2.4	2.1	14.6
Green Ext Time (p_c), s		0.2	0.0	5.6		0.2	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	37.4
HCM 2010 LOS	D

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	365	68	201	409	45	133
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.976					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3488	0	1770	3539	1752	1568
Flt Permitted			0.227		0.950	
Satd. Flow (perm)	3488	0	423	3539	1752	1568
Satd. Flow (RTOR)	22					145
Adj. Flow (vph)	397	74	218	445	49	145
Lane Group Flow (vph)	471	0	218	445	49	145
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Total Split (s)	37.0		31.0	68.0	32.0	32.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	18.6		39.3	39.3	48.7	48.7
Actuated g/C Ratio	0.19		0.39	0.39	0.49	0.49
v/c Ratio	0.71		0.60	0.32	0.06	0.17
Control Delay	43.8		26.4	18.2	16.6	3.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	43.8		26.4	18.2	16.6	3.8
LOS	D		C	B	B	A
Approach Delay	43.8			20.9	7.0	
Approach LOS	D			C	A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 51 (51%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: N High School Place & Home Road

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	471	218	445	49	145
v/c Ratio	0.71	0.60	0.32	0.06	0.17
Control Delay	43.8	26.4	18.2	16.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	26.4	18.2	16.6	3.8
Queue Length 50th (ft)	161	108	115	16	0
Queue Length 95th (ft)	211	152	137	43	38
Internal Link Dist (ft)	1749		1289	740	
Turn Bay Length (ft)		225			
Base Capacity (vph)	1096	502	2194	853	838
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.43	0.20	0.06	0.17

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	365	68	201	409	45	133
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1863	1863	1845	1845
Adj Flow Rate, veh/h	397	74	218	445	49	145
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	590	109	348	1322	890	794
Arrive On Green	0.20	0.20	0.12	0.37	0.51	0.51
Sat Flow, veh/h	3107	557	1774	3632	1757	1568
Grp Volume(v), veh/h	234	237	218	445	49	145
Grp Sat Flow(s),veh/h/ln	1787	1783	1774	1770	1757	1568
Q Serve(g_s), s	12.1	12.3	9.3	9.0	1.4	5.0
Cycle Q Clear(g_c), s	12.1	12.3	9.3	9.0	1.4	5.0
Prop In Lane		0.31	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	350	349	348	1322	890	794
V/C Ratio(X)	0.67	0.68	0.63	0.34	0.06	0.18
Avail Cap(c_a), veh/h	554	553	582	2194	890	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.83	0.83	1.00	1.00
Uniform Delay (d), s/veh	37.2	37.3	26.7	22.4	12.5	13.4
Incr Delay (d2), s/veh	1.8	1.8	1.5	0.1	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	6.2	4.7	4.4	0.7	2.3
LnGrp Delay(d),s/veh	39.0	39.1	28.2	22.6	12.7	13.9
LnGrp LOS	D	D	C	C	B	B
Approach Vol, veh/h	471			663	194	
Approach Delay, s/veh	39.1			24.4	13.6	
Approach LOS	D			C	B	

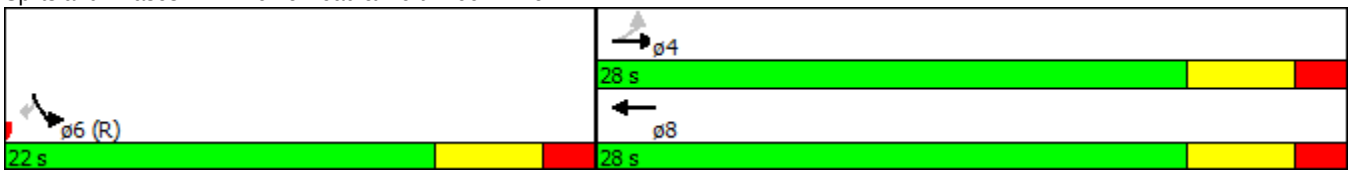
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		56.6	17.8	25.6				43.4
Change Period (Y+Rc), s		6.0	6.0	6.0				6.0
Max Green Setting (Gmax), s		26.0	25.0	31.0				62.0
Max Q Clear Time (g_c+I1), s		7.0	11.3	14.3				11.0
Green Ext Time (p_c), s		0.6	0.5	5.2				6.8

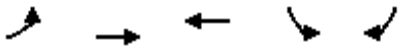
Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	24	470	566	5	19	46
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	3536	0	1752	1568
Flt Permitted	0.372				0.950	
Satd. Flow (perm)	700	3574	3536	0	1752	1568
Satd. Flow (RTOR)			2			50
Adj. Flow (vph)	26	511	615	5	21	50
Lane Group Flow (vph)	26	511	620	0	21	50
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Total Split (s)	28.0	28.0	28.0		22.0	22.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Act Effct Green (s)	15.4	15.4	15.4		22.6	22.6
Actuated g/C Ratio	0.31	0.31	0.31		0.45	0.45
v/c Ratio	0.12	0.46	0.57		0.03	0.07
Control Delay	6.0	6.8	15.0		9.5	4.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	6.0	6.8	15.0		9.5	4.1
LOS	A	A	B		A	A
Approach Delay		6.7	15.0		5.7	
Approach LOS		A	B		A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 8 (16%), Referenced to phase 2: and 6:SBL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 39.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Home Road & Northmoor Drive

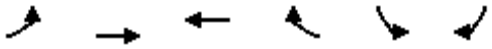




Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	26	511	620	21	50
v/c Ratio	0.12	0.46	0.57	0.03	0.07
Control Delay	6.0	6.8	15.0	9.5	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	6.8	15.0	9.5	4.1
Queue Length 50th (ft)	2	18	123	3	0
Queue Length 95th (ft)	m10	55	135	14	16
Internal Link Dist (ft)		1289	1125	460	
Turn Bay Length (ft)	100			50	
Base Capacity (vph)	308	1572	1556	792	736
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.33	0.40	0.03	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	24	470	566	5	19	46
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1900	1845	1845
Adj Flow Rate, veh/h	26	511	615	5	21	50
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	286	1133	1141	9	778	695
Arrive On Green	0.32	0.32	0.32	0.32	0.44	0.44
Sat Flow, veh/h	808	3668	3691	29	1757	1568
Grp Volume(v), veh/h	26	511	302	318	21	50
Grp Sat Flow(s),veh/h/ln	808	1787	1770	1858	1757	1568
Q Serve(g_s), s	1.4	5.7	7.0	7.0	0.3	0.9
Cycle Q Clear(g_c), s	8.4	5.7	7.0	7.0	0.3	0.9
Prop In Lane	1.00			0.02	1.00	1.00
Lane Grp Cap(c), veh/h	286	1133	561	589	778	695
V/C Ratio(X)	0.09	0.45	0.54	0.54	0.03	0.07
Avail Cap(c_a), veh/h	386	1573	779	817	778	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	17.5	13.6	14.1	14.1	7.9	8.0
Incr Delay (d2), s/veh	0.1	0.2	0.7	0.6	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.8	3.5	3.7	0.2	0.4
LnGrp Delay(d),s/veh	17.6	13.8	14.7	14.7	7.9	8.2
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h		537	620		71	
Approach Delay, s/veh		14.0	14.7		8.1	
Approach LOS		B	B		A	

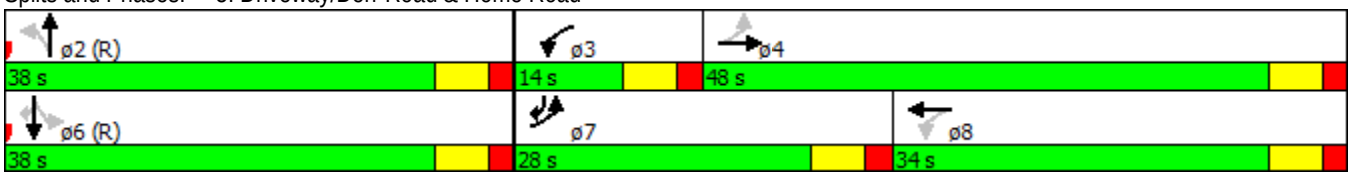
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.9		28.1		21.9
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				22.0		16.0		22.0
Max Q Clear Time (g_c+I1), s				10.4		2.9		9.0
Green Ext Time (p_c), s				5.4		0.1		5.8

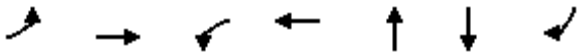
Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	216	0	1	319	139	0	0	1	154	0	325
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.955			0.865				0.850
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1736	3471	0	1752	3347	0	0	1644	0	0	1770	1583
Flt Permitted	0.262			0.605							0.757	
Satd. Flow (perm)	479	3471	0	1116	3347	0	0	1644	0	0	1410	1583
Satd. Flow (RTOR)					68			633				216
Adj. Flow (vph)	161	235	0	1	347	151	0	0	1	167	0	353
Lane Group Flow (vph)	161	235	0	1	498	0	0	1	0	0	167	353
Turn Type	pm+pt	NA		pm+pt	NA			NA		Perm	NA	pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases	4			8			2			6		6
Total Split (s)	28.0	48.0		14.0	34.0		38.0	38.0		38.0	38.0	28.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	6.0
Act Effct Green (s)	39.0	36.6		24.7	18.7			49.0			49.0	69.3
Actuated g/C Ratio	0.39	0.37		0.25	0.19			0.49			0.49	0.69
v/c Ratio	0.44	0.18		0.00	0.73			0.00			0.24	0.30
Control Delay	16.8	14.1		17.0	37.9			0.0			17.1	3.7
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	16.8	14.1		17.0	37.9			0.0			17.1	3.7
LOS	B	B		B	D			A			B	A
Approach Delay		15.2			37.9			0.0			8.0	
Approach LOS		B			D			A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 29 (29%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Driveway/Derr Road & Home Road





Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	161	235	1	498	1	167	353
v/c Ratio	0.44	0.18	0.00	0.73	0.00	0.24	0.30
Control Delay	16.8	14.1	17.0	37.9	0.0	17.1	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	14.1	17.0	37.9	0.0	17.1	3.7
Queue Length 50th (ft)	102	74	0	121	0	51	47
Queue Length 95th (ft)	105	92	m1	178	0	147	102
Internal Link Dist (ft)		1125		2716	128	3537	
Turn Bay Length (ft)	200		200				
Base Capacity (vph)	463	1473	348	986	1127	690	1267
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.16	0.00	0.51	0.00	0.24	0.28

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	148	216	0	1	319	139	0	0	1	154	0	325
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1845	1845	1900	1900	1900	1900	1900	1863	1863
Adj Flow Rate, veh/h	161	235	0	1	347	151	0	0	1	167	0	353
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	1
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
Percent Heavy Veh, %	4	4	4	3	3	3	0	0	0	2	2	2
Cap, veh/h	282	992	0	295	466	199	0	0	860	823	0	990
Arrive On Green	0.09	0.29	0.00	0.00	0.19	0.19	0.00	0.00	0.53	0.53	0.00	0.53
Sat Flow, veh/h	1740	3563	0	1757	2393	1024	0	0	1615	1410	0	1583
Grp Volume(v), veh/h	161	235	0	1	253	245	0	0	1	167	0	353
Grp Sat Flow(s),veh/h/ln	1740	1736	0	1757	1752	1664	0	0	1615	1410	0	1583
Q Serve(g_s), s	7.1	5.2	0.0	0.0	13.6	13.9	0.0	0.0	0.0	6.3	0.0	10.8
Cycle Q Clear(g_c), s	7.1	5.2	0.0	0.0	13.6	13.9	0.0	0.0	0.0	6.3	0.0	10.8
Prop In Lane	1.00		0.00	1.00		0.62	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	992	0	295	341	324	0	0	860	823	0	990
V/C Ratio(X)	0.57	0.24	0.00	0.00	0.74	0.76	0.00	0.00	0.00	0.20	0.00	0.36
Avail Cap(c_a), veh/h	503	1458	0	433	491	466	0	0	860	823	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.00	0.97	0.97	0.97	0.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	28.0	27.4	0.0	32.3	37.9	38.0	0.0	0.0	10.9	12.4	0.0	9.0
Incr Delay (d2), s/veh	1.6	0.1	0.0	0.0	3.4	4.2	0.0	0.0	0.0	0.5	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	2.5	0.0	0.0	6.9	6.8	0.0	0.0	0.0	2.5	0.0	4.9
LnGrp Delay(d),s/veh	29.6	27.5	0.0	32.3	41.2	42.2	0.0	0.0	10.9	13.0	0.0	10.0
LnGrp LOS	C	C		C	D	D			B	B		B
Approach Vol, veh/h		396			499			1			520	
Approach Delay, s/veh		28.3			41.7			10.9			11.0	
Approach LOS		C			D			B			B	

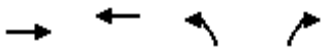
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		59.2	6.2	34.6		59.2	15.3	25.5
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		32.0	8.0	42.0		32.0	22.0	28.0
Max Q Clear Time (g_c+I1), s		2.0	2.0	7.2		12.8	9.1	15.9
Green Ext Time (p_c), s		2.2	0.0	5.0		2.1	0.3	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	133	140	30	192	214	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.923					0.850
Flt Protected				0.993	0.950	
Satd. Flow (prot)	3267	0	0	3514	1770	1583
Flt Permitted				0.863	0.950	
Satd. Flow (perm)	3267	0	0	3054	1770	1583
Satd. Flow (RTOR)	152					13
Adj. Flow (vph)	145	152	33	209	233	13
Lane Group Flow (vph)	297	0	0	242	233	13
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Total Split (s)	22.0		22.0	22.0	28.0	28.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Act Effct Green (s)	12.0			12.0	26.0	26.0
Actuated g/C Ratio	0.24			0.24	0.52	0.52
v/c Ratio	0.33			0.33	0.25	0.02
Control Delay	12.2			14.2	7.6	3.5
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	12.2			14.2	7.6	3.5
LOS	B			B	A	A
Approach Delay	12.2			14.2	7.3	
Approach LOS	B			B	A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 11 (22%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 46.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Belmont Avenue & Home Road



Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	297	242	233	13
v/c Ratio	0.33	0.33	0.25	0.02
Control Delay	12.2	14.2	7.6	3.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.2	14.2	7.6	3.5
Queue Length 50th (ft)	9	33	34	0
Queue Length 95th (ft)	33	56	65	6
Internal Link Dist (ft)	2716	3133	1033	
Turn Bay Length (ft)				175
Base Capacity (vph)	1148	977	920	829
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.25	0.25	0.02

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	133	140	30	192	214	12
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1900	1863	1863	1863
Adj Flow Rate, veh/h	145	152	33	209	233	13
Adj No. of Lanes	2	0	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	424	380	147	735	923	824
Arrive On Green	0.24	0.24	0.24	0.24	0.52	0.52
Sat Flow, veh/h	1863	1583	237	3149	1774	1583
Grp Volume(v), veh/h	145	152	130	112	233	13
Grp Sat Flow(s),veh/h/ln	1770	1583	1690	1610	1774	1583
Q Serve(g_s), s	3.4	4.0	0.0	2.8	3.6	0.2
Cycle Q Clear(g_c), s	3.4	4.0	2.9	2.8	3.6	0.2
Prop In Lane		1.00	0.25		1.00	1.00
Lane Grp Cap(c), veh/h	424	380	496	386	923	824
V/C Ratio(X)	0.34	0.40	0.26	0.29	0.25	0.02
Avail Cap(c_a), veh/h	566	507	622	515	923	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	15.7	16.0	15.5	15.5	6.6	5.8
Incr Delay (d2), s/veh	0.5	0.7	0.2	0.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.8	1.5	1.3	1.9	0.1
LnGrp Delay(d),s/veh	16.2	16.7	15.8	15.9	7.3	5.8
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	297			242	246	
Approach Delay, s/veh	16.4			15.8	7.2	
Approach LOS	B			B	A	

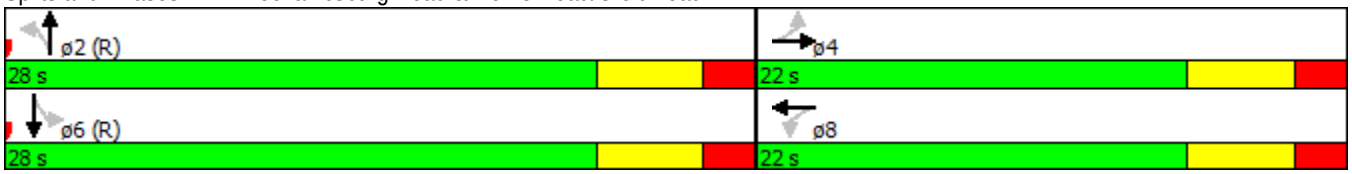
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		32.0		18.0				18.0
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		22.0		16.0				16.0
Max Q Clear Time (g_c+I1), s		5.6		6.0				4.9
Green Ext Time (p_c), s		0.6		2.2				2.4

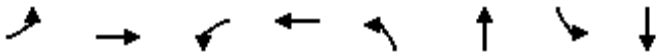
Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	67	18	12	142	129	16	120	11	227	250	46
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.968			0.929			0.987			0.977	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1768	0	1787	1748	0	1770	3493	0	1770	3458	0
Flt Permitted	0.527			0.697			0.557			0.662		
Satd. Flow (perm)	963	1768	0	1311	1748	0	1038	3493	0	1233	3458	0
Satd. Flow (RTOR)		20			96			12			50	
Adj. Flow (vph)	25	73	20	13	154	140	17	130	12	247	272	50
Lane Group Flow (vph)	25	93	0	13	294	0	17	142	0	247	322	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	22.0	22.0		22.0	22.0		28.0	28.0		28.0	28.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	13.1	13.1		13.1	13.1		24.9	24.9		24.9	24.9	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.50	0.50		0.50	0.50	
v/c Ratio	0.10	0.19		0.04	0.56		0.03	0.08		0.40	0.18	
Control Delay	12.4	10.5		13.1	14.7		7.6	6.7		11.0	6.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.4	10.5		13.1	14.7		7.6	6.7		11.0	6.5	
LOS	B	B		B	B		A	A		B	A	
Approach Delay		10.9			14.7			6.8			8.4	
Approach LOS		B			B			A			A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 34 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Mechanicsburg Road & Home Road/Croft Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	93	13	294	17	142	247	322
v/c Ratio	0.10	0.19	0.04	0.56	0.03	0.08	0.40	0.18
Control Delay	12.4	10.5	13.1	14.7	7.6	6.7	11.0	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	10.5	13.1	14.7	7.6	6.7	11.0	6.5
Queue Length 50th (ft)	10	6	3	50	2	8	39	19
Queue Length 95th (ft)	22	51	12	98	11	23	97	43
Internal Link Dist (ft)		3133		843		1034		682
Turn Bay Length (ft)			150				475	
Base Capacity (vph)	308	579	419	624	517	1747	614	1748
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.16	0.03	0.47	0.03	0.08	0.40	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	67	18	12	142	129	16	120	11	227	250	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1881	1881	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	25	73	20	13	154	140	17	130	12	247	272	50
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	4	4	4	1	1	1	2	2	2	2	2	2
Cap, veh/h	233	331	91	402	218	198	641	1708	156	765	1559	283
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1060	1382	379	1311	909	826	1053	3280	299	1241	2994	543
Grp Volume(v), veh/h	25	0	93	13	0	294	17	69	73	247	159	163
Grp Sat Flow(s),veh/h/ln	1060	0	1760	1311	0	1735	1053	1770	1810	1241	1770	1767
Q Serve(g_s), s	1.1	0.0	2.1	0.4	0.0	7.8	0.4	1.0	1.0	6.2	2.4	2.4
Cycle Q Clear(g_c), s	8.9	0.0	2.1	2.5	0.0	7.8	2.9	1.0	1.0	7.2	2.4	2.4
Prop In Lane	1.00		0.22	1.00		0.48	1.00		0.17	1.00		0.31
Lane Grp Cap(c), veh/h	233	0	421	402	0	415	641	921	942	765	921	920
V/C Ratio(X)	0.11	0.00	0.22	0.03	0.00	0.71	0.03	0.08	0.08	0.32	0.17	0.18
Avail Cap(c_a), veh/h	319	0	563	508	0	555	641	921	942	765	921	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.96	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	15.3	16.3	0.0	17.4	7.1	6.0	6.0	7.8	6.3	6.3
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.0	0.0	2.7	0.1	0.2	0.2	1.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.1	0.1	0.0	4.0	0.1	0.5	0.5	2.3	1.3	1.3
LnGrp Delay(d),s/veh	21.7	0.0	15.5	16.3	0.0	20.1	7.2	6.1	6.1	8.9	6.7	6.7
LnGrp LOS	C		B	B		C	A	A	A	A	A	A
Approach Vol, veh/h		118			307			159			569	
Approach Delay, s/veh		16.8			20.0			6.2			7.7	
Approach LOS		B			B			A			A	

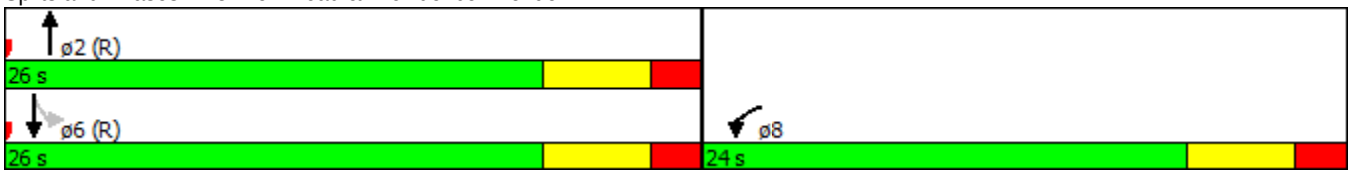
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		32.0		18.0		32.0		18.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		22.0		16.0		22.0		16.0
Max Q Clear Time (g_c+I1), s		4.9		10.9		9.2		9.8
Green Ext Time (p_c), s		3.3		1.1		3.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	86	59	244	28	20	328
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.945		0.985			
Flt Protected	0.971				0.950	
Satd. Flow (prot)	1709	0	3452	0	1752	3505
Flt Permitted	0.971				0.572	
Satd. Flow (perm)	1709	0	3452	0	1055	3505
Satd. Flow (RTOR)	64		29			
Adj. Flow (vph)	93	64	265	30	22	357
Lane Group Flow (vph)	157	0	295	0	22	357
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	24.0		26.0		26.0	26.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Act Effct Green (s)	12.0		30.8		30.8	30.8
Actuated g/C Ratio	0.24		0.62		0.62	0.62
v/c Ratio	0.34		0.14		0.03	0.17
Control Delay	12.4		6.5		5.0	5.6
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	12.4		6.5		5.0	5.6
LOS	B		A		A	A
Approach Delay	12.4		6.5			5.5
Approach LOS	B		A			A

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 41 (82%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 36.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Derr Road & Providence Avenue



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	157	295	22	357
v/c Ratio	0.34	0.14	0.03	0.17
Control Delay	12.4	6.5	5.0	5.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.4	6.5	5.0	5.6
Queue Length 50th (ft)	22	34	4	33
Queue Length 95th (ft)	61	80	4	22
Internal Link Dist (ft)	566	3537		893
Turn Bay Length (ft)			50	
Base Capacity (vph)	656	2137	649	2159
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.24	0.14	0.03	0.17

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	86	59	244	28	20	328
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1845	1900	1845	1845
Adj Flow Rate, veh/h	93	64	265	30	22	357
Adj No. of Lanes	0	0	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	3	3	3	3
Cap, veh/h	212	146	1737	195	684	1916
Arrive On Green	0.21	0.21	0.55	0.55	0.55	0.55
Sat Flow, veh/h	996	685	3270	356	1069	3597
Grp Volume(v), veh/h	158	0	145	150	22	357
Grp Sat Flow(s),veh/h/ln	1692	0	1752	1782	1069	1752
Q Serve(g_s), s	4.1	0.0	2.0	2.1	0.5	2.6
Cycle Q Clear(g_c), s	4.1	0.0	2.0	2.1	2.6	2.6
Prop In Lane	0.59	0.41		0.20	1.00	
Lane Grp Cap(c), veh/h	361	0	958	974	684	1916
V/C Ratio(X)	0.44	0.00	0.15	0.15	0.03	0.19
Avail Cap(c_a), veh/h	609	0	958	974	684	1916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	5.6	5.6	6.3	5.7
Incr Delay (d2), s/veh	0.8	0.0	0.3	0.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.0	1.1	0.2	1.3
LnGrp Delay(d),s/veh	17.9	0.0	5.9	5.9	6.3	5.9
LnGrp LOS	B		A	A	A	A
Approach Vol, veh/h	158		295			379
Approach Delay, s/veh	17.9		5.9			6.0
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		33.3				33.3		16.7
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		20.0				20.0		18.0
Max Q Clear Time (g_c+I1), s		4.1				4.6		6.1
Green Ext Time (p_c), s		3.7				3.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	8.2
HCM 2010 LOS	A

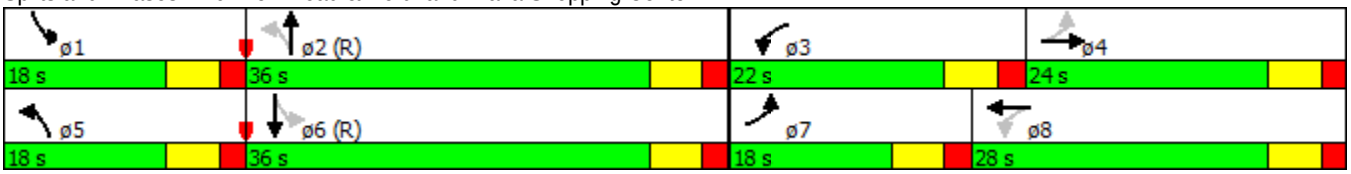
Notes

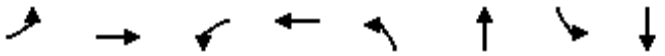
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	1	12	57	2	20	15	171	52	5	190	2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.861			0.862			0.965			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1398	0	1787	1622	0	1752	3382	0	1752	3501	0
Flt Permitted				0.476			0.608			0.601		
Satd. Flow (perm)	1624	1398	0	895	1622	0	1122	3382	0	1109	3501	0
Satd. Flow (RTOR)		13			22			41			1	
Adj. Flow (vph)	5	1	13	62	2	22	16	186	57	5	207	2
Lane Group Flow (vph)	5	14	0	62	24	0	16	243	0	5	209	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	18.0	24.0		22.0	28.0		18.0	36.0		18.0	36.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	8.5	12.0		13.8	12.9		75.2	75.0		73.7	72.5	
Actuated g/C Ratio	0.08	0.12		0.14	0.13		0.75	0.75		0.74	0.72	
v/c Ratio	0.04	0.08		0.29	0.11		0.02	0.10		0.01	0.08	
Control Delay	34.6	21.2		38.4	17.2		1.9	2.3		4.4	5.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.6	21.2		38.4	17.2		1.9	2.3		4.4	5.3	
LOS	C	C		D	B		A	A		A	A	
Approach Delay		24.7			32.5			2.3			5.3	
Approach LOS		C			C			A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 91 (91%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 32.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Derr Road & Northland Plaza Shopping Center





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	14	62	24	16	243	5	209
v/c Ratio	0.04	0.08	0.29	0.11	0.02	0.10	0.01	0.08
Control Delay	34.6	21.2	38.4	17.2	1.9	2.3	4.4	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	21.2	38.4	17.2	1.9	2.3	4.4	5.3
Queue Length 50th (ft)	3	1	37	1	1	4	0	8
Queue Length 95th (ft)	11	19	61	24	4	34	m3	48
Internal Link Dist (ft)		105		118		893		632
Turn Bay Length (ft)					100		100	
Base Capacity (vph)	224	262	308	374	931	2548	921	2539
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.20	0.06	0.02	0.10	0.01	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	1	12	57	2	20	15	171	52	5	190	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1624	1624	1900	1881	1881	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	5	1	13	62	2	22	16	186	57	5	207	2
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	17	17	17	1	1	1	3	3	3	3	3	3
Cap, veh/h	185	8	108	265	17	186	782	1650	491	747	2154	21
Arrive On Green	0.01	0.08	0.08	0.05	0.13	0.13	0.02	0.62	0.62	0.01	0.61	0.61
Sat Flow, veh/h	1547	100	1296	1792	135	1484	1757	2664	793	1757	3557	34
Grp Volume(v), veh/h	5	0	14	62	0	24	16	121	122	5	102	107
Grp Sat Flow(s),veh/h/ln	1547	0	1395	1792	0	1619	1757	1752	1705	1757	1752	1839
Q Serve(g_s), s	0.3	0.0	0.9	3.1	0.0	1.3	0.3	2.8	2.9	0.1	2.4	2.4
Cycle Q Clear(g_c), s	0.3	0.0	0.9	3.1	0.0	1.3	0.3	2.8	2.9	0.1	2.4	2.4
Prop In Lane	1.00		0.93	1.00		0.92	1.00		0.47	1.00		0.02
Lane Grp Cap(c), veh/h	185	0	117	265	0	203	782	1085	1056	747	1061	1113
V/C Ratio(X)	0.03	0.00	0.12	0.23	0.00	0.12	0.02	0.11	0.12	0.01	0.10	0.10
Avail Cap(c_a), veh/h	358	0	251	463	0	356	955	1085	1056	944	1061	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	41.4	0.0	42.4	38.8	0.0	38.8	7.0	7.8	7.8	7.5	8.3	8.3
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.4	0.0	0.3	0.0	0.2	0.2	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.4	1.6	0.0	0.6	0.2	1.4	1.4	0.1	1.2	1.3
LnGrp Delay(d),s/veh	41.5	0.0	42.9	39.3	0.0	39.1	7.1	8.0	8.0	7.5	8.4	8.4
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		19			86			259			214	
Approach Delay, s/veh		42.5			39.2			8.0			8.4	
Approach LOS		D			D			A			A	

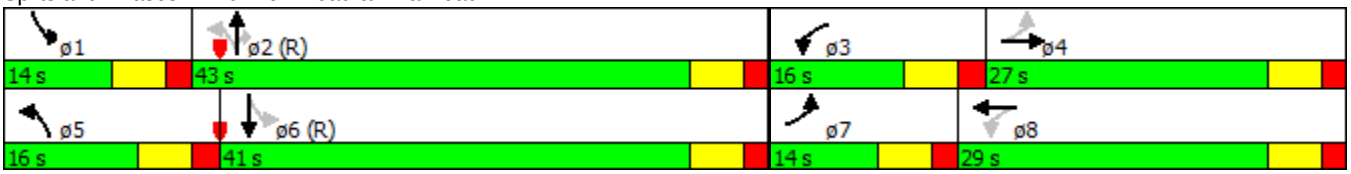
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	67.9	10.9	14.4	8.2	66.6	6.8	18.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	12.0	30.0	16.0	18.0	12.0	30.0	12.0	22.0
Max Q Clear Time (g_c+I1), s	2.1	4.9	5.1	2.9	2.3	4.4	2.3	3.3
Green Ext Time (p_c), s	0.0	2.6	0.1	0.1	0.0	2.6	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	125	70	62	116	32	65	84	38	48	158	51
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.967				0.850		0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3348	0	1787	1819	0	1752	1845	1568	1787	1813	0
Flt Permitted	0.655			0.493			0.590			0.698		
Satd. Flow (perm)	1220	3348	0	927	1819	0	1088	1845	1568	1313	1813	0
Satd. Flow (RTOR)		76			13				164		18	
Adj. Flow (vph)	23	136	76	67	126	35	71	91	41	52	172	55
Lane Group Flow (vph)	23	212	0	67	161	0	71	91	41	52	227	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	14.0	27.0		16.0	29.0		16.0	43.0	43.0	14.0	41.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Act Effct Green (s)	18.7	13.2		23.5	19.6		58.7	52.6	52.6	57.7	52.1	
Actuated g/C Ratio	0.19	0.13		0.24	0.20		0.59	0.53	0.53	0.58	0.52	
v/c Ratio	0.09	0.42		0.23	0.44		0.10	0.09	0.05	0.07	0.24	
Control Delay	26.1	27.5		28.4	36.6		4.7	9.1	0.7	9.5	15.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	26.1	27.5		28.4	36.6		4.7	9.1	0.7	9.5	15.7	
LOS	C	C		C	D		A	A	A	A	B	
Approach Delay		27.4			34.2			5.9			14.6	
Approach LOS		C			C			A			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 99 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 20.6	Intersection LOS: C
Intersection Capacity Utilization 51.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Derr Road & Villa Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	23	212	67	161	71	91	41	52	227
v/c Ratio	0.09	0.42	0.23	0.44	0.10	0.09	0.05	0.07	0.24
Control Delay	26.1	27.5	28.4	36.6	4.7	9.1	0.7	9.5	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	27.5	28.4	36.6	4.7	9.1	0.7	9.5	15.7
Queue Length 50th (ft)	11	42	33	76	7	33	1	12	75
Queue Length 95th (ft)	28	74	61	148	14	53	0	32	147
Internal Link Dist (ft)		616		681		632			459
Turn Bay Length (ft)	100		225		75			50	
Base Capacity (vph)	283	763	304	448	725	969	902	806	952
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.28	0.22	0.36	0.10	0.09	0.05	0.06	0.24

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	125	70	62	116	32	65	84	38	48	158	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1845	1845	1845	1881	1881	1900
Adj Flow Rate, veh/h	23	136	76	67	126	35	71	91	41	52	172	55
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	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
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	1	1	1
Cap, veh/h	194	269	142	233	202	56	699	1003	852	812	735	235
Arrive On Green	0.03	0.12	0.12	0.05	0.14	0.14	0.05	0.54	0.54	0.05	0.54	0.54
Sat Flow, veh/h	1774	2240	1184	1792	1418	394	1757	1845	1568	1792	1367	437
Grp Volume(v), veh/h	23	106	106	67	0	161	71	91	41	52	0	227
Grp Sat Flow(s),veh/h/ln	1774	1770	1654	1792	0	1812	1757	1845	1568	1792	0	1804
Q Serve(g_s), s	1.1	5.6	6.0	3.2	0.0	8.4	1.7	2.4	1.2	1.2	0.0	6.7
Cycle Q Clear(g_c), s	1.1	5.6	6.0	3.2	0.0	8.4	1.7	2.4	1.2	1.2	0.0	6.7
Prop In Lane	1.00		0.72	1.00		0.22	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	194	212	198	233	0	258	699	1003	852	812	0	970
V/C Ratio(X)	0.12	0.50	0.54	0.29	0.00	0.62	0.10	0.09	0.05	0.06	0.00	0.23
Avail Cap(c_a), veh/h	286	372	347	321	0	417	784	1003	852	873	0	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	41.2	41.4	35.9	0.0	40.4	9.0	11.0	10.7	8.9	0.0	12.2
Incr Delay (d2), s/veh	0.3	1.8	2.2	0.7	0.0	2.5	0.1	0.2	0.1	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.8	2.9	1.6	0.0	4.4	0.8	1.3	0.6	0.6	0.0	3.4
LnGrp Delay(d),s/veh	37.2	43.0	43.6	36.6	0.0	42.8	9.1	11.1	10.8	9.0	0.0	12.8
LnGrp LOS	D	D	D	D		D	A	B	B	A		B
Approach Vol, veh/h		235			228			203			279	
Approach Delay, s/veh		42.7			41.0			10.4			12.1	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	60.3	11.1	18.0	11.2	59.8	8.8	20.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	37.0	10.0	21.0	10.0	35.0	8.0	23.0
Max Q Clear Time (g_c+I1), s	3.2	4.4	5.2	8.0	3.7	8.7	3.1	10.4
Green Ext Time (p_c), s	0.0	2.0	0.0	1.7	0.1	2.0	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

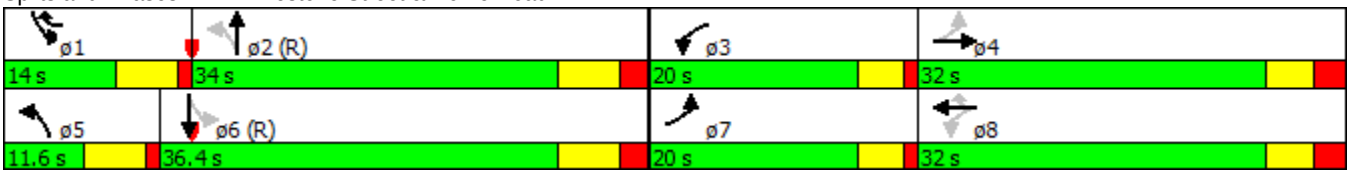
2016 Existing Conditions
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	232	269	14	242	267	90	40	412	206	115	511	154
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.993				0.850		0.950			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1868	0	1787	1881	1599	1787	3396	0	1787	3449	0
Flt Permitted	0.344			0.291			0.314			0.249		
Satd. Flow (perm)	647	1868	0	547	1881	1599	591	3396	0	468	3449	0
Satd. Flow (RTOR)		2				91		85			40	
Adj. Flow (vph)	252	292	15	263	290	98	43	448	224	125	555	167
Lane Group Flow (vph)	252	307	0	263	290	98	43	672	0	125	722	0
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	20.0	32.0		20.0	32.0	14.0	11.6	34.0		14.0	36.4	
Total Lost Time (s)	4.5	6.1		4.5	6.1	5.6	5.6	6.8		5.6	6.8	
Act Effct Green (s)	36.5	20.9		37.4	21.4	35.9	40.9	33.2		46.6	39.8	
Actuated g/C Ratio	0.36	0.21		0.37	0.21	0.36	0.41	0.33		0.47	0.40	
v/c Ratio	0.64	0.78		0.69	0.72	0.15	0.13	0.57		0.38	0.52	
Control Delay	27.0	51.0		32.1	51.2	22.1	17.2	27.4		19.5	25.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	27.0	51.0		32.1	51.2	22.1	17.2	27.4		19.5	25.6	
LOS	C	D		C	D	C	B	C		B	C	
Approach Delay		40.2			39.1			26.8			24.7	
Approach LOS		D			D			C			C	

Intersection Summary

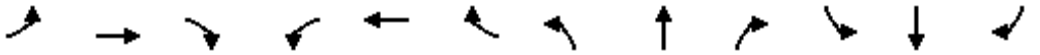
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 96 (96%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 31.8 — Intersection LOS: C
Intersection Capacity Utilization 71.9% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Limestone Street & Home Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	252	307	263	290	98	43	672	125	722
v/c Ratio	0.64	0.78	0.69	0.72	0.15	0.13	0.57	0.38	0.52
Control Delay	27.0	51.0	32.1	51.2	22.1	17.2	27.4	19.5	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	51.0	32.1	51.2	22.1	17.2	27.4	19.5	25.6
Queue Length 50th (ft)	104	184	169	197	35	15	167	44	190
Queue Length 95th (ft)	150	264	237	282	88	37	240	86	267
Internal Link Dist (ft)		429		385			541		559
Turn Bay Length (ft)					50	200		100	
Base Capacity (vph)	422	485	402	487	640	319	1184	336	1398
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.63	0.65	0.60	0.15	0.13	0.57	0.37	0.52

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	232	269	14	242	267	90	40	412	206	115	511	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1881	1881	1881	1900	1881	1881	1900
Adj Flow Rate, veh/h	252	292	15	263	290	98	43	448	224	125	555	167
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	368	358	18	363	388	428	319	861	427	351	1060	318
Arrive On Green	0.13	0.20	0.20	0.14	0.21	0.21	0.04	0.37	0.37	0.06	0.39	0.39
Sat Flow, veh/h	1792	1774	91	1792	1881	1599	1792	2317	1149	1792	2712	813
Grp Volume(v), veh/h	252	0	307	263	290	98	43	345	327	125	365	357
Grp Sat Flow(s),veh/h/ln	1792	0	1865	1792	1881	1599	1792	1787	1678	1792	1787	1738
Q Serve(g_s), s	10.9	0.0	15.7	11.4	14.5	4.8	1.4	15.0	15.2	4.3	15.6	15.7
Cycle Q Clear(g_c), s	10.9	0.0	15.7	11.4	14.5	4.8	1.4	15.0	15.2	4.3	15.6	15.7
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.68	1.00		0.47
Lane Grp Cap(c), veh/h	368	0	376	363	388	428	319	664	624	351	699	679
V/C Ratio(X)	0.68	0.00	0.82	0.72	0.75	0.23	0.13	0.52	0.52	0.36	0.52	0.53
Avail Cap(c_a), veh/h	411	0	483	398	487	512	351	664	624	391	699	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	38.1	27.4	37.2	28.6	18.6	24.5	24.5	18.7	23.3	23.3
Incr Delay (d2), s/veh	4.0	0.0	8.3	4.9	4.1	0.2	0.2	2.9	3.1	0.6	2.8	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	9.0	6.1	7.9	2.1	0.7	7.9	7.5	2.1	8.2	8.1
LnGrp Delay(d),s/veh	31.3	0.0	46.4	32.3	41.3	28.8	18.8	27.4	27.7	19.3	26.1	26.2
LnGrp LOS	C		D	C	D	C	B	C	C	B	C	C
Approach Vol, veh/h		559			651			715			847	
Approach Delay, s/veh		39.6			35.8			27.0			25.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	44.0	18.1	26.3	9.8	45.9	17.6	26.7
Change Period (Y+Rc), s	5.6	* 6.8	4.5	6.1	5.6	* 6.8	4.5	6.1
Max Green Setting (Gmax), s	8.4	* 27	15.5	25.9	6.0	* 30	15.5	25.9
Max Q Clear Time (g_c+I1), s	6.3	17.2	13.4	17.7	3.4	17.7	12.9	16.5
Green Ext Time (p_c), s	0.1	5.8	0.2	2.4	0.0	6.5	0.2	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

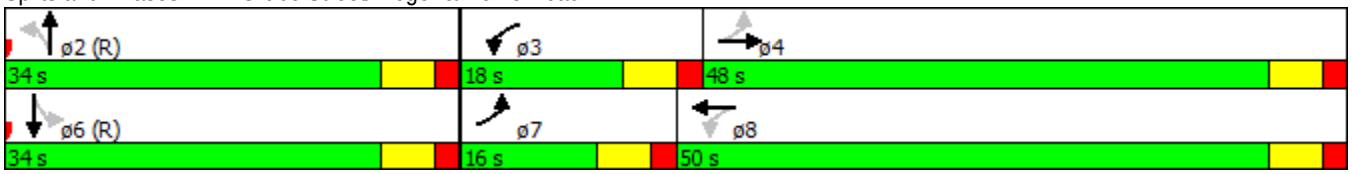
Notes

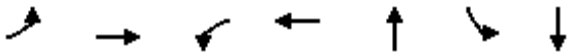
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	533	39	53	501	23	46	2	60	34	4	43
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.993			0.925			0.862	
Flt Protected	0.950			0.950				0.979		0.950		
Satd. Flow (prot)	1787	3539	0	1787	3549	0	0	1721	0	1805	1638	0
Flt Permitted	0.373			0.220				0.874		0.682		
Satd. Flow (perm)	702	3539	0	414	3549	0	0	1536	0	1296	1638	0
Satd. Flow (RTOR)		9			6			62			47	
Adj. Flow (vph)	15	579	42	58	545	25	50	2	65	37	4	47
Lane Group Flow (vph)	15	621	0	58	570	0	0	117	0	37	51	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	16.0	48.0		18.0	50.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Act Effct Green (s)	29.1	24.1		34.1	30.4			52.6		52.6	52.6	
Actuated g/C Ratio	0.29	0.24		0.34	0.30			0.53		0.53	0.53	
v/c Ratio	0.06	0.72		0.23	0.53			0.14		0.05	0.06	
Control Delay	11.4	31.3		13.7	22.7			8.6		15.6	5.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	11.4	31.3		13.7	22.7			8.6		15.6	5.7	
LOS	B	C		B	C			A		B	A	
Approach Delay		30.9			21.9			8.6			9.9	
Approach LOS		C			C			A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 56 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Grube Street/Kroger & Home Road





Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	15	621	58	570	117	37	51
v/c Ratio	0.06	0.72	0.23	0.53	0.14	0.05	0.06
Control Delay	11.4	31.3	13.7	22.7	8.6	15.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.4	31.3	13.7	22.7	8.6	15.6	5.7
Queue Length 50th (ft)	5	193	21	110	17	12	1
Queue Length 95th (ft)	m9	229	42	242	56	34	23
Internal Link Dist (ft)		385		1749	320		103
Turn Bay Length (ft)	50		50				
Base Capacity (vph)	333	1491	310	1564	836	681	883
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.42	0.19	0.36	0.14	0.05	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	533	39	53	501	23	46	2	60	34	4	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	15	579	42	58	545	25	50	2	65	37	4	47
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	232	853	62	237	974	45	369	33	438	793	67	783
Arrive On Green	0.02	0.25	0.25	0.05	0.28	0.28	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1792	3380	245	1792	3481	159	611	64	843	1355	128	1506
Grp Volume(v), veh/h	15	306	315	58	279	291	117	0	0	37	0	51
Grp Sat Flow(s),veh/h/ln	1792	1787	1838	1792	1787	1853	1518	0	0	1355	0	1634
Q Serve(g_s), s	0.6	15.4	15.5	2.3	13.3	13.4	0.9	0.0	0.0	0.0	0.0	1.5
Cycle Q Clear(g_c), s	0.6	15.4	15.5	2.3	13.3	13.4	3.6	0.0	0.0	1.0	0.0	1.5
Prop In Lane	1.00		0.13	1.00		0.09	0.43		0.56	1.00		0.92
Lane Grp Cap(c), veh/h	232	451	464	237	500	519	840	0	0	793	0	849
V/C Ratio(X)	0.06	0.68	0.68	0.24	0.56	0.56	0.14	0.00	0.00	0.05	0.00	0.06
Avail Cap(c_a), veh/h	375	751	772	366	786	815	840	0	0	793	0	849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.91	0.91	0.91	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	33.7	33.7	26.6	30.7	30.8	12.4	0.0	0.0	11.8	0.0	11.9
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.5	0.9	0.9	0.3	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.8	8.0	1.2	6.7	7.0	1.7	0.0	0.0	0.5	0.0	0.7
LnGrp Delay(d),s/veh	27.3	35.0	35.0	27.1	31.6	31.6	12.7	0.0	0.0	11.9	0.0	12.0
LnGrp LOS	C	C	C	C	C	C	B			B		B
Approach Vol, veh/h		636			628			117			88	
Approach Delay, s/veh		34.8			31.2			12.7			12.0	
Approach LOS		C			C			B			B	

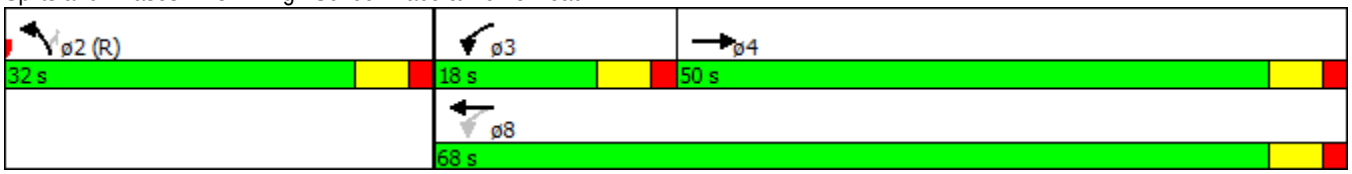
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		58.0	10.8	31.2		58.0	8.0	34.0
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		28.0	12.0	42.0		28.0	10.0	44.0
Max Q Clear Time (g_c+I1), s		5.6	4.3	17.5		3.5	2.6	15.4
Green Ext Time (p_c), s		1.1	0.1	7.7		1.1	0.0	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	638	20	71	594	66	135
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.995					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3522	0	1770	3539	1770	1583
Flt Permitted			0.163		0.950	
Satd. Flow (perm)	3522	0	304	3539	1770	1583
Satd. Flow (RTOR)	4					147
Adj. Flow (vph)	693	22	77	646	72	147
Lane Group Flow (vph)	715	0	77	646	72	147
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Total Split (s)	50.0		18.0	68.0	32.0	32.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	27.5		39.4	39.4	48.6	48.6
Actuated g/C Ratio	0.28		0.39	0.39	0.49	0.49
v/c Ratio	0.74		0.32	0.46	0.08	0.17
Control Delay	16.0		15.4	18.5	17.9	4.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	16.0		15.4	18.5	17.9	4.0
LOS	B		B	B	B	A
Approach Delay	16.0			18.1	8.5	
Approach LOS	B			B	A	

Intersection Summary			
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 98 (98%), Referenced to phase 2:NBL and 6:, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 15.9		Intersection LOS: B	
Intersection Capacity Utilization 48.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: N High School Place & Home Road



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	715	77	646	72	147
v/c Ratio	0.74	0.32	0.46	0.08	0.17
Control Delay	16.0	15.4	18.5	17.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	15.4	18.5	17.9	4.0
Queue Length 50th (ft)	236	30	134	25	0
Queue Length 95th (ft)	282	47	148	60	39
Internal Link Dist (ft)	1749		1289	740	
Turn Bay Length (ft)		225			
Base Capacity (vph)	1551	296	2194	859	844
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.26	0.29	0.08	0.17

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	638	20	71	594	66	135
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	693	22	77	646	72	147
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1020	32	251	1431	844	753
Arrive On Green	0.29	0.29	0.05	0.40	0.48	0.48
Sat Flow, veh/h	3595	111	1774	3632	1774	1583
Grp Volume(v), veh/h	350	365	77	646	72	147
Grp Sat Flow(s),veh/h/ln	1770	1843	1774	1770	1774	1583
Q Serve(g_s), s	17.5	17.5	2.9	13.3	2.2	5.4
Cycle Q Clear(g_c), s	17.5	17.5	2.9	13.3	2.2	5.4
Prop In Lane		0.06	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	516	537	251	1431	844	753
V/C Ratio(X)	0.68	0.68	0.31	0.45	0.09	0.20
Avail Cap(c_a), veh/h	779	811	370	2194	844	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	31.3	31.3	23.2	21.7	14.3	15.2
Incr Delay (d2), s/veh	1.1	1.0	0.6	0.2	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	9.1	1.4	6.5	1.1	2.5
LnGrp Delay(d),s/veh	32.4	32.3	23.8	21.9	14.5	15.7
LnGrp LOS	C	C	C	C	B	B
Approach Vol, veh/h	715			723	219	
Approach Delay, s/veh	32.3			22.1	15.3	
Approach LOS	C			C	B	

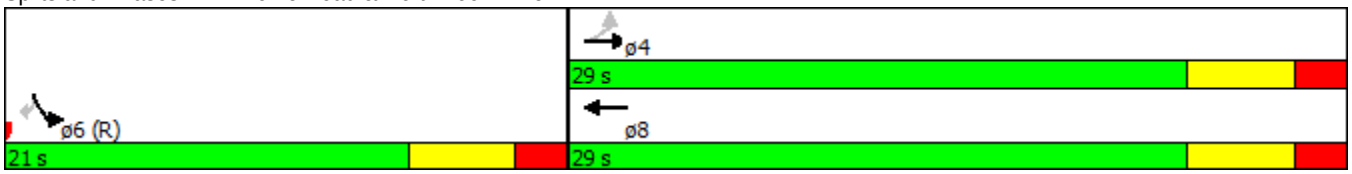
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		53.6	11.3	35.1				46.4
Change Period (Y+Rc), s		6.0	6.0	6.0				6.0
Max Green Setting (Gmax), s		26.0	12.0	44.0				62.0
Max Q Clear Time (g_c+I1), s		7.4	4.9	19.5				15.3
Green Ext Time (p_c), s		0.6	0.1	9.7				11.6

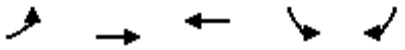
Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	35	715	610	13	23	50
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3529	0	1805	1615
Flt Permitted	0.350				0.950	
Satd. Flow (perm)	652	3539	3529	0	1805	1615
Satd. Flow (RTOR)			5			54
Adj. Flow (vph)	38	777	663	14	25	54
Lane Group Flow (vph)	38	777	677	0	25	54
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Total Split (s)	29.0	29.0	29.0		21.0	21.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Act Effct Green (s)	17.7	17.7	17.7		20.3	20.3
Actuated g/C Ratio	0.35	0.35	0.35		0.41	0.41
v/c Ratio	0.17	0.62	0.54		0.03	0.08
Control Delay	6.9	18.5	10.4		11.5	4.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	6.9	18.5	10.4		11.5	4.9
LOS	A	B	B		B	A
Approach Delay		18.0	10.4		7.0	
Approach LOS		B	B		A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 12 (24%), Referenced to phase 2: and 6:SBL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 49.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Home Road & Northmoor Drive

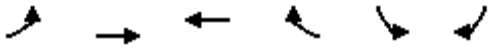




Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	38	777	677	25	54
v/c Ratio	0.17	0.62	0.54	0.03	0.08
Control Delay	6.9	18.5	10.4	11.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	18.5	10.4	11.5	4.9
Queue Length 50th (ft)	10	243	57	4	0
Queue Length 95th (ft)	m15	285	93	18	19
Internal Link Dist (ft)		1289	1125	460	
Turn Bay Length (ft)	100			50	
Base Capacity (vph)	299	1627	1626	734	688
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.13	0.48	0.42	0.03	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	35	715	610	13	23	50
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	38	777	663	14	25	54
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	311	1297	1299	27	712	636
Arrive On Green	0.37	0.37	0.37	0.37	0.39	0.39
Sat Flow, veh/h	759	3632	3637	75	1810	1615
Grp Volume(v), veh/h	38	777	331	346	25	54
Grp Sat Flow(s),veh/h/ln	759	1770	1770	1850	1810	1615
Q Serve(g_s), s	2.1	8.9	7.3	7.3	0.4	1.0
Cycle Q Clear(g_c), s	9.3	8.9	7.3	7.3	0.4	1.0
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	311	1297	648	678	712	636
V/C Ratio(X)	0.12	0.60	0.51	0.51	0.04	0.08
Avail Cap(c_a), veh/h	382	1628	814	851	712	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.82	0.82	1.00	1.00
Uniform Delay (d), s/veh	16.0	12.9	12.3	12.3	9.3	9.5
Incr Delay (d2), s/veh	0.1	0.3	0.5	0.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.4	3.6	3.7	0.2	0.5
LnGrp Delay(d),s/veh	16.1	13.2	12.9	12.8	9.4	9.8
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h		815	677		79	
Approach Delay, s/veh		13.3	12.8		9.7	
Approach LOS		B	B		A	

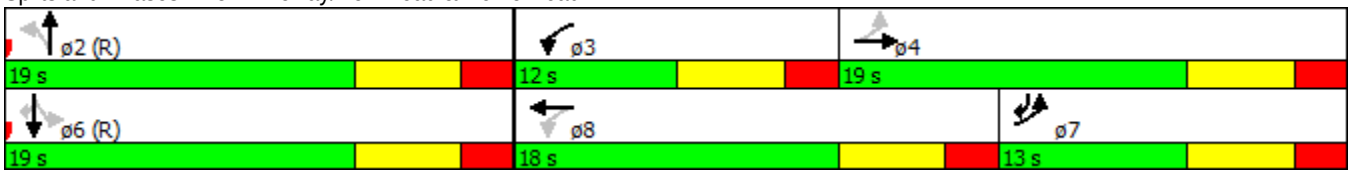
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.3		25.7		24.3
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				23.0		15.0		23.0
Max Q Clear Time (g_c+I1), s				11.3		3.0		9.3
Green Ext Time (p_c), s				7.0		0.1		7.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	302	389	0	0	330	279	0	0	0	236	0	272
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.931							0.850
Flt Protected	0.950										0.950	
Satd. Flow (prot)	1770	3539	0	1863	3295	0	0	1900	0	0	1787	1599
Flt Permitted	0.331										0.757	
Satd. Flow (perm)	617	3539	0	1863	3295	0	0	1900	0	0	1424	1599
Satd. Flow (RTOR)					303							152
Adj. Flow (vph)	328	423	0	0	359	303	0	0	0	257	0	296
Lane Group Flow (vph)	328	423	0	0	662	0	0	0	0	0	257	296
Turn Type	pm+pt	NA		pm+pt	NA					Perm	NA	pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases	4			8			2			6		6
Total Split (s)	13.0	19.0		12.0	18.0		19.0	19.0		19.0	19.0	13.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	6.0
Act Effct Green (s)	25.0	25.0			12.0						13.0	26.0
Actuated g/C Ratio	0.50	0.50			0.24						0.26	0.52
v/c Ratio	0.70	0.24			0.65						0.69	0.33
Control Delay	20.6	3.1			11.3						27.1	3.4
Queue Delay	0.0	0.0			0.0						0.0	0.0
Total Delay	20.6	3.1			11.3						27.1	3.4
LOS	C	A			B						C	A
Approach Delay		10.7			11.3						14.4	
Approach LOS		B			B						B	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 29 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Driveway/Derr Road & Home Road



Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	328	423	662	257	296
v/c Ratio	0.70	0.24	0.65	0.69	0.33
Control Delay	20.6	3.1	11.3	27.1	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	3.1	11.3	27.1	3.4
Queue Length 50th (ft)	55	11	32	91	40
Queue Length 95th (ft)	114	45	81	#145	50
Internal Link Dist (ft)		1125	2716	3537	
Turn Bay Length (ft)	200				
Base Capacity (vph)	469	1769	1021	370	904
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.24	0.65	0.69	0.33

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	302	389	0	0	330	279	0	0	0	236	0	272
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	328	423	0	0	359	303	0	0	0	257	0	296
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	386	1739	0	312	441	367	0	510	0	527	0	640
Arrive On Green	0.13	0.49	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.27	0.00	0.27
Sat Flow, veh/h	1774	3632	0	1774	1836	1527	0	1900	0	1426	0	1599
Grp Volume(v), veh/h	328	423	0	0	346	316	0	0	0	257	0	296
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1593	0	1900	0	1426	0	1599
Q Serve(g_s), s	4.6	3.5	0.0	0.0	9.2	9.4	0.0	0.0	0.0	8.0	0.0	0.2
Cycle Q Clear(g_c), s	4.6	3.5	0.0	0.0	9.2	9.4	0.0	0.0	0.0	8.0	0.0	0.2
Prop In Lane	1.00		0.00	1.00		0.96	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1739	0	312	425	382	0	510	0	527	0	640
V/C Ratio(X)	0.85	0.24	0.00	0.00	0.81	0.83	0.00	0.00	0.00	0.49	0.00	0.46
Avail Cap(c_a), veh/h	402	1739	0	521	425	382	0	510	0	527	0	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.00	0.00	0.92	0.92	0.00	0.00	0.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	19.8	7.3	0.0	0.0	17.9	18.0	0.0	0.0	0.0	16.3	0.0	11.0
Incr Delay (d2), s/veh	12.1	0.1	0.0	0.0	10.8	12.9	0.0	0.0	0.0	3.1	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	1.7	0.0	0.0	5.8	5.5	0.0	0.0	0.0	3.6	0.0	0.5
LnGrp Delay(d),s/veh	31.9	7.4	0.0	0.0	28.7	31.0	0.0	0.0	0.0	19.5	0.0	13.4
LnGrp LOS	C	A			C	C				B		B
Approach Vol, veh/h		751			662			0			553	
Approach Delay, s/veh		18.1			29.8			0.0			16.2	
Approach LOS		B			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		19.4	0.0	30.6		19.4	12.6	18.0
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		13.0	6.0	13.0		13.0	7.0	12.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	5.5		10.0	6.6	11.4
Green Ext Time (p_c), s		0.0	0.0	2.3		0.8	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	216	194	23	288	301	35
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.929					0.850
Flt Protected				0.996	0.950	
Satd. Flow (prot)	3288	0	0	3525	1770	1583
Flt Permitted				0.889	0.950	
Satd. Flow (perm)	3288	0	0	3146	1770	1583
Satd. Flow (RTOR)	211					38
Adj. Flow (vph)	235	211	25	313	327	38
Lane Group Flow (vph)	446	0	0	338	327	38
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Total Split (s)	22.0		22.0	22.0	28.0	28.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Act Effct Green (s)	12.5			12.5	25.5	25.5
Actuated g/C Ratio	0.25			0.25	0.51	0.51
v/c Ratio	0.46			0.43	0.36	0.05
Control Delay	14.8			14.9	9.0	3.0
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	14.8			14.9	9.0	3.0
LOS	B			B	A	A
Approach Delay	14.8			14.9	8.4	
Approach LOS	B			B	A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 23 (46%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Belmont Avenue & Home Road

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	446	338	327	38
v/c Ratio	0.46	0.43	0.36	0.05
Control Delay	14.8	14.9	9.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.8	14.9	9.0	3.0
Queue Length 50th (ft)	61	44	50	0
Queue Length 95th (ft)	66	m65	104	11
Internal Link Dist (ft)	2716	3133	1033	
Turn Bay Length (ft)				175
Base Capacity (vph)	1195	1006	904	827
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.34	0.36	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	216	194	23	288	301	35
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1900	1863	1863	1863
Adj Flow Rate, veh/h	235	211	25	313	327	38
Adj No. of Lanes	2	0	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	433	373	109	778	923	823
Arrive On Green	0.24	0.24	0.24	0.24	0.52	0.52
Sat Flow, veh/h	1899	1553	114	3326	1774	1583
Grp Volume(v), veh/h	230	216	180	158	327	38
Grp Sat Flow(s),veh/h/ln	1770	1589	1745	1610	1774	1583
Q Serve(g_s), s	5.7	6.0	0.0	4.1	5.4	0.6
Cycle Q Clear(g_c), s	5.7	6.0	6.0	4.1	5.4	0.6
Prop In Lane		0.98	0.14		1.00	1.00
Lane Grp Cap(c), veh/h	425	381	501	386	923	823
V/C Ratio(X)	0.54	0.57	0.36	0.41	0.35	0.05
Avail Cap(c_a), veh/h	566	508	632	515	923	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.61	0.61	1.00	1.00
Uniform Delay (d), s/veh	16.6	16.7	16.0	16.0	7.1	5.9
Incr Delay (d2), s/veh	1.1	1.3	0.3	0.4	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.7	2.1	1.9	2.9	0.3
LnGrp Delay(d),s/veh	17.7	18.0	16.3	16.4	8.1	6.0
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	446			338	365	
Approach Delay, s/veh	17.8			16.3	7.9	
Approach LOS	B			B	A	

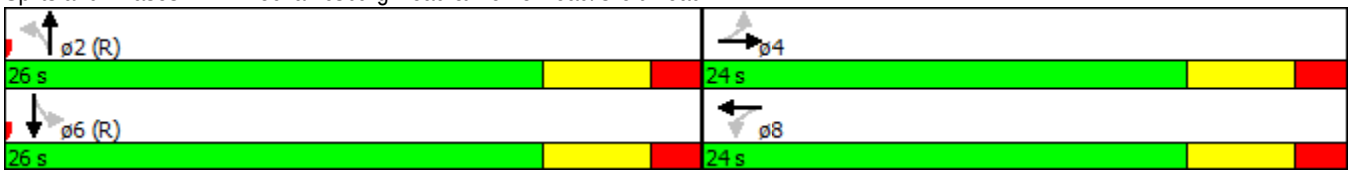
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		32.0		18.0				18.0
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		22.0		16.0				16.0
Max Q Clear Time (g_c+I1), s		7.4		8.0				8.0
Green Ext Time (p_c), s		1.0		2.9				2.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	151	32	31	176	283	28	208	35	220	238	59
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.974			0.907			0.978			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1779	0	1805	1723	0	1770	3461	0	1736	3367	0
Flt Permitted	0.261			0.633			0.556			0.589		
Satd. Flow (perm)	477	1779	0	1203	1723	0	1036	3461	0	1076	3367	0
Satd. Flow (RTOR)		24			181			38			64	
Adj. Flow (vph)	51	164	35	34	191	308	30	226	38	239	259	64
Lane Group Flow (vph)	51	199	0	34	499	0	30	264	0	239	323	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	15.3	15.3		15.3	15.3		22.7	22.7		22.7	22.7	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.45	0.45		0.45	0.45	
v/c Ratio	0.35	0.36		0.09	0.77		0.06	0.17		0.49	0.21	
Control Delay	16.3	9.7		11.8	18.2		9.6	7.9		15.0	7.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.3	9.7		11.8	18.2		9.6	7.9		15.0	7.6	
LOS	B	A		B	B		A	A		B	A	
Approach Delay		11.1			17.8			8.1			10.8	
Approach LOS		B			B			A			B	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 45 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Mechanicsburg Road & Home Road/Croft Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	199	34	499	30	264	239	323
v/c Ratio	0.35	0.36	0.09	0.77	0.06	0.17	0.49	0.21
Control Delay	16.3	9.7	11.8	18.2	9.6	7.9	15.0	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	9.7	11.8	18.2	9.6	7.9	15.0	7.6
Queue Length 50th (ft)	19	68	7	76	5	19	47	22
Queue Length 95th (ft)	43	99	21	159	17	40	110	45
Internal Link Dist (ft)		3133		843		1034		682
Turn Bay Length (ft)			150				475	
Base Capacity (vph)	171	655	433	736	471	1594	489	1566
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.30	0.08	0.68	0.06	0.17	0.49	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	47	151	32	31	176	283	28	208	35	220	238	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1900	1900	1863	1863	1900	1827	1827	1900
Adj Flow Rate, veh/h	51	164	35	34	191	308	30	226	38	239	259	64
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	4	4	4
Cap, veh/h	229	525	112	479	236	380	499	1218	202	527	1110	269
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	878	1460	312	1202	656	1058	1052	3040	504	1089	2771	672
Grp Volume(v), veh/h	51	0	199	34	0	499	30	130	134	239	160	163
Grp Sat Flow(s),veh/h/ln	878	0	1772	1202	0	1713	1052	1770	1774	1089	1736	1708
Q Serve(g_s), s	2.8	0.0	4.1	1.0	0.0	13.2	1.0	2.4	2.4	9.1	3.1	3.2
Cycle Q Clear(g_c), s	15.9	0.0	4.1	5.1	0.0	13.2	4.1	2.4	2.4	11.6	3.1	3.2
Prop In Lane	1.00		0.18	1.00		0.62	1.00		0.28	1.00		0.39
Lane Grp Cap(c), veh/h	229	0	637	479	0	616	499	709	710	527	695	684
V/C Ratio(X)	0.22	0.00	0.31	0.07	0.00	0.81	0.06	0.18	0.19	0.45	0.23	0.24
Avail Cap(c_a), veh/h	229	0	638	479	0	617	499	709	710	527	695	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.00	0.91	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	11.6	13.4	0.0	14.5	11.3	9.7	9.7	13.5	9.9	9.9
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.1	0.0	8.0	0.2	0.6	0.6	2.8	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	2.0	0.4	0.0	7.5	0.3	1.3	1.3	3.1	1.6	1.6
LnGrp Delay(d),s/veh	22.1	0.0	11.8	13.5	0.0	22.5	11.5	10.3	10.3	16.3	10.7	10.7
LnGrp LOS	C		B	B		C	B	B	B	B	B	B
Approach Vol, veh/h		250			533			294			562	
Approach Delay, s/veh		13.9			21.9			10.4			13.1	
Approach LOS		B			C			B			B	

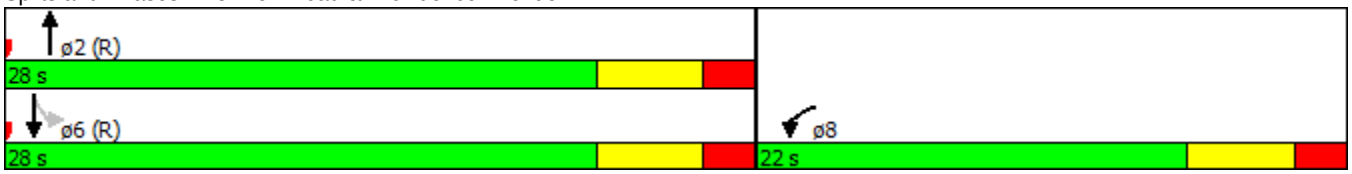
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.0		24.0		26.0		24.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		20.0		18.0		20.0		18.0
Max Q Clear Time (g_c+I1), s		6.1		17.9		13.6		15.2
Green Ext Time (p_c), s		3.9		0.0		2.5		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	64	74	474	53	77	426
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.928		0.985			
Flt Protected	0.977				0.950	
Satd. Flow (prot)	1706	0	3521	0	1787	3574
Flt Permitted	0.977				0.436	
Satd. Flow (perm)	1706	0	3521	0	820	3574
Satd. Flow (RTOR)	80		31			
Adj. Flow (vph)	70	80	515	58	84	463
Lane Group Flow (vph)	150	0	573	0	84	463
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	22.0		28.0		28.0	28.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Act Effct Green (s)	12.0		30.8		30.8	30.8
Actuated g/C Ratio	0.24		0.62		0.62	0.62
v/c Ratio	0.32		0.26		0.17	0.21
Control Delay	10.6		8.5		4.6	3.8
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	10.6		8.5		4.6	3.8
LOS	B		A		A	A
Approach Delay	10.6		8.5			3.9
Approach LOS	B		A			A

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 41 (82%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Derr Road & Providence Avenue



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	573	84	463
v/c Ratio	0.32	0.26	0.17	0.21
Control Delay	10.6	8.5	4.6	3.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	8.5	4.6	3.8
Queue Length 50th (ft)	16	74	12	35
Queue Length 95th (ft)	53	93	16	32
Internal Link Dist (ft)	566	3537		893
Turn Bay Length (ft)			50	
Base Capacity (vph)	600	2180	505	2201
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.26	0.17	0.21

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	64	74	474	53	77	426
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1881	1900	1881	1881
Adj Flow Rate, veh/h	70	80	515	58	84	463
Adj No. of Lanes	0	0	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	1	1	1
Cap, veh/h	164	188	1780	200	536	1964
Arrive On Green	0.21	0.21	0.55	0.55	0.55	0.55
Sat Flow, veh/h	781	893	3334	364	844	3668
Grp Volume(v), veh/h	151	0	283	290	84	463
Grp Sat Flow(s),veh/h/ln	1685	0	1787	1817	844	1787
Q Serve(g_s), s	3.9	0.0	4.2	4.3	3.0	3.4
Cycle Q Clear(g_c), s	3.9	0.0	4.2	4.3	7.2	3.4
Prop In Lane	0.46	0.53		0.20	1.00	
Lane Grp Cap(c), veh/h	355	0	982	998	536	1964
V/C Ratio(X)	0.43	0.00	0.29	0.29	0.16	0.24
Avail Cap(c_a), veh/h	539	0	982	998	536	1964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.65	0.65	0.99	0.99
Uniform Delay (d), s/veh	17.1	0.0	6.0	6.0	8.0	5.8
Incr Delay (d2), s/veh	0.8	0.0	0.5	0.5	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	2.2	2.2	0.8	1.7
LnGrp Delay(d),s/veh	17.9	0.0	6.5	6.5	8.6	6.1
LnGrp LOS	B		A	A	A	A
Approach Vol, veh/h	151		573			547
Approach Delay, s/veh	17.9		6.5			6.5
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		33.5				33.5		16.5
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		22.0				22.0		16.0
Max Q Clear Time (g_c+I1), s		6.3				9.2		5.9
Green Ext Time (p_c), s		6.3				5.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Notes

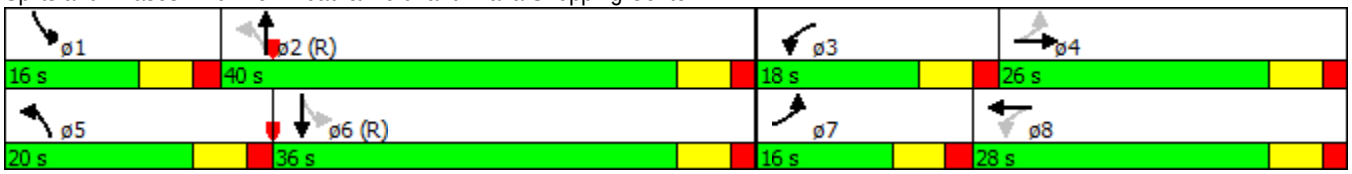
User approved volume balancing among the lanes for turning movement.

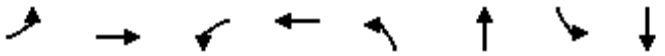
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	5	64	62	8	21	97	259	66	14	273	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.860			0.892			0.969			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1618	0	1687	1584	0	1752	3396	0	1770	3518	0
Flt Permitted	0.736			0.575			0.520			0.540		
Satd. Flow (perm)	1385	1618	0	1021	1584	0	959	3396	0	1006	3518	0
Satd. Flow (RTOR)		70			23			34			4	
Adj. Flow (vph)	40	5	70	67	9	23	105	282	72	15	297	12
Lane Group Flow (vph)	40	75	0	67	32	0	105	354	0	15	309	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	16.0	26.0		18.0	28.0		20.0	40.0		16.0	36.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	16.9	12.0		20.4	15.7		66.3	63.7		60.7	57.0	
Actuated g/C Ratio	0.17	0.12		0.20	0.16		0.66	0.64		0.61	0.57	
v/c Ratio	0.15	0.29		0.25	0.12		0.15	0.16		0.02	0.15	
Control Delay	28.5	14.6		30.1	20.6		5.8	7.7		7.5	14.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.5	14.6		30.1	20.6		5.8	7.7		7.5	14.0	
LOS	C	B		C	C		A	A		A	B	
Approach Delay		19.4			27.0			7.3			13.7	
Approach LOS		B			C			A			B	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 98 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 12.7 — Intersection LOS: B
Intersection Capacity Utilization 40.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: Derr Road & Northland Plaza Shopping Center





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	40	75	67	32	105	354	15	309
v/c Ratio	0.15	0.29	0.25	0.12	0.15	0.16	0.02	0.15
Control Delay	28.5	14.6	30.1	20.6	5.8	7.7	7.5	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	14.6	30.1	20.6	5.8	7.7	7.5	14.0
Queue Length 50th (ft)	19	3	33	5	31	51	4	72
Queue Length 95th (ft)	44	44	65	32	62	83	m10	105
Internal Link Dist (ft)		105		118		893		632
Turn Bay Length (ft)					100		100	
Base Capacity (vph)	311	379	314	376	757	2175	718	2006
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.20	0.21	0.09	0.14	0.16	0.02	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	37	5	64	62	8	21	97	259	66	14	273	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1776	1776	1900	1845	1845	1900	1863	1863	1900
Adj Flow Rate, veh/h	40	5	70	67	9	23	105	282	72	15	297	12
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	1	1	1	7	7	7	3	3	3	2	2	2
Cap, veh/h	297	13	178	252	57	145	690	1585	398	642	1854	75
Arrive On Green	0.04	0.12	0.12	0.05	0.13	0.13	0.06	0.57	0.57	0.02	0.53	0.53
Sat Flow, veh/h	1792	108	1507	1691	443	1133	1757	2777	697	1774	3468	140
Grp Volume(v), veh/h	40	0	75	67	0	32	105	176	178	15	151	158
Grp Sat Flow(s),veh/h/ln	1792	0	1615	1691	0	1576	1757	1752	1722	1774	1770	1838
Q Serve(g_s), s	1.9	0.0	4.3	3.4	0.0	1.8	2.6	4.8	4.9	0.4	4.3	4.4
Cycle Q Clear(g_c), s	1.9	0.0	4.3	3.4	0.0	1.8	2.6	4.8	4.9	0.4	4.3	4.4
Prop In Lane	1.00		0.93	1.00		0.72	1.00		0.40	1.00		0.08
Lane Grp Cap(c), veh/h	297	0	191	252	0	202	690	1000	983	642	946	983
V/C Ratio(X)	0.13	0.00	0.39	0.27	0.00	0.16	0.15	0.18	0.18	0.02	0.16	0.16
Avail Cap(c_a), veh/h	404	0	323	369	0	347	836	1000	983	783	946	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	0.94	0.94	0.94
Uniform Delay (d), s/veh	36.2	0.0	40.8	36.1	0.0	38.8	9.0	10.2	10.3	10.0	11.8	11.8
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.6	0.0	0.4	0.1	0.4	0.4	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	2.0	1.6	0.0	0.8	1.2	2.4	2.4	0.2	2.2	2.3
LnGrp Delay(d),s/veh	36.4	0.0	42.1	36.6	0.0	39.1	9.1	10.6	10.7	10.0	12.2	12.2
LnGrp LOS	D		D	D		D	A	B	B	B	B	B
Approach Vol, veh/h		115			99			459			324	
Approach Delay, s/veh		40.1			37.4			10.3			12.1	
Approach LOS		D			D			B			B	

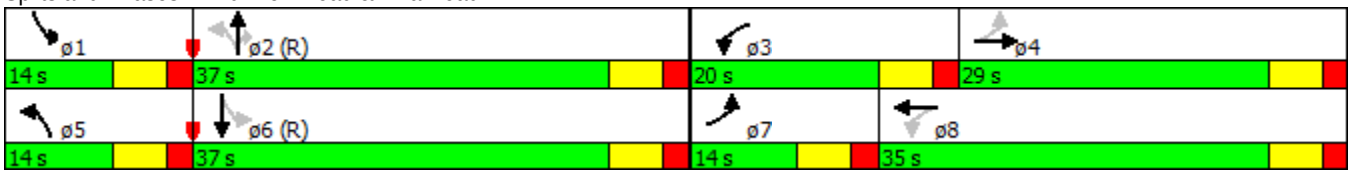
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	63.1	11.1	17.8	11.7	59.5	10.0	18.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0	34.0	12.0	20.0	14.0	30.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.4	6.9	5.4	6.3	4.6	6.4	3.9	3.8
Green Ext Time (p_c), s	0.0	4.0	0.1	0.4	0.1	3.9	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	230	119	136	206	34	105	177	93	55	155	51
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.949			0.979				0.850		0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3392	0	1787	1842	0	1787	1881	1599	1805	1830	0
Flt Permitted	0.516			0.299			0.542			0.637		
Satd. Flow (perm)	971	3392	0	562	1842	0	1020	1881	1599	1210	1830	0
Satd. Flow (RTOR)		86			8				164		17	
Adj. Flow (vph)	86	250	129	148	224	37	114	192	101	60	168	55
Lane Group Flow (vph)	86	379	0	148	261	0	114	192	101	60	223	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	14.0	29.0		20.0	35.0		14.0	37.0	37.0	14.0	37.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Act Effct Green (s)	23.1	15.5		31.5	21.7		51.7	44.3	44.3	47.7	40.5	
Actuated g/C Ratio	0.23	0.16		0.32	0.22		0.52	0.44	0.44	0.48	0.40	
v/c Ratio	0.30	0.63		0.47	0.64		0.19	0.23	0.13	0.10	0.30	
Control Delay	25.6	35.0		28.4	42.6		7.5	12.4	1.0	12.9	21.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	25.6	35.0		28.4	42.6		7.5	12.4	1.0	12.9	21.8	
LOS	C	D		C	D		A	B	A	B	C	
Approach Delay		33.3			37.5			8.2			19.9	
Approach LOS		C			D			A			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Derr Road & Villa Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	86	379	148	261	114	192	101	60	223
v/c Ratio	0.30	0.63	0.47	0.64	0.19	0.23	0.13	0.10	0.30
Control Delay	25.6	35.0	28.4	42.6	7.5	12.4	1.0	12.9	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	35.0	28.4	42.6	7.5	12.4	1.0	12.9	21.8
Queue Length 50th (ft)	38	92	68	153	18	78	1	17	87
Queue Length 95th (ft)	66	134	105	221	34	78	0	42	168
Internal Link Dist (ft)		616		681		632			459
Turn Bay Length (ft)	100		225		75			50	
Base Capacity (vph)	293	846	356	539	598	832	799	638	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.45	0.42	0.48	0.19	0.23	0.13	0.09	0.30

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	230	119	136	206	34	105	177	93	55	155	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1881	1900	1900	1900
Adj Flow Rate, veh/h	86	250	129	148	224	37	114	192	101	60	168	55
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	229	355	178	278	295	49	623	883	750	611	631	207
Arrive On Green	0.05	0.15	0.15	0.09	0.19	0.19	0.06	0.47	0.47	0.05	0.46	0.46
Sat Flow, veh/h	1792	2310	1155	1792	1575	260	1792	1881	1599	1810	1372	449
Grp Volume(v), veh/h	86	192	187	148	0	261	114	192	101	60	0	223
Grp Sat Flow(s),veh/h/ln	1792	1787	1677	1792	0	1835	1792	1881	1599	1810	0	1821
Q Serve(g_s), s	4.0	10.2	10.6	6.8	0.0	13.5	3.3	6.0	3.6	1.7	0.0	7.5
Cycle Q Clear(g_c), s	4.0	10.2	10.6	6.8	0.0	13.5	3.3	6.0	3.6	1.7	0.0	7.5
Prop In Lane	1.00		0.69	1.00		0.14	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	229	275	258	278	0	344	623	883	750	611	0	838
V/C Ratio(X)	0.37	0.70	0.73	0.53	0.00	0.76	0.18	0.22	0.13	0.10	0.00	0.27
Avail Cap(c_a), veh/h	275	411	386	371	0	532	664	883	750	668	0	838
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.5	40.1	40.3	32.0	0.0	38.5	12.7	15.7	15.0	12.6	0.0	16.6
Incr Delay (d2), s/veh	1.0	3.2	3.9	1.6	0.0	3.4	0.1	0.6	0.4	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.2	5.2	3.5	0.0	7.1	1.6	3.3	1.7	0.8	0.0	4.0
LnGrp Delay(d),s/veh	34.5	43.3	44.2	33.5	0.0	41.9	12.9	16.3	15.4	12.7	0.0	17.4
LnGrp LOS	C	D	D	C		D	B	B	B	B		B
Approach Vol, veh/h		465			409			407			283	
Approach Delay, s/veh		42.0			38.9			15.1			16.4	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	52.9	14.8	21.4	11.7	52.0	11.5	24.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	31.0	14.0	23.0	8.0	31.0	8.0	29.0
Max Q Clear Time (g_c+I1), s	3.7	8.0	8.8	12.6	5.3	9.5	6.0	15.5
Green Ext Time (p_c), s	0.0	2.7	0.2	2.7	0.1	2.6	0.0	3.2

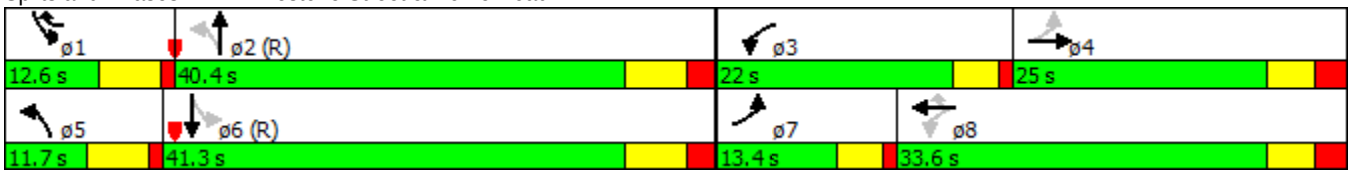
Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

2040 No Build Conditions
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	200	10	280	250	70	20	250	120	110	560	280
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.993				0.850		0.951			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1787	1881	1599	1703	3239	0	1770	3362	0
Flt Permitted	0.592			0.306			0.233			0.436		
Satd. Flow (perm)	1103	1850	0	576	1881	1599	418	3239	0	812	3362	0
Satd. Flow (RTOR)		2				91		86			94	
Adj. Flow (vph)	130	217	11	304	272	76	22	272	130	120	609	304
Lane Group Flow (vph)	130	228	0	304	272	76	22	402	0	120	913	0
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	13.4	25.0		22.0	33.6	12.6	11.7	40.4		12.6	41.3	
Total Lost Time (s)	4.5	6.1		4.5	6.1	5.6	5.6	6.8		5.6	6.8	
Act Effct Green (s)	26.5	16.4		38.7	24.1	37.5	44.3	37.0		49.3	45.3	
Actuated g/C Ratio	0.26	0.16		0.39	0.24	0.38	0.44	0.37		0.49	0.45	
v/c Ratio	0.37	0.75		0.73	0.60	0.12	0.08	0.32		0.26	0.58	
Control Delay	23.3	54.9		25.4	13.2	1.9	14.8	19.1		15.6	21.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	23.3	54.9		25.4	13.2	1.9	14.8	19.1		15.6	21.8	
LOS	C	D		C	B	A	B	B		B	C	
Approach Delay		43.4			17.6			18.9			21.1	
Approach LOS		D			B			B			C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 88 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Limestone Street & Home Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	130	228	304	272	76	22	402	120	913
v/c Ratio	0.37	0.75	0.73	0.60	0.12	0.08	0.32	0.26	0.58
Control Delay	23.3	54.9	25.4	13.2	1.9	14.8	19.1	15.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	54.9	25.4	13.2	1.9	14.8	19.1	15.6	21.8
Queue Length 50th (ft)	52	137	10	143	10	7	77	40	187
Queue Length 95th (ft)	90	215	184	22	0	21	117	75	317
Internal Link Dist (ft)		429		385			541		559
Turn Bay Length (ft)					50	200		100	
Base Capacity (vph)	355	351	434	517	659	263	1253	471	1573
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.65	0.70	0.53	0.12	0.08	0.32	0.25	0.58

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	200	10	280	250	70	20	250	120	110	560	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1881	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	130	217	11	304	272	76	22	272	130	120	609	304
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	2	2	2
Cap, veh/h	318	269	14	395	438	465	250	905	421	484	986	492
Arrive On Green	0.08	0.15	0.15	0.16	0.23	0.23	0.03	0.40	0.40	0.06	0.43	0.43
Sat Flow, veh/h	1774	1758	89	1792	1881	1599	1707	2259	1051	1774	2289	1142
Grp Volume(v), veh/h	130	0	228	304	272	76	22	203	199	120	471	442
Grp Sat Flow(s),veh/h/ln	1774	0	1847	1792	1881	1599	1707	1703	1607	1774	1770	1661
Q Serve(g_s), s	6.1	0.0	11.9	13.7	13.0	3.5	0.7	8.1	8.5	3.9	20.6	20.6
Cycle Q Clear(g_c), s	6.1	0.0	11.9	13.7	13.0	3.5	0.7	8.1	8.5	3.9	20.6	20.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.65	1.00		0.69
Lane Grp Cap(c), veh/h	318	0	283	395	438	465	250	682	644	484	763	716
V/C Ratio(X)	0.41	0.00	0.81	0.77	0.62	0.16	0.09	0.30	0.31	0.25	0.62	0.62
Avail Cap(c_a), veh/h	336	0	349	425	517	532	308	682	644	505	763	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	40.9	28.2	34.4	26.4	18.2	20.4	20.5	16.1	22.1	22.1
Incr Delay (d2), s/veh	0.8	0.0	10.7	5.8	1.3	0.1	0.1	1.1	1.2	0.3	3.7	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	6.9	7.3	6.9	1.6	0.4	4.0	4.0	1.9	10.9	10.2
LnGrp Delay(d),s/veh	32.8	0.0	51.6	34.0	35.7	26.5	18.3	21.5	21.8	16.4	25.8	26.0
LnGrp LOS	C		D	C	D	C	B	C	C	B	C	C
Approach Vol, veh/h		358			652			424			1033	
Approach Delay, s/veh		44.8			33.8			21.5			24.8	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	46.8	20.3	21.4	8.3	49.9	12.4	29.4
Change Period (Y+Rc), s	5.6	* 6.8	4.5	6.1	5.6	* 6.8	4.5	6.1
Max Green Setting (Gmax), s	7.0	* 34	17.5	18.9	6.1	* 35	8.9	27.5
Max Q Clear Time (g_c+I1), s	5.9	10.5	15.7	13.9	2.7	22.6	8.1	15.0
Green Ext Time (p_c), s	0.0	9.1	0.2	1.4	0.0	6.3	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

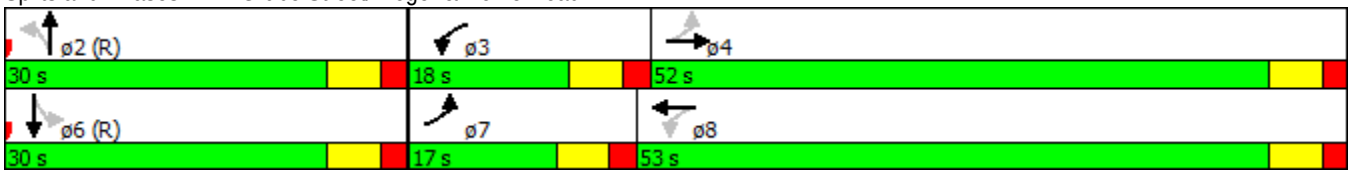
Notes

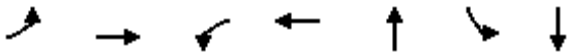
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	400	20	30	550	10	10	10	20	10	0	20
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.997			0.932			0.850	
Flt Protected	0.950			0.950				0.988		0.950		
Satd. Flow (prot)	1770	3514	0	1787	3564	0	0	1682	0	1736	1553	0
Flt Permitted	0.304			0.330				0.959		0.728		
Satd. Flow (perm)	566	3514	0	621	3564	0	0	1633	0	1330	1553	0
Satd. Flow (RTOR)		7			2			22			377	
Adj. Flow (vph)	11	435	22	33	598	11	11	11	22	11	0	22
Lane Group Flow (vph)	11	457	0	33	609	0	0	44	0	11	22	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	17.0	52.0		18.0	53.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Act Effct Green (s)	25.3	21.5		28.7	27.1			58.4		58.4	58.4	
Actuated g/C Ratio	0.25	0.22		0.29	0.27			0.58		0.58	0.58	
v/c Ratio	0.05	0.60		0.13	0.63			0.05		0.01	0.02	
Control Delay	34.1	54.0		10.6	22.7			8.3		13.2	0.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	34.1	54.0		10.6	22.7			8.3		13.2	0.1	
LOS	C	D		B	C			A		B	A	
Approach Delay		53.5			22.1			8.3			4.4	
Approach LOS		D			C			A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 93 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 33.5	Intersection LOS: C
Intersection Capacity Utilization 44.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Grube Street/Kroger & Home Road





Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	11	457	33	609	44	11	22
v/c Ratio	0.05	0.60	0.13	0.63	0.05	0.01	0.02
Control Delay	34.1	54.0	10.6	22.7	8.3	13.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	54.0	10.6	22.7	8.3	13.2	0.1
Queue Length 50th (ft)	7	164	10	159	6	3	0
Queue Length 95th (ft)	m14	180	21	233	27	14	0
Internal Link Dist (ft)		385		1749	320		103
Turn Bay Length (ft)	50		50				
Base Capacity (vph)	291	1620	322	1676	962	776	1063
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.28	0.10	0.36	0.05	0.01	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	400	20	30	550	10	10	10	20	10	0	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1900	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	11	435	22	33	598	11	11	11	22	11	0	22
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	4	4	4
Cap, veh/h	174	762	38	239	871	16	240	245	440	832	0	872
Arrive On Green	0.02	0.22	0.22	0.04	0.24	0.24	0.56	0.56	0.56	0.56	0.00	0.56
Sat Flow, veh/h	1774	3429	173	1792	3591	66	347	437	784	1344	0	1553
Grp Volume(v), veh/h	11	224	233	33	298	311	44	0	0	11	0	22
Grp Sat Flow(s),veh/h/ln	1774	1770	1832	1792	1787	1870	1568	0	0	1344	0	1553
Q Serve(g_s), s	0.5	11.3	11.3	1.4	15.1	15.1	0.0	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.5	11.3	11.3	1.4	15.1	15.1	1.2	0.0	0.0	0.3	0.0	0.6
Prop In Lane	1.00		0.09	1.00		0.04	0.25		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	174	393	407	239	433	453	926	0	0	832	0	872
V/C Ratio(X)	0.06	0.57	0.57	0.14	0.69	0.69	0.05	0.00	0.00	0.01	0.00	0.03
Avail Cap(c_a), veh/h	341	814	843	389	840	879	926	0	0	832	0	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.96	0.96	0.96	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	34.6	34.6	28.7	34.4	34.4	9.9	0.0	0.0	9.7	0.0	9.7
Incr Delay (d2), s/veh	0.1	1.0	1.0	0.2	1.9	1.8	0.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.6	5.8	0.7	7.7	8.0	0.6	0.0	0.0	0.1	0.0	0.3
LnGrp Delay(d),s/veh	30.2	35.6	35.6	28.9	36.3	36.2	10.0	0.0	0.0	9.7	0.0	9.8
LnGrp LOS	C	D	D	C	D	D	A			A		A
Approach Vol, veh/h		468			642			44			33	
Approach Delay, s/veh		35.5			35.9			10.0			9.8	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		62.2	9.6	28.2		62.2	7.6	30.3
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		24.0	12.0	46.0		24.0	11.0	47.0
Max Q Clear Time (g_c+I1), s		3.2	3.4	13.3		2.6	2.5	17.1
Green Ext Time (p_c), s		0.3	0.0	7.2		0.3	0.0	7.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	450	80	250	510	60	160
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3492	0	1770	3539	1752	1568
Flt Permitted			0.188		0.950	
Satd. Flow (perm)	3492	0	350	3539	1752	1568
Satd. Flow (RTOR)	21					174
Adj. Flow (vph)	489	87	272	554	65	174
Lane Group Flow (vph)	576	0	272	554	65	174
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Total Split (s)	37.0		32.0	69.0	31.0	31.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	21.9		44.3	44.3	43.7	43.7
Actuated g/C Ratio	0.22		0.44	0.44	0.44	0.44
v/c Ratio	0.74		0.70	0.35	0.09	0.22
Control Delay	38.3		33.7	14.1	20.0	4.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	38.3		33.7	14.1	20.0	4.3
LOS	D		C	B	B	A
Approach Delay	38.3			20.5	8.6	
Approach LOS	D			C	A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 46 (46%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: N High School Place & Home Road

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	576	272	554	65	174
v/c Ratio	0.74	0.70	0.35	0.09	0.22
Control Delay	38.3	33.7	14.1	20.0	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	33.7	14.1	20.0	4.3
Queue Length 50th (ft)	197	146	132	24	0
Queue Length 95th (ft)	252	207	150	59	45
Internal Link Dist (ft)	1749		1289	740	
Turn Bay Length (ft)		225			
Base Capacity (vph)	1097	524	2229	764	782
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.52	0.25	0.09	0.22

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	450	80	250	510	60	160
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1863	1863	1845	1845
Adj Flow Rate, veh/h	489	87	272	554	65	174
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	696	123	383	1510	797	711
Arrive On Green	0.23	0.23	0.14	0.43	0.45	0.45
Sat Flow, veh/h	3130	537	1774	3632	1757	1568
Grp Volume(v), veh/h	287	289	272	554	65	174
Grp Sat Flow(s),veh/h/ln	1787	1786	1774	1770	1757	1568
Q Serve(g_s), s	14.7	14.9	11.1	10.6	2.1	6.8
Cycle Q Clear(g_c), s	14.7	14.9	11.1	10.6	2.1	6.8
Prop In Lane		0.30	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	410	409	383	1510	797	711
V/C Ratio(X)	0.70	0.71	0.71	0.37	0.08	0.24
Avail Cap(c_a), veh/h	554	554	600	2230	797	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.79	0.79	1.00	1.00
Uniform Delay (d), s/veh	35.4	35.4	24.3	19.5	15.5	16.8
Incr Delay (d2), s/veh	1.9	2.0	1.9	0.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	7.5	5.6	5.2	1.1	3.1
LnGrp Delay(d),s/veh	37.3	37.5	26.3	19.6	15.7	17.6
LnGrp LOS	D	D	C	B	B	B
Approach Vol, veh/h	576			826	239	
Approach Delay, s/veh	37.4			21.8	17.1	
Approach LOS	D			C	B	

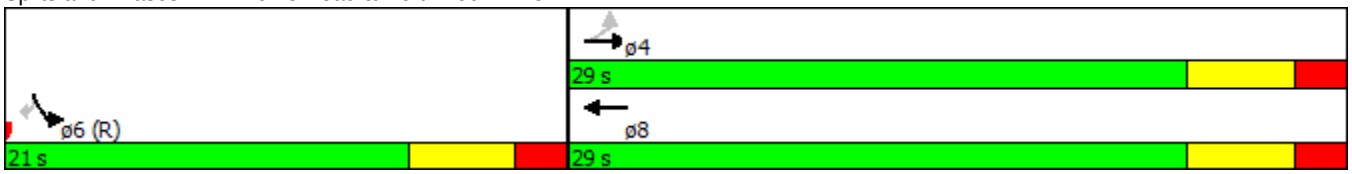
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		51.3	19.7	28.9				48.7
Change Period (Y+Rc), s		6.0	6.0	6.0				6.0
Max Green Setting (Gmax), s		25.0	26.0	31.0				63.0
Max Q Clear Time (g_c+I1), s		8.8	13.1	16.9				12.6
Green Ext Time (p_c), s		0.7	0.6	6.0				9.0

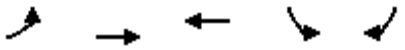
Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	30	580	700	10	30	60
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	3532	0	1752	1568
Flt Permitted	0.288				0.950	
Satd. Flow (perm)	542	3574	3532	0	1752	1568
Satd. Flow (RTOR)			4			65
Adj. Flow (vph)	33	630	761	11	33	65
Lane Group Flow (vph)	33	630	772	0	33	65
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Total Split (s)	29.0	29.0	29.0		21.0	21.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Act Effct Green (s)	17.5	17.5	17.5		20.5	20.5
Actuated g/C Ratio	0.35	0.35	0.35		0.41	0.41
v/c Ratio	0.17	0.50	0.62		0.05	0.10
Control Delay	5.0	6.6	14.6		11.3	4.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	5.0	6.6	14.6		11.3	4.6
LOS	A	A	B		B	A
Approach Delay		6.6	14.6		6.8	
Approach LOS		A	B		A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 8 (16%), Referenced to phase 2: and 6:SBL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 44.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Home Road & Northmoor Drive

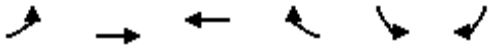




Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	33	630	772	33	65
v/c Ratio	0.17	0.50	0.62	0.05	0.10
Control Delay	5.0	6.6	14.6	11.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.0	6.6	14.6	11.3	4.6
Queue Length 50th (ft)	2	18	151	6	0
Queue Length 95th (ft)	m6	37	92	22	20
Internal Link Dist (ft)		1289	1125	460	
Turn Bay Length (ft)	100			50	
Base Capacity (vph)	249	1644	1626	717	680
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.13	0.38	0.47	0.05	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	30	580	700	10	30	60
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1900	1845	1845
Adj Flow Rate, veh/h	33	630	761	11	33	65
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	288	1337	1336	19	678	605
Arrive On Green	0.37	0.37	0.37	0.37	0.39	0.39
Sat Flow, veh/h	702	3668	3665	52	1757	1568
Grp Volume(v), veh/h	33	630	377	395	33	65
Grp Sat Flow(s),veh/h/ln	702	1787	1770	1854	1757	1568
Q Serve(g_s), s	2.0	6.7	8.5	8.5	0.6	1.3
Cycle Q Clear(g_c), s	10.4	6.7	8.5	8.5	0.6	1.3
Prop In Lane	1.00			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	288	1337	662	693	678	605
V/C Ratio(X)	0.11	0.47	0.57	0.57	0.05	0.11
Avail Cap(c_a), veh/h	348	1644	814	853	678	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.77	0.77	1.00	1.00
Uniform Delay (d), s/veh	16.6	11.9	12.4	12.4	9.6	9.8
Incr Delay (d2), s/veh	0.1	0.2	0.6	0.6	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.3	4.2	4.4	0.3	0.6
LnGrp Delay(d),s/veh	16.7	12.1	13.0	13.0	9.7	10.2
LnGrp LOS	B	B	B	B	A	B
Approach Vol, veh/h		663	772		98	
Approach Delay, s/veh		12.3	13.0		10.0	
Approach LOS		B	B		B	

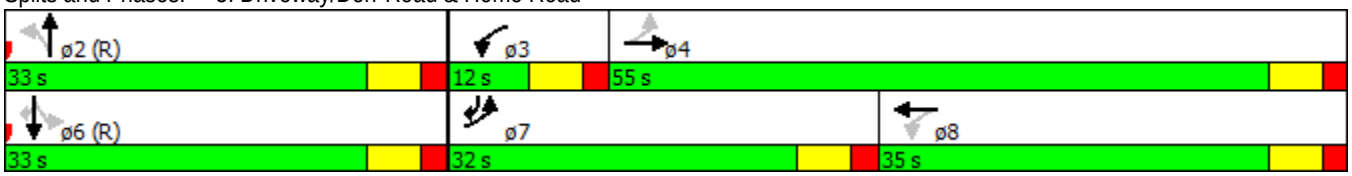
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.7		25.3		24.7
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				23.0		15.0		23.0
Max Q Clear Time (g_c+I1), s				12.4		3.3		10.5
Green Ext Time (p_c), s				6.3		0.2		7.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	280	0	0	410	130	0	0	0	140	0	390
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.964							0.850
Flt Protected	0.950										0.950	
Satd. Flow (prot)	1736	3471	0	1845	3379	0	0	1900	0	0	1770	1583
Flt Permitted	0.186										0.757	
Satd. Flow (perm)	340	3471	0	1845	3379	0	0	1900	0	0	1410	1583
Satd. Flow (RTOR)					43							144
Adj. Flow (vph)	196	304	0	0	446	141	0	0	0	152	0	424
Lane Group Flow (vph)	196	304	0	0	587	0	0	0	0	0	152	424
Turn Type	pm+pt	NA		pm+pt	NA					Perm	NA	pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases	4			8			2			6		6
Total Split (s)	32.0	55.0		12.0	35.0		33.0	33.0		33.0	33.0	32.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	6.0
Act Effct Green (s)	45.3	45.3			22.3						42.7	65.7
Actuated g/C Ratio	0.45	0.45			0.22						0.43	0.66
v/c Ratio	0.50	0.19			0.75						0.25	0.39
Control Delay	17.1	11.9			36.3						24.7	7.1
Queue Delay	0.0	0.0			0.0						0.0	0.0
Total Delay	17.1	11.9			36.3						24.7	7.1
LOS	B	B			D						C	A
Approach Delay		14.0			36.3						11.8	
Approach LOS		B			D						B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 35 (35%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 50.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Driveway/Derr Road & Home Road



Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	196	304	587	152	424
v/c Ratio	0.50	0.19	0.75	0.25	0.39
Control Delay	17.1	11.9	36.3	24.7	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	11.9	36.3	24.7	7.1
Queue Length 50th (ft)	117	95	168	47	76
Queue Length 95th (ft)	164	97	212	142	117
Internal Link Dist (ft)		1125	2716	3537	
Turn Bay Length (ft)	200				
Base Capacity (vph)	517	1778	1010	601	1218
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.17	0.58	0.25	0.35

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	280	0	0	410	130	0	0	0	140	0	390
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1845	1845	1900	1900	1900	1900	1900	1863	1863
Adj Flow Rate, veh/h	196	304	0	0	446	141	0	0	0	152	0	424
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	1
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
Percent Heavy Veh, %	4	4	4	3	3	3	0	0	0	2	2	2
Cap, veh/h	307	1348	0	309	582	183	0	934	0	766	0	947
Arrive On Green	0.11	0.39	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.49	0.00	0.49
Sat Flow, veh/h	1740	3563	0	1757	2628	824	0	1900	0	1412	0	1583
Grp Volume(v), veh/h	196	304	0	0	296	291	0	0	0	152	0	424
Grp Sat Flow(s),veh/h/ln	1740	1736	0	1757	1752	1699	0	1900	0	1412	0	1583
Q Serve(g_s), s	8.3	5.9	0.0	0.0	15.8	16.1	0.0	0.0	0.0	6.1	0.0	14.7
Cycle Q Clear(g_c), s	8.3	5.9	0.0	0.0	15.8	16.1	0.0	0.0	0.0	6.1	0.0	14.7
Prop In Lane	1.00		0.00	1.00		0.48	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1348	0	309	388	377	0	934	0	766	0	947
V/C Ratio(X)	0.64	0.23	0.00	0.00	0.76	0.77	0.00	0.00	0.00	0.20	0.00	0.45
Avail Cap(c_a), veh/h	574	1701	0	412	508	493	0	934	0	766	0	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.00	0.00	0.93	0.93	0.00	0.00	0.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	26.1	20.5	0.0	0.0	36.5	36.5	0.0	0.0	0.0	14.5	0.0	11.0
Incr Delay (d2), s/veh	1.9	0.1	0.0	0.0	4.6	5.1	0.0	0.0	0.0	0.6	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	2.8	0.0	0.0	8.1	8.1	0.0	0.0	0.0	2.5	0.0	6.8
LnGrp Delay(d),s/veh	28.0	20.6	0.0	0.0	41.1	41.7	0.0	0.0	0.0	15.1	0.0	12.5
LnGrp LOS	C	C			D	D				B		B
Approach Vol, veh/h		500			587			0			576	
Approach Delay, s/veh		23.5			41.4			0.0			13.2	
Approach LOS		C			D						B	

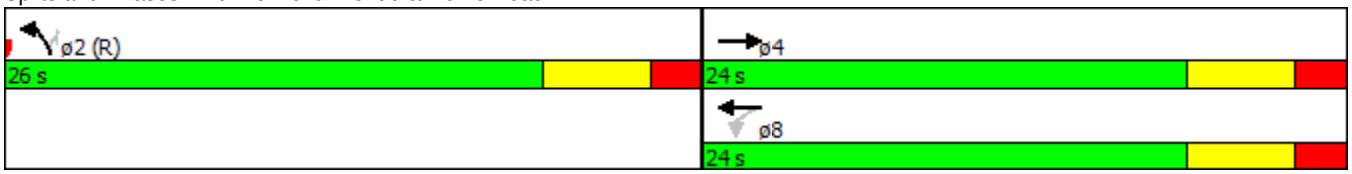
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		55.2	0.0	44.8		55.2	16.7	28.2
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		27.0	6.0	49.0		27.0	26.0	29.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	7.9		16.7	10.3	18.1
Green Ext Time (p_c), s		0.0	0.0	6.4		1.8	0.5	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	200	140	40	280	210	20
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.938					0.850
Flt Protected				0.994	0.950	
Satd. Flow (prot)	3320	0	0	3518	1770	1583
Flt Permitted				0.852	0.950	
Satd. Flow (perm)	3320	0	0	3015	1770	1583
Satd. Flow (RTOR)	152					22
Adj. Flow (vph)	217	152	43	304	228	22
Lane Group Flow (vph)	369	0	0	347	228	22
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Total Split (s)	24.0		24.0	24.0	26.0	26.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Act Effct Green (s)	12.6			12.6	25.4	25.4
Actuated g/C Ratio	0.25			0.25	0.51	0.51
v/c Ratio	0.39			0.46	0.25	0.03
Control Delay	11.2			13.7	8.2	3.7
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	11.2			13.7	8.2	3.7
LOS	B			B	A	A
Approach Delay	11.2			13.7	7.8	
Approach LOS	B			B	A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 11 (22%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 46.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Belmont Avenue & Home Road



Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	369	347	228	22
v/c Ratio	0.39	0.46	0.25	0.03
Control Delay	11.2	13.7	8.2	3.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.2	13.7	8.2	3.7
Queue Length 50th (ft)	76	45	33	0
Queue Length 95th (ft)	91	m68	74	8
Internal Link Dist (ft)	2716	3133	1033	
Turn Bay Length (ft)				175
Base Capacity (vph)	1292	1085	899	814
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.32	0.25	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	200	140	40	280	210	20
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1900	1863	1863	1863
Adj Flow Rate, veh/h	217	152	43	304	228	22
Adj No. of Lanes	2	0	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	487	327	141	727	923	823
Arrive On Green	0.24	0.24	0.24	0.24	0.52	0.52
Sat Flow, veh/h	2124	1361	219	3114	1774	1583
Grp Volume(v), veh/h	188	181	184	163	228	22
Grp Sat Flow(s),veh/h/ln	1770	1623	1638	1610	1774	1583
Q Serve(g_s), s	4.5	4.8	0.0	4.3	3.5	0.3
Cycle Q Clear(g_c), s	4.5	4.8	4.8	4.3	3.5	0.3
Prop In Lane		0.84	0.23		1.00	1.00
Lane Grp Cap(c), veh/h	425	389	482	386	923	823
V/C Ratio(X)	0.44	0.47	0.38	0.42	0.25	0.03
Avail Cap(c_a), veh/h	637	584	669	580	923	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.71	0.71	1.00	1.00
Uniform Delay (d), s/veh	16.2	16.3	16.0	16.1	6.6	5.8
Incr Delay (d2), s/veh	0.7	0.9	0.4	0.5	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.2	2.2	2.0	1.9	0.2
LnGrp Delay(d),s/veh	16.9	17.1	16.4	16.6	7.2	5.9
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	369			347	250	
Approach Delay, s/veh	17.0			16.5	7.1	
Approach LOS	B			B	A	

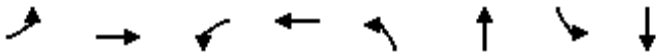
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		32.0		18.0				18.0
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		20.0		18.0				18.0
Max Q Clear Time (g_c+I1), s		5.5		6.8				6.8
Green Ext Time (p_c), s		0.6		3.2				3.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	90	40	20	190	150	40	260	20	270	530	80
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.954			0.934			0.989			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1743	0	1787	1757	0	1770	3500	0	1770	3468	0
Flt Permitted	0.397			0.667			0.399			0.566		
Satd. Flow (perm)	725	1743	0	1255	1757	0	743	3500	0	1054	3468	0
Satd. Flow (RTOR)		43			79			22			46	
Adj. Flow (vph)	43	98	43	22	207	163	43	283	22	293	576	87
Lane Group Flow (vph)	43	141	0	22	370	0	43	305	0	293	663	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	20.0	20.0		20.0	20.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	13.2	13.2		13.2	13.2		24.8	24.8		24.8	24.8	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.50	0.50		0.50	0.50	
v/c Ratio	0.23	0.29		0.07	0.71		0.12	0.17		0.56	0.38	
Control Delay	14.2	9.0		13.9	22.0		8.2	6.9		14.3	8.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.2	9.0		13.9	22.0		8.2	6.9		14.3	8.2	
LOS	B	A		B	C		A	A		B	A	
Approach Delay		10.2			21.5			7.1			10.1	
Approach LOS		B			C			A			B	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 30 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Mechanicsburg Road & Home Road/Croft Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	141	22	370	43	305	293	663
v/c Ratio	0.23	0.29	0.07	0.71	0.12	0.17	0.56	0.38
Control Delay	14.2	9.0	13.9	22.0	8.2	6.9	14.3	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	9.0	13.9	22.0	8.2	6.9	14.3	8.2
Queue Length 50th (ft)	18	11	5	73	6	22	56	54
Queue Length 95th (ft)	35	75	17	#173	20	40	122	85
Internal Link Dist (ft)		3133		843		1034		682
Turn Bay Length (ft)			150				475	
Base Capacity (vph)	203	519	351	548	369	1749	523	1746
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.27	0.06	0.68	0.12	0.17	0.56	0.38

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	90	40	20	190	150	40	260	20	270	530	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1881	1881	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	98	43	22	207	163	43	283	22	293	576	87
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	4	4	4	1	1	1	2	2	2	2	2	2
Cap, veh/h	226	334	147	412	271	213	423	1607	124	609	1489	224
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	989	1205	529	1255	977	769	769	3330	257	1070	3085	465
Grp Volume(v), veh/h	43	0	141	22	0	370	43	150	155	293	330	333
Grp Sat Flow(s),veh/h/ln	989	0	1734	1255	0	1745	769	1770	1817	1070	1770	1781
Q Serve(g_s), s	2.1	0.0	3.2	0.7	0.0	9.7	1.9	2.4	2.4	10.7	5.9	6.0
Cycle Q Clear(g_c), s	11.8	0.0	3.2	3.9	0.0	9.7	7.8	2.4	2.4	13.1	5.9	6.0
Prop In Lane	1.00		0.30	1.00		0.44	1.00		0.14	1.00		0.26
Lane Grp Cap(c), veh/h	226	0	481	412	0	484	423	854	877	609	854	859
V/C Ratio(X)	0.19	0.00	0.29	0.05	0.00	0.76	0.10	0.18	0.18	0.48	0.39	0.39
Avail Cap(c_a), veh/h	229	0	485	415	0	489	423	854	877	609	854	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.00	0.94	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	14.2	15.7	0.0	16.6	10.7	7.3	7.3	11.0	8.2	8.2
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.1	0.0	7.0	0.5	0.4	0.4	2.7	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.6	0.3	0.0	5.6	0.5	1.3	1.3	3.6	3.2	3.2
LnGrp Delay(d),s/veh	22.4	0.0	14.5	15.8	0.0	23.6	11.2	7.8	7.8	13.7	9.5	9.6
LnGrp LOS	C		B	B		C	B	A	A	B	A	A
Approach Vol, veh/h		184			392			348			956	
Approach Delay, s/veh		16.4			23.1			8.2			10.8	
Approach LOS		B			C			A			B	

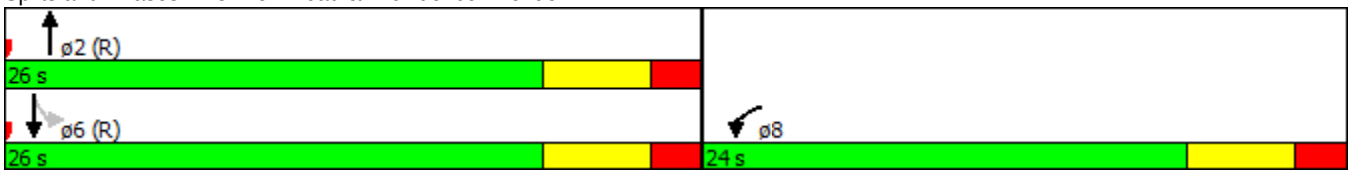
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.1		19.9		30.1		19.9
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		24.0		14.0		24.0		14.0
Max Q Clear Time (g_c+I1), s		9.8		13.8		15.1		11.7
Green Ext Time (p_c), s		6.4		0.1		4.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	100	90	260	30	30	350
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.936		0.984			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1698	0	3449	0	1752	3505
Flt Permitted	0.974				0.560	
Satd. Flow (perm)	1698	0	3449	0	1033	3505
Satd. Flow (RTOR)	98		30			
Adj. Flow (vph)	109	98	283	33	33	380
Lane Group Flow (vph)	207	0	316	0	33	380
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	24.0		26.0		26.0	26.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Act Effct Green (s)	12.3		30.5		30.5	30.5
Actuated g/C Ratio	0.25		0.61		0.61	0.61
v/c Ratio	0.42		0.15		0.05	0.18
Control Delay	11.7		2.7		3.6	3.7
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	11.7		2.7		3.6	3.7
LOS	B		A		A	A
Approach Delay	11.7		2.7			3.7
Approach LOS	B		A			A

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 33 (66%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Derr Road & Providence Avenue



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	316	33	380
v/c Ratio	0.42	0.15	0.05	0.18
Control Delay	11.7	2.7	3.6	3.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.7	2.7	3.6	3.7
Queue Length 50th (ft)	26	34	4	30
Queue Length 95th (ft)	68	12	8	28
Internal Link Dist (ft)	566	3537		893
Turn Bay Length (ft)			50	
Base Capacity (vph)	674	2115	630	2138
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.15	0.05	0.18

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	100	90	260	30	30	350
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1845	1900	1845	1845
Adj Flow Rate, veh/h	109	98	283	33	33	380
Adj No. of Lanes	0	0	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	3	3	3	3
Cap, veh/h	199	179	1689	195	655	1869
Arrive On Green	0.23	0.23	0.53	0.53	0.53	0.53
Sat Flow, veh/h	880	791	3259	366	1049	3597
Grp Volume(v), veh/h	208	0	155	161	33	380
Grp Sat Flow(s),veh/h/ln	1679	0	1752	1780	1049	1752
Q Serve(g_s), s	5.5	0.0	2.3	2.3	0.8	2.8
Cycle Q Clear(g_c), s	5.5	0.0	2.3	2.3	3.1	2.8
Prop In Lane	0.52	0.47		0.21	1.00	
Lane Grp Cap(c), veh/h	381	0	935	949	655	1869
V/C Ratio(X)	0.55	0.00	0.17	0.17	0.05	0.20
Avail Cap(c_a), veh/h	604	0	935	949	655	1869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.86	0.86	0.99	0.99
Uniform Delay (d), s/veh	17.1	0.0	6.0	6.0	6.8	6.1
Incr Delay (d2), s/veh	1.2	0.0	0.3	0.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	1.2	1.2	0.3	1.4
LnGrp Delay(d),s/veh	18.3	0.0	6.3	6.3	6.9	6.4
LnGrp LOS	B		A	A	A	A
Approach Vol, veh/h	208		316			413
Approach Delay, s/veh	18.3		6.3			6.4
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		32.7				32.7		17.3
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		20.0				20.0		18.0
Max Q Clear Time (g_c+I1), s		4.3				5.1		7.5
Green Ext Time (p_c), s		3.9				3.8		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

Notes

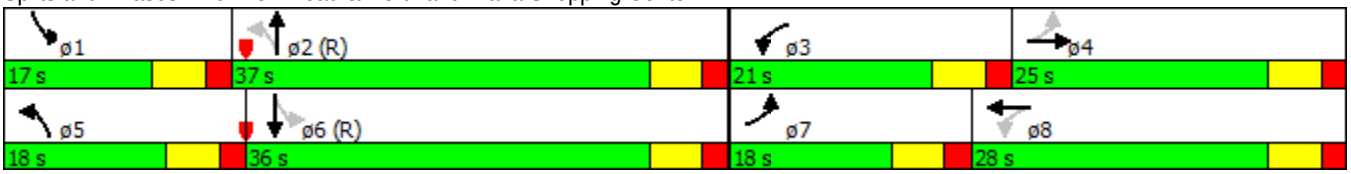
User approved volume balancing among the lanes for turning movement.

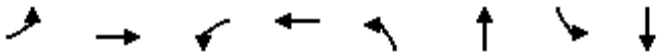
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	20	70	10	20	20	190	60	10	210	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900			0.900			0.964			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1462	0	1787	1693	0	1752	3379	0	1752	3480	0
Flt Permitted	0.736			0.451			0.589			0.584		
Satd. Flow (perm)	1195	1462	0	848	1693	0	1087	3379	0	1077	3480	0
Satd. Flow (RTOR)		22			22			43			5	
Adj. Flow (vph)	11	11	22	76	11	22	22	207	65	11	228	11
Lane Group Flow (vph)	11	33	0	76	33	0	22	272	0	11	239	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	18.0	25.0		21.0	28.0		18.0	37.0		17.0	36.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	13.5	12.0		20.2	19.0		68.9	68.7		67.4	66.1	
Actuated g/C Ratio	0.14	0.12		0.20	0.19		0.69	0.69		0.67	0.66	
v/c Ratio	0.06	0.17		0.29	0.10		0.03	0.12		0.01	0.10	
Control Delay	27.3	23.4		32.2	17.9		4.2	4.3		6.4	8.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.3	23.4		32.2	17.9		4.2	4.3		6.4	8.4	
LOS	C	C		C	B		A	A		A	A	
Approach Delay		24.4			27.8			4.3			8.3	
Approach LOS		C			C			A			A	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 93 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 10.7 — Intersection LOS: B
Intersection Capacity Utilization 37.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: Derr Road & Northland Plaza Shopping Center





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	33	76	33	22	272	11	239
v/c Ratio	0.06	0.17	0.29	0.10	0.03	0.12	0.01	0.10
Control Delay	27.3	23.4	32.2	17.9	4.2	4.3	6.4	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	23.4	32.2	17.9	4.2	4.3	6.4	8.4
Queue Length 50th (ft)	5	6	37	5	2	5	3	28
Queue Length 95th (ft)	18	35	71	33	7	60	m9	70
Internal Link Dist (ft)		105		118		893		632
Turn Bay Length (ft)					100		100	
Base Capacity (vph)	271	295	334	425	839	2334	820	2302
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.11	0.23	0.08	0.03	0.12	0.01	0.10

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	20	70	10	20	20	190	60	10	210	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1624	1624	1900	1881	1881	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	11	11	22	76	11	22	22	207	65	11	228	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	17	17	17	1	1	1	3	3	3	3	3	3
Cap, veh/h	223	51	103	284	80	160	732	1549	474	700	1954	94
Arrive On Green	0.02	0.11	0.11	0.05	0.14	0.14	0.03	0.59	0.59	0.02	0.57	0.57
Sat Flow, veh/h	1547	484	969	1792	561	1122	1757	2646	809	1757	3405	164
Grp Volume(v), veh/h	11	0	33	76	0	33	22	135	137	11	117	122
Grp Sat Flow(s),veh/h/ln	1547	0	1453	1792	0	1683	1757	1752	1702	1757	1752	1816
Q Serve(g_s), s	0.6	0.0	2.1	3.7	0.0	1.7	0.5	3.5	3.6	0.3	3.0	3.1
Cycle Q Clear(g_c), s	0.6	0.0	2.1	3.7	0.0	1.7	0.5	3.5	3.6	0.3	3.0	3.1
Prop In Lane	1.00		0.67	1.00		0.67	1.00		0.48	1.00		0.09
Lane Grp Cap(c), veh/h	223	0	154	284	0	240	732	1026	997	700	1006	1042
V/C Ratio(X)	0.05	0.00	0.21	0.27	0.00	0.14	0.03	0.13	0.14	0.02	0.12	0.12
Avail Cap(c_a), veh/h	384	0	276	458	0	370	894	1026	997	865	1006	1042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.99	0.99	0.97	0.97	0.97
Uniform Delay (d), s/veh	38.9	0.0	40.9	37.0	0.0	37.5	8.1	9.3	9.3	8.5	9.7	9.7
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.5	0.0	0.3	0.0	0.3	0.3	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.9	1.9	0.0	0.8	0.2	1.7	1.8	0.1	1.5	1.6
LnGrp Delay(d),s/veh	38.9	0.0	41.6	37.5	0.0	37.7	8.1	9.6	9.6	8.5	10.0	10.0
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		44			109			294			250	
Approach Delay, s/veh		40.9			37.6			9.5			9.9	
Approach LOS		D			D			A			A	

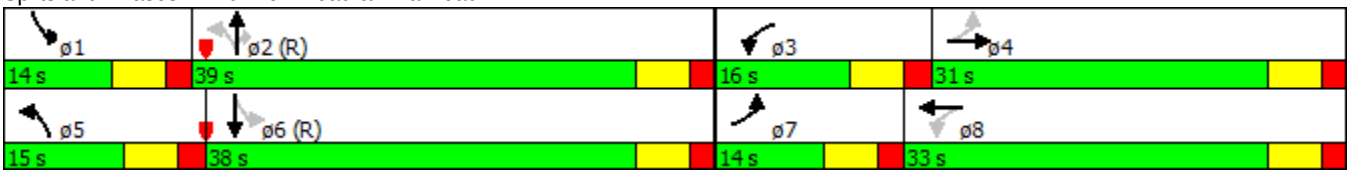
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	64.6	11.3	16.6	8.7	63.4	7.6	20.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	31.0	15.0	19.0	12.0	30.0	12.0	22.0
Max Q Clear Time (g_c+I1), s	2.3	5.6	5.7	4.1	2.5	5.1	2.6	3.7
Green Ext Time (p_c), s	0.0	3.0	0.1	0.2	0.0	2.9	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	170	80	80	160	40	80	90	50	60	160	50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952			0.970				0.850		0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3369	0	1787	1825	0	1752	1845	1568	1787	1813	0
Flt Permitted	0.609			0.432			0.581			0.694		
Satd. Flow (perm)	1134	3369	0	813	1825	0	1072	1845	1568	1306	1813	0
Satd. Flow (RTOR)		75			12				164		16	
Adj. Flow (vph)	22	185	87	87	174	43	87	98	54	65	174	54
Lane Group Flow (vph)	22	272	0	87	217	0	87	98	54	65	228	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	14.0	31.0		16.0	33.0		15.0	39.0	39.0	14.0	38.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Act Effct Green (s)	20.0	14.5		25.4	21.4		57.0	50.4	50.4	55.8	49.8	
Actuated g/C Ratio	0.20	0.14		0.25	0.21		0.57	0.50	0.50	0.56	0.50	
v/c Ratio	0.08	0.49		0.30	0.54		0.13	0.11	0.06	0.09	0.25	
Control Delay	24.1	30.7		28.0	38.1		4.9	8.6	1.2	10.8	17.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	24.1	30.7		28.0	38.1		4.9	8.6	1.2	10.8	17.9	
LOS	C	C		C	D		A	A	A	B	B	
Approach Delay		30.2			35.2			5.6			16.3	
Approach LOS		C			D			A			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 98 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: Derr Road & Villa Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	22	272	87	217	87	98	54	65	228
v/c Ratio	0.08	0.49	0.30	0.54	0.13	0.11	0.06	0.09	0.25
Control Delay	24.1	30.7	28.0	38.1	4.9	8.6	1.2	10.8	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	30.7	28.0	38.1	4.9	8.6	1.2	10.8	17.9
Queue Length 50th (ft)	10	62	42	107	8	31	0	16	78
Queue Length 95th (ft)	25	94	71	189	18	22	1	42	162
Internal Link Dist (ft)		616		681		632			459
Turn Bay Length (ft)	100		225		75			50	
Base Capacity (vph)	288	898	303	502	683	929	871	776	910
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.30	0.29	0.43	0.13	0.11	0.06	0.08	0.25

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	170	80	80	160	40	80	90	50	60	160	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1845	1845	1845	1881	1881	1900
Adj Flow Rate, veh/h	22	185	87	87	174	43	87	98	54	65	174	54
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	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
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	1	1	1
Cap, veh/h	171	305	138	231	230	57	681	968	823	781	717	223
Arrive On Green	0.03	0.13	0.13	0.06	0.16	0.16	0.05	0.52	0.52	0.05	0.52	0.52
Sat Flow, veh/h	1774	2372	1072	1792	1457	360	1757	1845	1568	1792	1378	428
Grp Volume(v), veh/h	22	136	136	87	0	217	87	98	54	65	0	228
Grp Sat Flow(s),veh/h/ln	1774	1770	1674	1792	0	1818	1757	1845	1568	1792	0	1806
Q Serve(g_s), s	1.1	7.3	7.7	4.2	0.0	11.4	2.2	2.7	1.7	1.6	0.0	6.9
Cycle Q Clear(g_c), s	1.1	7.3	7.7	4.2	0.0	11.4	2.2	2.7	1.7	1.6	0.0	6.9
Prop In Lane	1.00		0.64	1.00		0.20	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	171	227	215	231	0	287	681	968	823	781	0	939
V/C Ratio(X)	0.13	0.60	0.63	0.38	0.00	0.76	0.13	0.10	0.07	0.08	0.00	0.24
Avail Cap(c_a), veh/h	264	442	418	308	0	491	743	968	823	834	0	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	41.1	41.3	35.2	0.0	40.3	9.8	11.9	11.7	9.6	0.0	13.2
Incr Delay (d2), s/veh	0.3	2.5	3.0	1.0	0.0	4.1	0.1	0.2	0.2	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.7	3.7	2.1	0.0	6.1	1.1	1.4	0.8	0.8	0.0	3.6
LnGrp Delay(d),s/veh	36.8	43.7	44.4	36.2	0.0	44.4	9.8	12.1	11.8	9.6	0.0	13.8
LnGrp LOS	D	D	D	D		D	A	B	B	A		B
Approach Vol, veh/h		294			304			239			293	
Approach Delay, s/veh		43.5			42.0			11.2			12.9	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	58.5	11.7	18.8	11.5	58.0	8.7	21.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	33.0	10.0	25.0	9.0	32.0	8.0	27.0
Max Q Clear Time (g_c+I1), s	3.6	4.7	6.2	9.7	4.2	8.9	3.1	13.4
Green Ext Time (p_c), s	0.0	2.1	0.1	2.5	0.1	2.0	0.0	2.3

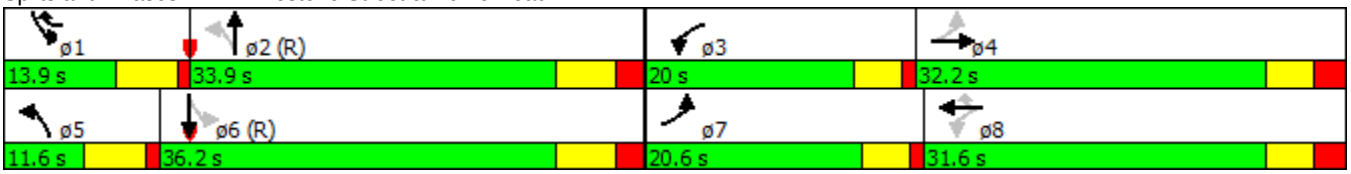
Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

2040 No Build Conditions
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	340	20	290	340	100	50	490	250	130	620	200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.992				0.850		0.949			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1866	0	1787	1881	1599	1787	3392	0	1787	3442	0
Flt Permitted	0.226			0.203			0.173			0.157		
Satd. Flow (perm)	425	1866	0	382	1881	1599	325	3392	0	295	3442	0
Satd. Flow (RTOR)		3				91		88			44	
Adj. Flow (vph)	326	370	22	315	370	109	54	533	272	141	674	217
Lane Group Flow (vph)	326	392	0	315	370	109	54	805	0	141	891	0
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	20.6	32.2		20.0	31.6	13.9	11.6	33.9		13.9	36.2	
Total Lost Time (s)	4.5	6.1		4.5	6.1	5.6	5.6	6.8		5.6	6.8	
Act Effct Green (s)	41.2	24.1		40.3	23.6	37.9	37.0	29.7		42.0	34.1	
Actuated g/C Ratio	0.41	0.24		0.40	0.24	0.38	0.37	0.30		0.42	0.34	
v/c Ratio	0.84	0.87		0.86	0.83	0.16	0.26	0.75		0.58	0.74	
Control Delay	40.3	56.3		53.4	32.8	3.0	20.7	34.3		27.6	33.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.3	56.3		53.4	32.8	3.0	20.7	34.3		27.6	33.8	
LOS	D	E		D	C	A	C	C		C	C	
Approach Delay		49.0			36.9			33.5			33.0	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 71 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 37.4	Intersection LOS: D
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Limestone Street & Home Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	326	392	315	370	109	54	805	141	891
v/c Ratio	0.84	0.87	0.86	0.83	0.16	0.26	0.75	0.58	0.74
Control Delay	40.3	56.3	53.4	32.8	3.0	20.7	34.3	27.6	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	56.3	53.4	32.8	3.0	20.7	34.3	27.6	33.8
Queue Length 50th (ft)	128	232	42	239	37	20	227	55	268
Queue Length 95th (ft)	#255	#378	#277	#359	3	44	302	96	#372
Internal Link Dist (ft)		429		385			541		559
Turn Bay Length (ft)					50	200		100	
Base Capacity (vph)	396	489	373	479	666	209	1069	249	1202
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.80	0.84	0.77	0.16	0.26	0.75	0.57	0.74

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	300	340	20	290	340	100	50	490	250	130	620	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1881	1881	1881	1900	1881	1881	1900
Adj Flow Rate, veh/h	326	370	22	315	370	109	54	533	272	141	674	217
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	396	422	25	381	443	492	221	703	358	266	883	284
Arrive On Green	0.16	0.24	0.24	0.15	0.24	0.24	0.05	0.31	0.31	0.07	0.33	0.33
Sat Flow, veh/h	1792	1758	105	1792	1881	1599	1792	2294	1168	1792	2661	856
Grp Volume(v), veh/h	326	0	392	315	370	109	54	415	390	141	453	438
Grp Sat Flow(s),veh/h/ln	1792	0	1863	1792	1881	1599	1792	1787	1675	1792	1787	1730
Q Serve(g_s), s	13.5	0.0	20.2	13.1	18.7	5.1	2.0	21.0	21.1	5.3	22.7	22.7
Cycle Q Clear(g_c), s	13.5	0.0	20.2	13.1	18.7	5.1	2.0	21.0	21.1	5.3	22.7	22.7
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.70	1.00		0.49
Lane Grp Cap(c), veh/h	396	0	448	381	443	492	221	548	513	266	593	574
V/C Ratio(X)	0.82	0.00	0.88	0.83	0.84	0.22	0.24	0.76	0.76	0.53	0.76	0.76
Avail Cap(c_a), veh/h	405	0	486	387	480	523	245	548	513	286	593	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	36.6	25.4	36.4	25.7	23.8	31.3	31.3	23.8	29.9	29.9
Incr Delay (d2), s/veh	12.7	0.0	15.5	11.2	9.4	0.2	0.6	9.4	10.1	1.6	9.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	12.3	7.6	10.8	2.2	1.0	11.8	11.2	2.7	12.7	12.3
LnGrp Delay(d),s/veh	37.7	0.0	52.0	36.6	45.8	25.9	24.4	40.8	41.5	25.4	38.9	39.2
LnGrp LOS	D		D	D	D	C	C	D	D	C	D	D
Approach Vol, veh/h		718			794			859			1032	
Approach Delay, s/veh		45.5			39.4			40.1			37.2	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	37.5	19.6	30.1	10.3	40.0	20.1	29.7
Change Period (Y+Rc), s	5.6	* 6.8	4.5	6.1	5.6	* 6.8	4.5	6.1
Max Green Setting (Gmax), s	8.3	* 27	15.5	26.1	6.0	* 29	16.1	25.5
Max Q Clear Time (g_c+I1), s	7.3	23.1	15.1	22.2	4.0	24.7	15.5	20.7
Green Ext Time (p_c), s	0.0	3.2	0.0	1.8	0.0	3.6	0.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	40.2
HCM 2010 LOS	D

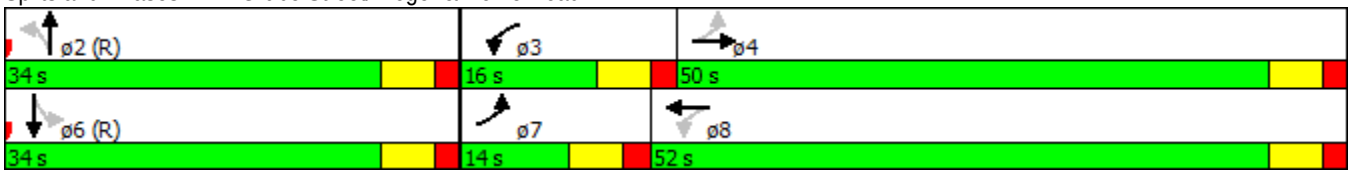
Notes

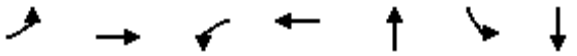
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	660	40	60	620	30	50	10	70	40	10	50
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.993			0.927			0.875	
Flt Protected	0.950			0.950				0.981		0.950		
Satd. Flow (prot)	1787	3546	0	1787	3549	0	0	1728	0	1805	1662	0
Flt Permitted	0.297			0.182				0.876		0.687		
Satd. Flow (perm)	559	3546	0	342	3549	0	0	1543	0	1305	1662	0
Satd. Flow (RTOR)		8			6			58			54	
Adj. Flow (vph)	22	717	43	65	674	33	54	11	76	43	11	54
Lane Group Flow (vph)	22	760	0	65	707	0	0	141	0	43	65	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	14.0	50.0		16.0	52.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Act Effct Green (s)	33.9	28.8		38.7	35.1			47.8		47.8	47.8	
Actuated g/C Ratio	0.34	0.29		0.39	0.35			0.48		0.48	0.48	
v/c Ratio	0.08	0.74		0.27	0.57			0.18		0.07	0.08	
Control Delay	18.4	41.6		13.9	25.6			12.0		18.7	7.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	18.4	41.6		13.9	25.6			12.0		18.7	7.3	
LOS	B	D		B	C			B		B	A	
Approach Delay		41.0			24.6			12.0			11.9	
Approach LOS		D			C			B			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 66 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 30.0	Intersection LOS: C
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Grube Street/Kroger & Home Road





Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	22	760	65	707	141	43	65
v/c Ratio	0.08	0.74	0.27	0.57	0.18	0.07	0.08
Control Delay	18.4	41.6	13.9	25.6	12.0	18.7	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	41.6	13.9	25.6	12.0	18.7	7.3
Queue Length 50th (ft)	10	218	26	233	30	15	4
Queue Length 95th (ft)	m10	230	55	291	79	42	32
Internal Link Dist (ft)		385		1749	320		103
Turn Bay Length (ft)	50		50				
Base Capacity (vph)	294	1564	278	1635	767	623	822
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.49	0.23	0.43	0.18	0.07	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	660	40	60	620	30	50	10	70	40	10	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	22	717	43	65	674	33	54	11	76	43	11	54
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	243	1039	62	246	1130	55	303	77	387	702	131	643
Arrive On Green	0.03	0.30	0.30	0.05	0.33	0.33	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1792	3427	205	1792	3469	170	543	166	828	1331	280	1377
Grp Volume(v), veh/h	22	374	386	65	347	360	141	0	0	43	0	65
Grp Sat Flow(s),veh/h/ln	1792	1787	1845	1792	1787	1851	1537	0	0	1331	0	1657
Q Serve(g_s), s	0.8	18.4	18.5	2.4	16.2	16.3	1.7	0.0	0.0	0.0	0.0	2.2
Cycle Q Clear(g_c), s	0.8	18.4	18.5	2.4	16.2	16.3	4.9	0.0	0.0	1.6	0.0	2.2
Prop In Lane	1.00		0.11	1.00		0.09	0.38		0.54	1.00		0.83
Lane Grp Cap(c), veh/h	243	542	559	246	582	603	767	0	0	702	0	773
V/C Ratio(X)	0.09	0.69	0.69	0.26	0.60	0.60	0.18	0.00	0.00	0.06	0.00	0.08
Avail Cap(c_a), veh/h	337	786	812	335	822	852	767	0	0	702	0	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.51	0.89	0.89	0.89	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	30.7	30.7	23.6	28.2	28.2	15.5	0.0	0.0	14.6	0.0	14.8
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.5	0.9	0.8	0.5	0.0	0.0	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	9.2	9.5	1.2	8.1	8.4	2.4	0.0	0.0	0.7	0.0	1.0
LnGrp Delay(d),s/veh	23.8	31.5	31.5	24.1	29.1	29.1	16.0	0.0	0.0	14.8	0.0	15.0
LnGrp LOS	C	C	C	C	C	C	B			B		B
Approach Vol, veh/h		782			772			141			108	
Approach Delay, s/veh		31.3			28.6			16.0			14.9	
Approach LOS		C			C			B			B	

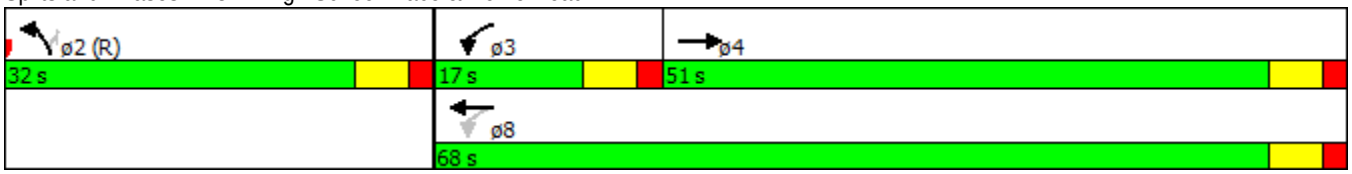
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		52.7	11.0	36.3		52.7	8.7	38.6
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		28.0	10.0	44.0		28.0	8.0	46.0
Max Q Clear Time (g_c+I1), s		6.9	4.4	20.5		4.2	2.8	18.3
Green Ext Time (p_c), s		1.4	0.0	9.9		1.4	0.0	10.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	790	30	90	740	80	170
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.994					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3518	0	1770	3539	1770	1583
Flt Permitted			0.129		0.950	
Satd. Flow (perm)	3518	0	240	3539	1770	1583
Satd. Flow (RTOR)	5					185
Adj. Flow (vph)	859	33	98	804	87	185
Lane Group Flow (vph)	892	0	98	804	87	185
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Total Split (s)	51.0		17.0	68.0	32.0	32.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	33.4		45.6	45.6	42.4	42.4
Actuated g/C Ratio	0.33		0.46	0.46	0.42	0.42
v/c Ratio	0.76		0.40	0.50	0.12	0.24
Control Delay	14.4		19.5	17.4	22.2	4.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	14.4		19.5	17.4	22.2	4.7
LOS	B		B	B	C	A
Approach Delay	14.4			17.7	10.3	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 8 (8%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 52.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: N High School Place & Home Road



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	892	98	804	87	185
v/c Ratio	0.76	0.40	0.50	0.12	0.24
Control Delay	14.4	19.5	17.4	22.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	19.5	17.4	22.2	4.7
Queue Length 50th (ft)	246	31	134	35	0
Queue Length 95th (ft)	272	61	183	78	48
Internal Link Dist (ft)	1749		1289	740	
Turn Bay Length (ft)		225			
Base Capacity (vph)	1585	277	2194	749	777
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.35	0.37	0.12	0.24

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	790	30	90	740	80	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	859	33	98	804	87	185
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1219	47	257	1652	733	654
Arrive On Green	0.35	0.35	0.06	0.47	0.41	0.41
Sat Flow, veh/h	3568	134	1774	3632	1774	1583
Grp Volume(v), veh/h	437	455	98	804	87	185
Grp Sat Flow(s),veh/h/ln	1770	1839	1774	1770	1774	1583
Q Serve(g_s), s	21.3	21.3	3.4	15.7	3.0	7.8
Cycle Q Clear(g_c), s	21.3	21.3	3.4	15.7	3.0	7.8
Prop In Lane		0.07	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	621	645	257	1652	733	654
V/C Ratio(X)	0.70	0.70	0.38	0.49	0.12	0.28
Avail Cap(c_a), veh/h	796	828	353	2194	733	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.83	0.83	1.00	1.00
Uniform Delay (d), s/veh	28.0	28.0	20.6	18.4	18.1	19.5
Incr Delay (d2), s/veh	1.3	1.2	0.8	0.2	0.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	11.1	1.7	7.6	1.5	3.6
LnGrp Delay(d),s/veh	29.3	29.2	21.4	18.6	18.4	20.6
LnGrp LOS	C	C	C	B	B	C
Approach Vol, veh/h	892			902	272	
Approach Delay, s/veh	29.3			18.9	19.9	
Approach LOS	C			B	B	

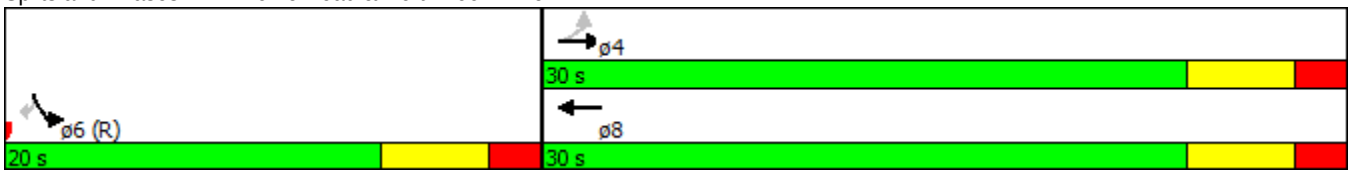
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		47.3	11.6	41.1				52.7
Change Period (Y+Rc), s		6.0	6.0	6.0				6.0
Max Green Setting (Gmax), s		26.0	11.0	45.0				62.0
Max Q Clear Time (g_c+I1), s		9.8	5.4	23.3				17.7
Green Ext Time (p_c), s		0.8	0.1	11.8				16.2

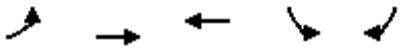
Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	890	750	20	30	60
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.996			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3525	0	1805	1615
Flt Permitted	0.281				0.950	
Satd. Flow (perm)	523	3539	3525	0	1805	1615
Satd. Flow (RTOR)			7			65
Adj. Flow (vph)	54	967	815	22	33	65
Lane Group Flow (vph)	54	967	837	0	33	65
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Total Split (s)	30.0	30.0	30.0		20.0	20.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Act Effct Green (s)	20.8	20.8	20.8		17.2	17.2
Actuated g/C Ratio	0.42	0.42	0.42		0.34	0.34
v/c Ratio	0.25	0.66	0.57		0.05	0.11
Control Delay	8.2	10.6	10.7		13.2	5.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	8.2	10.6	10.7		13.2	5.2
LOS	A	B	B		B	A
Approach Delay		10.4	10.7		7.9	
Approach LOS		B	B		A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 11 (22%), Referenced to phase 2: and 6:SBL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: Home Road & Northmoor Drive

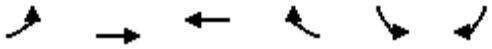




Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	54	967	837	33	65
v/c Ratio	0.25	0.66	0.57	0.05	0.11
Control Delay	8.2	10.6	10.7	13.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	10.6	10.7	13.2	5.2
Queue Length 50th (ft)	7	66	91	7	0
Queue Length 95th (ft)	m20	144	89	23	21
Internal Link Dist (ft)		1289	1125	460	
Turn Bay Length (ft)	100			50	
Base Capacity (vph)	251	1698	1695	621	598
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.57	0.49	0.05	0.11

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	50	890	750	20	30	60
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	54	967	815	22	33	65
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	311	1514	1506	41	601	536
Arrive On Green	0.43	0.43	0.43	0.43	0.33	0.33
Sat Flow, veh/h	654	3632	3614	95	1810	1615
Grp Volume(v), veh/h	54	967	410	427	33	65
Grp Sat Flow(s),veh/h/ln	654	1770	1770	1846	1810	1615
Q Serve(g_s), s	3.4	10.8	8.6	8.6	0.6	1.4
Cycle Q Clear(g_c), s	12.0	10.8	8.6	8.6	0.6	1.4
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	311	1514	757	790	601	536
V/C Ratio(X)	0.17	0.64	0.54	0.54	0.05	0.12
Avail Cap(c_a), veh/h	345	1699	849	886	601	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.73	0.73	1.00	1.00
Uniform Delay (d), s/veh	15.1	11.3	10.6	10.6	11.4	11.6
Incr Delay (d2), s/veh	0.2	0.5	0.4	0.4	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.3	4.3	4.5	0.3	0.7
LnGrp Delay(d),s/veh	15.3	11.7	11.1	11.1	11.5	12.1
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h		1021	837		98	
Approach Delay, s/veh		11.9	11.1		11.9	
Approach LOS		B	B		B	

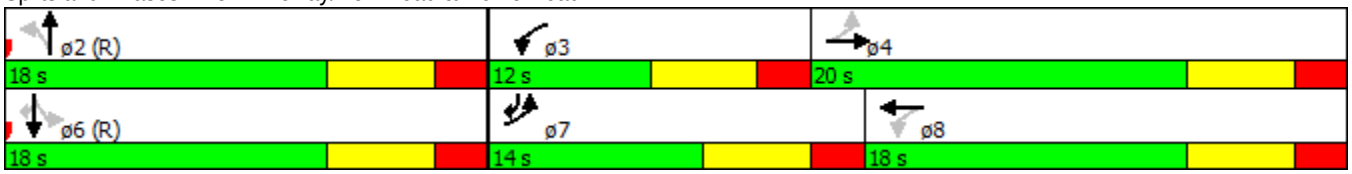
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				27.4		22.6		27.4
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				24.0		14.0		24.0
Max Q Clear Time (g_c+I1), s				14.0		3.4		10.6
Green Ext Time (p_c), s				7.4		0.2		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	490	0	0	420	270	0	0	0	220	0	330
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.941							0.850
Flt Protected	0.950										0.950	
Satd. Flow (prot)	1770	3539	0	1863	3330	0	0	1900	0	0	1787	1599
Flt Permitted	0.222										0.757	
Satd. Flow (perm)	414	3539	0	1863	3330	0	0	1900	0	0	1424	1599
Satd. Flow (RTOR)					272							87
Adj. Flow (vph)	391	533	0	0	457	293	0	0	0	239	0	359
Lane Group Flow (vph)	391	533	0	0	750	0	0	0	0	0	239	359
Turn Type	pm+pt	NA		pm+pt	NA					Perm	NA	pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases	4			8			2			6		6
Total Split (s)	14.0	20.0		12.0	18.0		18.0	18.0		18.0	18.0	14.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	6.0
Act Effct Green (s)	26.0	26.0			12.0						12.0	26.0
Actuated g/C Ratio	0.52	0.52			0.24						0.24	0.52
v/c Ratio	0.91	0.29			0.75						0.70	0.41
Control Delay	43.4	1.0			15.9						32.1	8.7
Queue Delay	0.0	0.0			0.0						0.0	0.0
Total Delay	43.4	1.0			15.9						32.1	8.7
LOS	D	A			B						C	A
Approach Delay		18.9			15.9						18.1	
Approach LOS		B			B						B	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 34 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 67.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Driveway/Derr Road & Home Road



Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	391	533	750	239	359
v/c Ratio	0.91	0.29	0.75	0.70	0.41
Control Delay	43.4	1.0	15.9	32.1	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	1.0	15.9	32.1	8.7
Queue Length 50th (ft)	104	3	87	88	87
Queue Length 95th (ft)	#327	7	#150	#131	104
Internal Link Dist (ft)		1125	2716	3537	
Turn Bay Length (ft)	200				
Base Capacity (vph)	432	1840	1005	341	873
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.91	0.29	0.75	0.70	0.41

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	360	490	0	0	420	270	0	0	0	220	0	330
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	391	533	0	0	457	293	0	0	0	239	0	359
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	445	1840	0	356	498	318	0	456	0	486	0	640
Arrive On Green	0.16	0.52	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.24	0.00	0.24
Sat Flow, veh/h	1774	3632	0	1774	2076	1323	0	1900	0	1426	0	1599
Grp Volume(v), veh/h	391	533	0	0	389	361	0	0	0	239	0	359
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1629	0	1900	0	1426	0	1599
Q Serve(g_s), s	7.9	4.3	0.0	0.0	10.7	10.8	0.0	0.0	0.0	7.7	0.0	8.7
Cycle Q Clear(g_c), s	7.9	4.3	0.0	0.0	10.7	10.8	0.0	0.0	0.0	7.7	0.0	8.7
Prop In Lane	1.00		0.00	1.00		0.81	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	445	1840	0	356	425	391	0	456	0	486	0	640
V/C Ratio(X)	0.88	0.29	0.00	0.00	0.92	0.92	0.00	0.00	0.00	0.49	0.00	0.56
Avail Cap(c_a), veh/h	445	1840	0	565	425	391	0	456	0	486	0	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.00	0.00	0.86	0.86	0.00	0.00	0.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	12.0	6.8	0.0	0.0	18.5	18.5	0.0	0.0	0.0	17.3	0.0	11.6
Incr Delay (d2), s/veh	13.8	0.1	0.0	0.0	21.9	24.4	0.0	0.0	0.0	3.4	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	2.1	0.0	0.0	7.8	7.5	0.0	0.0	0.0	3.5	0.0	4.4
LnGrp Delay(d),s/veh	25.8	6.8	0.0	0.0	40.4	42.9	0.0	0.0	0.0	20.8	0.0	15.0
LnGrp LOS	C	A			D	D				C		B
Approach Vol, veh/h		924			750			0			598	
Approach Delay, s/veh		14.9			41.6			0.0			17.3	
Approach LOS		B			D						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		18.0	0.0	32.0		18.0	14.0	18.0
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		12.0	6.0	14.0		12.0	8.0	12.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	6.3		10.7	9.9	12.8
Green Ext Time (p_c), s		0.0	0.0	4.6		0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	320	190	30	420	300	50
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.944					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3341	0	0	3529	1770	1583
Flt Permitted				0.878	0.950	
Satd. Flow (perm)	3341	0	0	3107	1770	1583
Satd. Flow (RTOR)	207					54
Adj. Flow (vph)	348	207	33	457	326	54
Lane Group Flow (vph)	555	0	0	490	326	54
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Total Split (s)	22.0		22.0	22.0	28.0	28.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Act Effct Green (s)	13.6			13.6	24.4	24.4
Actuated g/C Ratio	0.27			0.27	0.49	0.49
v/c Ratio	0.52			0.58	0.38	0.07
Control Delay	11.9			14.8	10.2	3.2
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	11.9			14.8	10.2	3.2
LOS	B			B	B	A
Approach Delay	11.9			14.8	9.2	
Approach LOS	B			B	A	

Intersection Summary			
Cycle Length: 50			
Actuated Cycle Length: 50			
Offset: 26 (52%), Referenced to phase 2:NBL and 6:, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Belmont Avenue & Home Road

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	555	490	326	54
v/c Ratio	0.52	0.58	0.38	0.07
Control Delay	11.9	14.8	10.2	3.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.9	14.8	10.2	3.2
Queue Length 50th (ft)	61	57	53	0
Queue Length 95th (ft)	74	m74	113	14
Internal Link Dist (ft)	2716	3133	1033	
Turn Bay Length (ft)				175
Base Capacity (vph)	1209	994	863	799
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.49	0.38	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	320	190	30	420	300	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1900	1863	1863	1863
Adj Flow Rate, veh/h	348	207	33	457	326	54
Adj No. of Lanes	2	0	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	556	325	105	789	890	795
Arrive On Green	0.26	0.26	0.26	0.26	0.50	0.50
Sat Flow, veh/h	2246	1257	91	3141	1774	1583
Grp Volume(v), veh/h	285	270	255	235	326	54
Grp Sat Flow(s),veh/h/ln	1770	1641	1536	1610	1774	1583
Q Serve(g_s), s	7.1	7.3	0.4	6.3	5.6	0.9
Cycle Q Clear(g_c), s	7.1	7.3	7.7	6.3	5.6	0.9
Prop In Lane		0.77	0.13		1.00	1.00
Lane Grp Cap(c), veh/h	457	424	478	416	890	795
V/C Ratio(X)	0.62	0.64	0.53	0.57	0.37	0.07
Avail Cap(c_a), veh/h	566	525	578	515	890	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.49	0.49	1.00	1.00
Uniform Delay (d), s/veh	16.4	16.5	16.0	16.1	7.6	6.4
Incr Delay (d2), s/veh	1.4	1.7	0.5	0.6	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	3.5	3.0	2.9	3.0	0.4
LnGrp Delay(d),s/veh	17.8	18.2	16.4	16.7	8.8	6.6
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	555			490	380	
Approach Delay, s/veh	18.0			16.6	8.5	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		31.1		18.9				18.9
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		22.0		16.0				16.0
Max Q Clear Time (g_c+I1), s		7.6		9.3				9.7
Green Ext Time (p_c), s		1.0		3.4				3.2

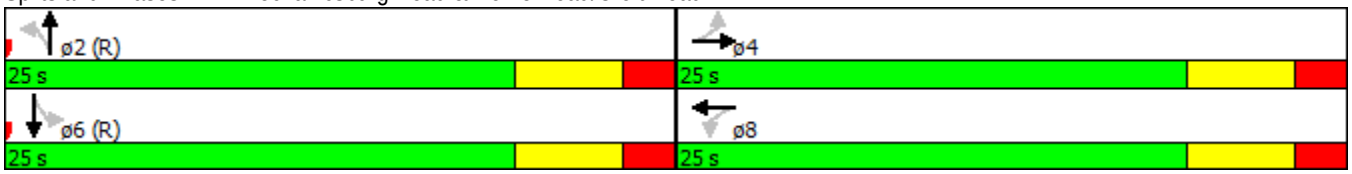
Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

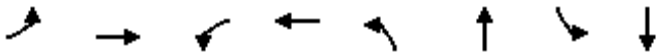
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	200	80	50	230	340	70	460	60	250	510	100
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.957			0.910			0.983			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1748	0	1805	1729	0	1770	3479	0	1736	3384	0
Flt Permitted	0.231			0.553			0.380			0.440		
Satd. Flow (perm)	422	1748	0	1051	1729	0	708	3479	0	804	3384	0
Satd. Flow (RTOR)		47			172			33			53	
Adj. Flow (vph)	87	217	87	54	250	370	76	500	65	272	554	109
Lane Group Flow (vph)	87	304	0	54	620	0	76	565	0	272	663	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	17.3	17.3		17.3	17.3		20.7	20.7		20.7	20.7	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.41	0.41		0.41	0.41	
v/c Ratio	0.60	0.48		0.15	0.87		0.26	0.39		0.82	0.46	
Control Delay	25.8	7.6		11.5	26.4		13.8	11.2		39.9	11.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.8	7.6		11.5	26.4		13.8	11.2		39.9	11.6	
LOS	C	A		B	C		B	B		D	B	
Approach Delay		11.6			25.2			11.5			19.8	
Approach LOS		B			C			B			B	

Intersection Summary

Cycle Length: 50
Actuated Cycle Length: 50
Offset: 46 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 18.0 — Intersection LOS: B
Intersection Capacity Utilization 91.4% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 7: Mechanicsburg Road & Home Road/Croft Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	87	304	54	620	76	565	272	663
v/c Ratio	0.60	0.48	0.15	0.87	0.26	0.39	0.82	0.46
Control Delay	25.8	7.6	11.5	26.4	13.8	11.2	39.9	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	7.6	11.5	26.4	13.8	11.2	39.9	11.6
Queue Length 50th (ft)	26	17	10	110	15	57	72	67
Queue Length 95th (ft)	#53	20	28	#279	41	91	#191	107
Internal Link Dist (ft)		3133		843		1034		682
Turn Bay Length (ft)			150				475	
Base Capacity (vph)	160	693	399	763	293	1458	332	1430
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.44	0.14	0.81	0.26	0.39	0.82	0.46

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	200	80	50	230	340	70	460	60	250	510	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1900	1900	1863	1863	1900	1827	1827	1900
Adj Flow Rate, veh/h	87	217	87	54	250	370	76	500	65	272	554	109
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	4	4	4
Cap, veh/h	168	472	189	416	263	390	323	1198	155	361	1100	216
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	785	1241	498	1092	693	1026	769	3152	408	826	2895	568
Grp Volume(v), veh/h	87	0	304	54	0	620	76	280	285	272	331	332
Grp Sat Flow(s),veh/h/ln	785	0	1739	1092	0	1719	769	1770	1791	826	1736	1727
Q Serve(g_s), s	1.5	0.0	6.6	2.0	0.0	17.5	4.2	5.8	5.9	13.1	7.3	7.4
Cycle Q Clear(g_c), s	19.0	0.0	6.6	8.5	0.0	17.5	11.6	5.8	5.9	19.0	7.3	7.4
Prop In Lane	1.00		0.29	1.00		0.60	1.00		0.23	1.00		0.33
Lane Grp Cap(c), veh/h	168	0	661	416	0	653	323	672	680	361	660	656
V/C Ratio(X)	0.52	0.00	0.46	0.13	0.00	0.95	0.24	0.42	0.42	0.75	0.50	0.51
Avail Cap(c_a), veh/h	168	0	661	416	0	653	323	672	680	361	660	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.00	0.87	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	11.6	14.8	0.0	15.0	16.3	11.4	11.4	19.8	11.9	11.9
Incr Delay (d2), s/veh	2.4	0.0	0.4	0.1	0.0	23.4	1.7	1.9	1.9	13.6	2.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	3.2	0.6	0.0	12.3	1.0	3.2	3.2	5.1	4.0	4.0
LnGrp Delay(d),s/veh	27.2	0.0	12.1	15.0	0.0	38.4	18.0	13.3	13.3	33.4	14.6	14.7
LnGrp LOS	C		B	B		D	B	B	B	C	B	B
Approach Vol, veh/h		391			674			641			935	
Approach Delay, s/veh		15.5			36.6			13.9			20.1	
Approach LOS		B			D			B			C	

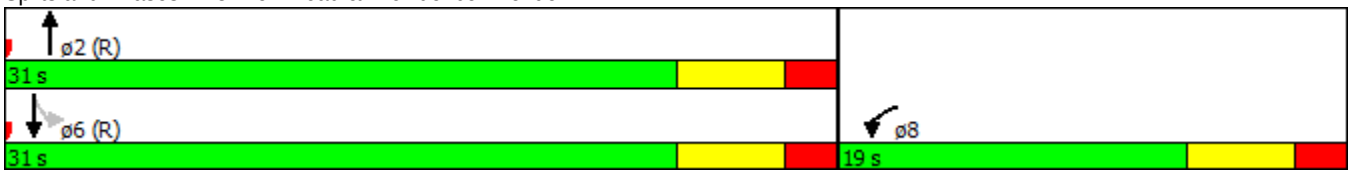
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		25.0		25.0		25.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		19.0		19.0		19.0		19.0
Max Q Clear Time (g_c+I1), s		13.6		21.0		21.0		19.5
Green Ext Time (p_c), s		3.9		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	110	520	60	110	460
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.917		0.985			
Flt Protected	0.981				0.950	
Satd. Flow (prot)	1692	0	3521	0	1787	3574
Flt Permitted	0.981				0.413	
Satd. Flow (perm)	1692	0	3521	0	777	3574
Satd. Flow (RTOR)	120		35			
Adj. Flow (vph)	76	120	565	65	120	500
Lane Group Flow (vph)	196	0	630	0	120	500
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	19.0		31.0		31.0	31.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Act Effct Green (s)	12.1		30.7		30.7	30.7
Actuated g/C Ratio	0.24		0.61		0.61	0.61
v/c Ratio	0.39		0.29		0.25	0.23
Control Delay	9.8		4.9		6.8	4.7
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	9.8		4.9		6.8	4.7
LOS	A		A		A	A
Approach Delay	9.8		4.9			5.1
Approach LOS	A		A			A

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 36 (72%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Derr Road & Providence Avenue



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	630	120	500
v/c Ratio	0.39	0.29	0.25	0.23
Control Delay	9.8	4.9	6.8	4.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.8	4.9	6.8	4.7
Queue Length 50th (ft)	18	57	14	29
Queue Length 95th (ft)	59	m60	46	64
Internal Link Dist (ft)	566	3537		893
Turn Bay Length (ft)			50	
Base Capacity (vph)	528	2178	478	2197
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.29	0.25	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	110	520	60	110	460
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1881	1900	1881	1881
Adj Flow Rate, veh/h	76	120	565	65	120	500
Adj No. of Lanes	0	0	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	1	1	1
Cap, veh/h	145	228	1731	199	494	1914
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	644	1017	3326	371	801	3668
Grp Volume(v), veh/h	197	0	312	318	120	500
Grp Sat Flow(s),veh/h/ln	1670	0	1787	1816	801	1787
Q Serve(g_s), s	5.2	0.0	4.9	4.9	5.0	3.8
Cycle Q Clear(g_c), s	5.2	0.0	4.9	4.9	9.9	3.8
Prop In Lane	0.39	0.61		0.20	1.00	
Lane Grp Cap(c), veh/h	375	0	957	972	494	1914
V/C Ratio(X)	0.53	0.00	0.33	0.33	0.24	0.26
Avail Cap(c_a), veh/h	434	0	957	972	494	1914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.30	0.30	0.99	0.99
Uniform Delay (d), s/veh	17.0	0.0	6.5	6.5	9.3	6.3
Incr Delay (d2), s/veh	1.1	0.0	0.3	0.3	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	2.5	2.5	1.2	1.9
LnGrp Delay(d),s/veh	18.2	0.0	6.8	6.8	10.5	6.6
LnGrp LOS	B		A	A	B	A
Approach Vol, veh/h	197		630			620
Approach Delay, s/veh	18.2		6.8			7.3
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		32.8				32.8		17.2
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		25.0				25.0		13.0
Max Q Clear Time (g_c+I1), s		6.9				11.9		7.2
Green Ext Time (p_c), s		7.6				6.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	8.6
HCM 2010 LOS	A

Notes

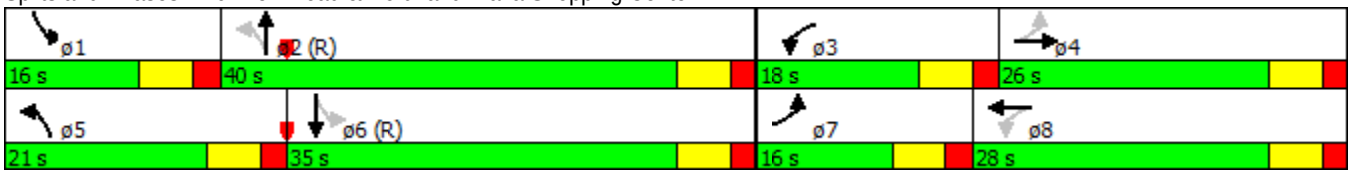
User approved volume balancing among the lanes for turning movement.

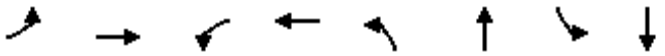
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	10	80	70	10	20	120	280	80	20	300	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.867			0.900			0.967			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1631	0	1687	1598	0	1752	3389	0	1770	3522	0
Flt Permitted	0.736			0.559			0.489			0.521		
Satd. Flow (perm)	1385	1631	0	993	1598	0	902	3389	0	970	3522	0
Satd. Flow (RTOR)		87			22			40			3	
Adj. Flow (vph)	54	11	87	76	11	22	130	304	87	22	326	11
Lane Group Flow (vph)	54	98	0	76	33	0	130	391	0	22	337	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	16.0	26.0		18.0	28.0		21.0	40.0		16.0	35.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	17.4	12.0		20.8	15.8		66.1	63.1		58.5	52.3	
Actuated g/C Ratio	0.17	0.12		0.21	0.16		0.66	0.63		0.58	0.52	
v/c Ratio	0.20	0.36		0.28	0.12		0.19	0.18		0.04	0.18	
Control Delay	28.7	15.2		30.4	21.5		6.8	8.4		9.2	16.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.7	15.2		30.4	21.5		6.8	8.4		9.2	16.9	
LOS	C	B		C	C		A	A		A	B	
Approach Delay		20.0			27.7			8.0			16.5	
Approach LOS		C			C			A			B	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 98 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 14.2 — Intersection LOS: B
Intersection Capacity Utilization 42.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: Derr Road & Northland Plaza Shopping Center





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	54	98	76	33	130	391	22	337
v/c Ratio	0.20	0.36	0.28	0.12	0.19	0.18	0.04	0.18
Control Delay	28.7	15.2	30.4	21.5	6.8	8.4	9.2	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	15.2	30.4	21.5	6.8	8.4	9.2	16.9
Queue Length 50th (ft)	26	6	37	6	43	63	5	82
Queue Length 95th (ft)	54	54	71	34	74	90	m14	133
Internal Link Dist (ft)		105		118		893		632
Turn Bay Length (ft)					100		100	
Base Capacity (vph)	311	395	311	382	731	2152	683	1841
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.25	0.24	0.09	0.18	0.18	0.03	0.18

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	10	80	70	10	20	120	280	80	20	300	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1776	1776	1900	1845	1845	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	11	87	76	11	22	130	304	87	22	326	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	1	1	1	7	7	7	3	3	3	2	2	2
Cap, veh/h	303	22	172	239	66	133	670	1515	426	619	1850	62
Arrive On Green	0.05	0.12	0.12	0.05	0.13	0.13	0.06	0.56	0.56	0.03	0.53	0.53
Sat Flow, veh/h	1792	183	1444	1691	530	1059	1757	2703	760	1774	3494	118
Grp Volume(v), veh/h	54	0	98	76	0	33	130	195	196	22	165	172
Grp Sat Flow(s),veh/h/ln	1792	0	1626	1691	0	1589	1757	1752	1710	1774	1770	1842
Q Serve(g_s), s	2.6	0.0	5.6	3.9	0.0	1.9	3.3	5.5	5.7	0.6	4.8	4.9
Cycle Q Clear(g_c), s	2.6	0.0	5.6	3.9	0.0	1.9	3.3	5.5	5.7	0.6	4.8	4.9
Prop In Lane	1.00		0.89	1.00		0.67	1.00		0.44	1.00		0.06
Lane Grp Cap(c), veh/h	303	0	194	239	0	199	670	982	959	619	937	976
V/C Ratio(X)	0.18	0.00	0.51	0.32	0.00	0.17	0.19	0.20	0.20	0.04	0.18	0.18
Avail Cap(c_a), veh/h	399	0	325	352	0	350	831	982	959	748	937	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	0.90	0.90	0.90
Uniform Delay (d), s/veh	35.9	0.0	41.3	36.1	0.0	39.1	9.3	10.9	10.9	10.0	12.2	12.2
Incr Delay (d2), s/veh	0.3	0.0	2.0	0.8	0.0	0.4	0.1	0.4	0.5	0.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.6	1.8	0.0	0.8	1.6	2.8	2.8	0.3	2.4	2.5
LnGrp Delay(d),s/veh	36.2	0.0	43.3	36.8	0.0	39.4	9.4	11.3	11.4	10.0	12.6	12.6
LnGrp LOS	D		D	D		D	A	B	B	A	B	B
Approach Vol, veh/h		152			109			521			359	
Approach Delay, s/veh		40.8			37.6			10.9			12.4	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	62.1	11.3	17.9	11.8	59.0	10.7	18.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0	34.0	12.0	20.0	15.0	29.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.6	7.7	5.9	7.6	5.3	6.9	4.6	3.9
Green Ext Time (p_c), s	0.0	4.4	0.1	0.5	0.2	4.3	0.0	0.7

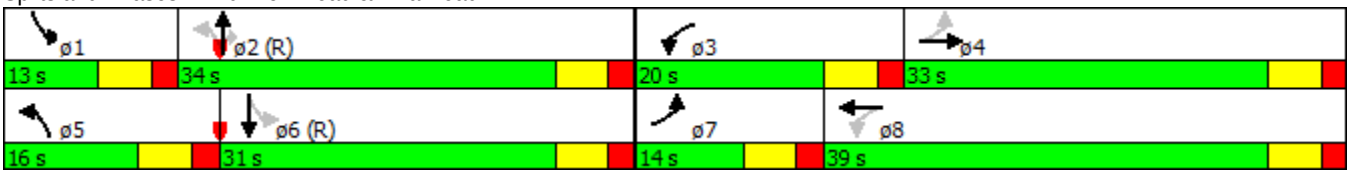
Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	310	130	170	270	40	120	180	120	60	160	50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956			0.981				0.850		0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3417	0	1787	1845	0	1787	1881	1599	1805	1832	0
Flt Permitted	0.414			0.234			0.509			0.634		
Satd. Flow (perm)	779	3417	0	440	1845	0	958	1881	1599	1205	1832	0
Satd. Flow (RTOR)		63			8				164		15	
Adj. Flow (vph)	87	337	141	185	293	43	130	196	130	65	174	54
Lane Group Flow (vph)	87	478	0	185	336	0	130	196	130	65	228	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Total Split (s)	14.0	33.0		20.0	39.0		16.0	34.0	34.0	13.0	31.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Act Effct Green (s)	26.0	18.5		36.1	25.6		48.3	40.2	40.2	43.4	35.9	
Actuated g/C Ratio	0.26	0.18		0.36	0.26		0.48	0.40	0.40	0.43	0.36	
v/c Ratio	0.31	0.70		0.57	0.70		0.24	0.26	0.18	0.11	0.34	
Control Delay	23.0	38.3		28.4	41.6		10.9	17.1	1.9	15.4	26.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	23.0	38.3		28.4	41.6		10.9	17.1	1.9	15.4	26.2	
LOS	C	D		C	D		B	B	A	B	C	
Approach Delay		36.0			36.9			11.0			23.8	
Approach LOS		D			D			B			C	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 28.1 — Intersection LOS: C
Intersection Capacity Utilization 60.3% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Derr Road & Villa Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	87	478	185	336	130	196	130	65	228
v/c Ratio	0.31	0.70	0.57	0.70	0.24	0.26	0.18	0.11	0.34
Control Delay	23.0	38.3	28.4	41.6	10.9	17.1	1.9	15.4	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	38.3	28.4	41.6	10.9	17.1	1.9	15.4	26.2
Queue Length 50th (ft)	36	132	81	197	25	85	1	20	98
Queue Length 95th (ft)	61	173	118	269	51	153	0	50	190
Internal Link Dist (ft)		616		681		632			459
Turn Bay Length (ft)	100		225		75			50	
Base Capacity (vph)	286	968	350	614	556	755	740	572	666
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.49	0.53	0.55	0.23	0.26	0.18	0.11	0.34

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	310	130	170	270	40	120	180	120	60	160	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1881	1900	1900	1900
Adj Flow Rate, veh/h	87	337	141	185	293	43	130	196	130	65	174	54
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	239	468	192	308	379	56	556	788	670	539	568	176
Arrive On Green	0.05	0.19	0.19	0.10	0.24	0.24	0.06	0.42	0.42	0.05	0.41	0.41
Sat Flow, veh/h	1792	2473	1016	1792	1604	235	1792	1881	1599	1810	1392	432
Grp Volume(v), veh/h	87	242	236	185	0	336	130	196	130	65	0	228
Grp Sat Flow(s),veh/h/ln	1792	1787	1702	1792	0	1840	1792	1881	1599	1810	0	1824
Q Serve(g_s), s	3.9	12.7	13.1	8.1	0.0	17.1	4.2	6.8	5.1	2.0	0.0	8.5
Cycle Q Clear(g_c), s	3.9	12.7	13.1	8.1	0.0	17.1	4.2	6.8	5.1	2.0	0.0	8.5
Prop In Lane	1.00		0.60	1.00		0.13	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	239	338	322	308	0	435	556	788	670	539	0	744
V/C Ratio(X)	0.36	0.72	0.73	0.60	0.00	0.77	0.23	0.25	0.19	0.12	0.00	0.31
Avail Cap(c_a), veh/h	284	483	460	377	0	607	626	788	670	575	0	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.9	38.0	38.2	28.6	0.0	35.7	15.6	18.8	18.4	15.4	0.0	20.0
Incr Delay (d2), s/veh	0.9	2.9	3.6	1.9	0.0	4.1	0.2	0.7	0.6	0.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.5	6.5	4.1	0.0	9.2	2.1	3.6	2.4	1.0	0.0	4.5
LnGrp Delay(d),s/veh	31.8	40.9	41.7	30.5	0.0	39.7	15.8	19.6	19.0	15.5	0.0	21.1
LnGrp LOS	C	D	D	C		D	B	B	B	B		C
Approach Vol, veh/h		565			521			456			293	
Approach Delay, s/veh		39.8			36.5			18.4			19.8	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	47.9	16.2	24.9	12.1	46.8	11.5	29.6
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	7.0	28.0	14.0	27.0	10.0	25.0	8.0	33.0
Max Q Clear Time (g_c+I1), s	4.0	8.8	10.1	15.1	6.2	10.5	5.9	19.1
Green Ext Time (p_c), s	0.0	2.7	0.2	3.8	0.1	2.5	0.0	4.2

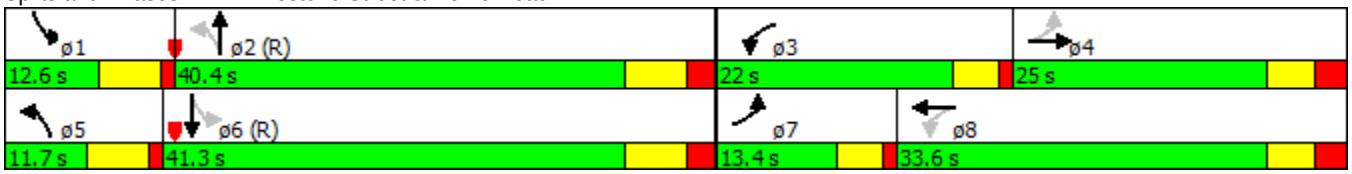
Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

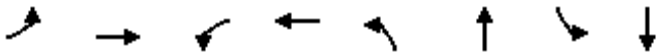
2040 Build Conditions
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	200	10	280	250	70	20	250	120	110	560	280
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.993			0.967			0.951			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1787	1819	0	1703	3239	0	1770	3362	0
Flt Permitted	0.409			0.306			0.233			0.436		
Satd. Flow (perm)	762	1850	0	576	1819	0	418	3239	0	812	3362	0
Satd. Flow (RTOR)		2			14			86			94	
Adj. Flow (vph)	130	217	11	304	272	76	22	272	130	120	609	304
Lane Group Flow (vph)	130	228	0	304	348	0	22	402	0	120	913	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	13.4	25.0		22.0	33.6		11.7	40.4		12.6	41.3	
Total Lost Time (s)	4.5	6.1		4.5	6.1		5.6	6.8		5.6	6.8	
Act Effct Green (s)	26.5	16.4		38.7	24.1		44.3	37.0		49.3	45.3	
Actuated g/C Ratio	0.26	0.16		0.39	0.24		0.44	0.37		0.49	0.45	
v/c Ratio	0.45	0.75		0.73	0.78		0.08	0.32		0.26	0.58	
Control Delay	25.4	54.9		20.7	30.7		14.8	19.1		15.6	21.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.4	54.9		20.7	30.7		14.8	19.1		15.6	21.8	
LOS	C	D		C	C		B	B		B	C	
Approach Delay		44.2			26.0			18.9			21.1	
Approach LOS		D			C			B			C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 6 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

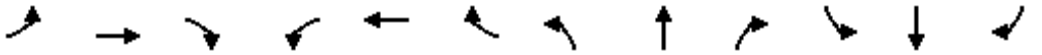
Splits and Phases: 1: Limestone Street & Home Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	130	228	304	348	22	402	120	913
v/c Ratio	0.45	0.75	0.73	0.78	0.08	0.32	0.26	0.58
Control Delay	25.4	54.9	20.7	30.7	14.8	19.1	15.6	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	54.9	20.7	30.7	14.8	19.1	15.6	21.8
Queue Length 50th (ft)	52	137	152	216	7	77	40	187
Queue Length 95th (ft)	90	215	91	259	21	117	75	317
Internal Link Dist (ft)		429		385		541		559
Turn Bay Length (ft)			150		200		100	
Base Capacity (vph)	294	351	434	510	263	1253	471	1573
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.65	0.70	0.68	0.08	0.32	0.25	0.58

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	200	10	280	250	70	20	250	120	110	560	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1792	1792	1900	1863	1863	1900
Adj Flow Rate, veh/h	130	217	11	304	272	76	22	272	130	120	609	304
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	2	2	2
Cap, veh/h	265	271	14	396	331	92	250	903	420	483	984	491
Arrive On Green	0.08	0.15	0.15	0.16	0.23	0.23	0.03	0.40	0.40	0.06	0.43	0.43
Sat Flow, veh/h	1774	1758	89	1792	1416	396	1707	2259	1051	1774	2289	1142
Grp Volume(v), veh/h	130	0	228	304	0	348	22	203	199	120	471	442
Grp Sat Flow(s),veh/h/ln	1774	0	1847	1792	0	1811	1707	1703	1607	1774	1770	1661
Q Serve(g_s), s	6.1	0.0	11.9	13.6	0.0	18.2	0.7	8.1	8.5	3.9	20.7	20.7
Cycle Q Clear(g_c), s	6.1	0.0	11.9	13.6	0.0	18.2	0.7	8.1	8.5	3.9	20.7	20.7
Prop In Lane	1.00		0.05	1.00		0.22	1.00		0.65	1.00		0.69
Lane Grp Cap(c), veh/h	265	0	285	396	0	423	250	681	642	483	761	714
V/C Ratio(X)	0.49	0.00	0.80	0.77	0.00	0.82	0.09	0.30	0.31	0.25	0.62	0.62
Avail Cap(c_a), veh/h	283	0	349	426	0	498	307	681	642	504	761	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.59	0.00	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	40.8	28.1	0.0	36.3	18.2	20.5	20.6	16.2	22.1	22.1
Incr Delay (d2), s/veh	1.4	0.0	10.4	4.6	0.0	5.7	0.2	1.1	1.3	0.3	3.8	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	6.9	7.2	0.0	9.8	0.4	4.0	4.0	1.9	10.9	10.3
LnGrp Delay(d),s/veh	33.8	0.0	51.2	32.8	0.0	42.0	18.4	21.6	21.8	16.5	25.9	26.1
LnGrp LOS	C		D	C		D	B	C	C	B	C	C
Approach Vol, veh/h		358			652			424			1033	
Approach Delay, s/veh		44.8			37.7			21.5			24.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	46.8	20.3	21.5	8.3	49.8	12.4	29.5
Change Period (Y+Rc), s	5.6	* 6.8	4.5	6.1	5.6	* 6.8	4.5	6.1
Max Green Setting (Gmax), s	7.0	* 34	17.5	18.9	6.1	* 35	8.9	27.5
Max Q Clear Time (g_c+I1), s	5.9	10.5	15.6	13.9	2.7	22.7	8.1	20.2
Green Ext Time (p_c), s	0.0	9.1	0.2	1.5	0.0	6.3	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

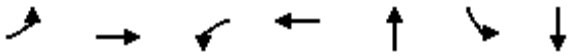
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	400	20	30	550	10	10	10	20	10	0	20
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.997			0.932			0.850	
Flt Protected	0.950			0.950				0.988		0.950		
Satd. Flow (prot)	1770	1850	0	1787	1876	0	0	1682	0	1736	1553	0
Flt Permitted	0.219			0.312				0.954		0.728		
Satd. Flow (perm)	408	1850	0	587	1876	0	0	1624	0	1330	1553	0
Satd. Flow (RTOR)		5			2			22			381	
Adj. Flow (vph)	11	435	22	33	598	11	11	11	22	11	0	22
Lane Group Flow (vph)	11	457	0	33	609	0	0	44	0	11	22	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	12.0	68.0		12.0	68.0		20.0	20.0		20.0	20.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Act Effct Green (s)	42.4	38.8		44.8	43.6			42.0		42.0	42.0	
Actuated g/C Ratio	0.42	0.39		0.45	0.44			0.42		0.42	0.42	
v/c Ratio	0.04	0.63		0.10	0.74			0.06		0.02	0.03	
Control Delay	15.2	38.1		8.7	25.5			16.2		25.8	0.1	
Queue Delay	0.0	0.1		0.0	0.0			0.0		0.0	0.0	
Total Delay	15.2	38.3		8.7	25.5			16.2		25.8	0.1	
LOS	B	D		A	C			B		C	A	
Approach Delay		37.7			24.6			16.2			8.6	
Approach LOS		D			C			B			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Grube Street/Kroger & Home Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	11	457	33	609	44	11	22
v/c Ratio	0.04	0.63	0.10	0.74	0.06	0.02	0.03
Control Delay	15.2	38.1	8.7	25.5	16.2	25.8	0.1
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	38.3	8.7	25.5	16.2	25.8	0.1
Queue Length 50th (ft)	5	313	13	335	8	4	0
Queue Length 95th (ft)	m7	304	m24	469	41	21	0
Internal Link Dist (ft)		385		1749	320		103
Turn Bay Length (ft)	50		50				
Base Capacity (vph)	254	1148	335	1163	694	558	873
Starvation Cap Reductn	0	151	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.46	0.10	0.52	0.06	0.02	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	400	20	30	550	10	10	10	20	10	0	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1900	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	11	435	22	33	598	11	11	11	22	11	0	22
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	1	1	1	4	4	4	4	4	4
Cap, veh/h	181	654	33	292	722	13	182	187	324	632	0	640
Arrive On Green	0.02	0.37	0.37	0.04	0.39	0.39	0.41	0.41	0.41	0.41	0.00	0.41
Sat Flow, veh/h	1774	1758	89	1792	1841	34	332	454	787	1344	0	1553
Grp Volume(v), veh/h	11	0	457	33	0	609	44	0	0	11	0	22
Grp Sat Flow(s),veh/h/ln	1774	0	1847	1792	0	1875	1573	0	0	1344	0	1553
Q Serve(g_s), s	0.4	0.0	20.6	1.1	0.0	29.2	0.0	0.0	0.0	0.0	0.0	0.8
Cycle Q Clear(g_c), s	0.4	0.0	20.6	1.1	0.0	29.2	1.6	0.0	0.0	0.4	0.0	0.8
Prop In Lane	1.00		0.05	1.00		0.02	0.25		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	181	0	687	292	0	736	693	0	0	632	0	640
V/C Ratio(X)	0.06	0.00	0.67	0.11	0.00	0.83	0.06	0.00	0.00	0.02	0.00	0.03
Avail Cap(c_a), veh/h	259	0	1145	335	0	1163	693	0	0	632	0	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.00	0.79	0.87	0.00	0.87	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	26.2	20.1	0.0	27.4	17.8	0.0	0.0	17.4	0.0	17.5
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.1	0.0	2.5	0.2	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	10.7	0.6	0.0	15.6	0.8	0.0	0.0	0.2	0.0	0.4
LnGrp Delay(d),s/veh	22.7	0.0	27.1	20.2	0.0	29.9	17.9	0.0	0.0	17.5	0.0	17.6
LnGrp LOS	C		C	C		C	B			B		B
Approach Vol, veh/h		468			642			44			33	
Approach Delay, s/veh		27.0			29.4			17.9			17.6	
Approach LOS		C			C			B			B	

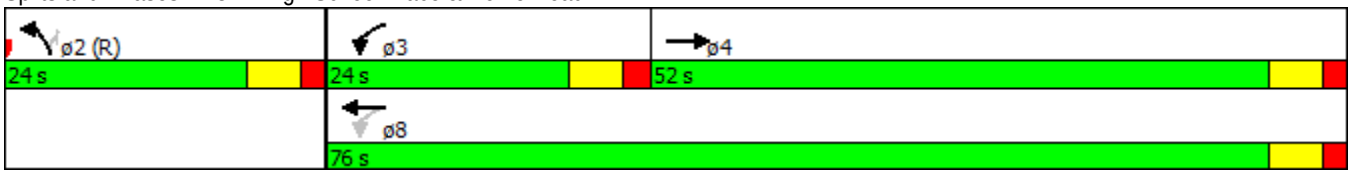
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		47.2	9.6	43.2		47.2	7.6	45.2
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		14.0	6.0	62.0		14.0	6.0	62.0
Max Q Clear Time (g_c+I1), s		3.6	3.1	22.6		2.8	2.4	31.2
Green Ext Time (p_c), s		0.2	0.0	8.4		0.2	0.0	8.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	450	80	250	510	60	160
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1844	0	1770	1863	1752	1568
Flt Permitted			0.141		0.950	
Satd. Flow (perm)	1844	0	263	1863	1752	1568
Satd. Flow (RTOR)	12					174
Adj. Flow (vph)	489	87	272	554	65	174
Lane Group Flow (vph)	576	0	272	554	65	174
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Total Split (s)	52.0		24.0	76.0	24.0	24.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	37.2		57.3	57.3	30.7	30.7
Actuated g/C Ratio	0.37		0.57	0.57	0.31	0.31
v/c Ratio	0.83		0.75	0.52	0.12	0.29
Control Delay	31.9		26.8	9.9	29.9	6.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	31.9		26.8	9.9	29.9	6.5
LOS	C		C	A	C	A
Approach Delay	31.9			15.5	12.9	
Approach LOS	C			B	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 37 (37%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 20.9	Intersection LOS: C
Intersection Capacity Utilization 67.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: N High School Place & Home Road



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	576	272	554	65	174
v/c Ratio	0.83	0.75	0.52	0.12	0.29
Control Delay	31.9	26.8	9.9	29.9	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	26.8	9.9	29.9	6.5
Queue Length 50th (ft)	372	110	240	30	0
Queue Length 95th (ft)	382	m159	m235	72	54
Internal Link Dist (ft)	1749		1289	740	
Turn Bay Length (ft)		225			
Base Capacity (vph)	855	421	1304	538	602
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.67	0.65	0.42	0.12	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	450	80	250	510	60	160
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1863	1863	1845	1845
Adj Flow Rate, veh/h	489	87	272	554	65	174
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	580	103	345	1018	586	523
Arrive On Green	0.37	0.37	0.11	0.55	0.33	0.33
Sat Flow, veh/h	1556	277	1774	1863	1757	1568
Grp Volume(v), veh/h	0	576	272	554	65	174
Grp Sat Flow(s),veh/h/ln	0	1832	1774	1863	1757	1568
Q Serve(g_s), s	0.0	28.8	8.9	19.2	2.6	8.3
Cycle Q Clear(g_c), s	0.0	28.8	8.9	19.2	2.6	8.3
Prop In Lane		0.15	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	683	345	1018	586	523
V/C Ratio(X)	0.00	0.84	0.79	0.54	0.11	0.33
Avail Cap(c_a), veh/h	0	843	462	1304	586	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.75	0.50	0.50	1.00	1.00
Uniform Delay (d), s/veh	0.0	28.7	21.0	14.6	23.1	25.0
Incr Delay (d2), s/veh	0.0	5.0	3.3	0.2	0.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	4.6	9.9	1.3	3.9
LnGrp Delay(d),s/veh	0.0	33.7	24.3	14.9	23.5	26.7
LnGrp LOS		C	C	B	C	C
Approach Vol, veh/h	576			826	239	
Approach Delay, s/veh	33.7			18.0	25.8	
Approach LOS	C			B	C	

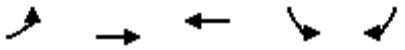
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		39.3	17.4	43.3				60.7
Change Period (Y+Rc), s		6.0	6.0	6.0				6.0
Max Green Setting (Gmax), s		18.0	18.0	46.0				70.0
Max Q Clear Time (g_c+I1), s		10.3	10.9	30.8				21.2
Green Ext Time (p_c), s		0.5	0.5	6.5				9.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	30	580	700	10	30	60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1881	1859	0	1752	1568
Flt Permitted	0.167				0.950	
Satd. Flow (perm)	314	1881	1859	0	1752	1568
Satd. Flow (RTOR)			2			65
Adj. Flow (vph)	33	630	761	11	33	65
Lane Group Flow (vph)	33	630	772	0	33	65
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Total Split (s)	32.0	32.0	32.0		18.0	18.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Act Effct Green (s)	24.2	24.2	24.2		13.8	13.8
Actuated g/C Ratio	0.48	0.48	0.48		0.28	0.28
v/c Ratio	0.22	0.69	0.86		0.07	0.14
Control Delay	7.4	16.3	17.8		15.2	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.4	16.3	17.8		15.2	6.0
LOS	A	B	B		B	A
Approach Delay		15.8	17.8		9.1	
Approach LOS		B	B		A	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

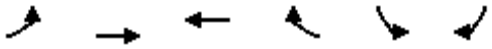
Splits and Phases: 4: Home Road & Northmoor Drive



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	33	630	772	33	65
v/c Ratio	0.22	0.69	0.86	0.07	0.14
Control Delay	7.4	16.3	17.8	15.2	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	16.3	17.8	15.2	6.0
Queue Length 50th (ft)	4	368	102	8	0
Queue Length 95th (ft)	m8	275	275	24	22
Internal Link Dist (ft)		1289	1125	460	
Turn Bay Length (ft)	100			50	
Base Capacity (vph)	163	978	967	484	480
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.20	0.64	0.80	0.07	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	30	580	700	10	30	60
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1900	1845	1845
Adj Flow Rate, veh/h	33	630	761	11	33	65
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	244	938	913	13	459	410
Arrive On Green	0.50	0.50	0.50	0.50	0.26	0.26
Sat Flow, veh/h	702	1881	1832	26	1757	1568
Grp Volume(v), veh/h	33	630	0	772	33	65
Grp Sat Flow(s),veh/h/ln	702	1881	0	1858	1757	1568
Q Serve(g_s), s	2.1	12.6	0.0	17.8	0.7	1.6
Cycle Q Clear(g_c), s	19.9	12.6	0.0	17.8	0.7	1.6
Prop In Lane	1.00			0.01	1.00	1.00
Lane Grp Cap(c), veh/h	244	938	0	926	459	410
V/C Ratio(X)	0.14	0.67	0.00	0.83	0.07	0.16
Avail Cap(c_a), veh/h	259	978	0	966	459	410
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.00	0.49	1.00	1.00
Uniform Delay (d), s/veh	19.3	9.5	0.0	10.8	13.9	14.2
Incr Delay (d2), s/veh	0.2	1.1	0.0	3.1	0.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.8	0.0	9.8	0.4	0.8
LnGrp Delay(d),s/veh	19.5	10.6	0.0	13.9	14.2	15.0
LnGrp LOS	B	B		B	B	B
Approach Vol, veh/h		663	772		98	
Approach Delay, s/veh		11.0	13.9		14.8	
Approach LOS		B	B		B	

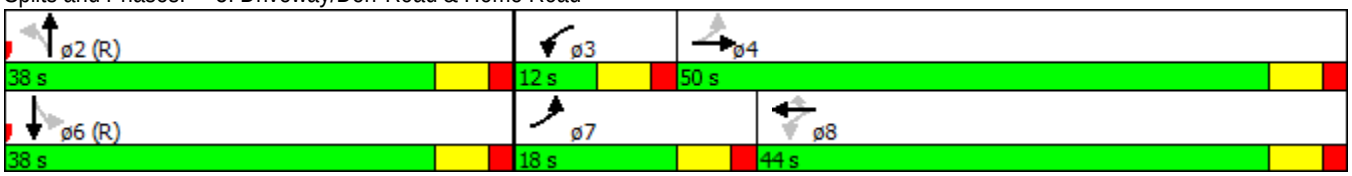
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				30.9		19.1		30.9
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				26.0		12.0		26.0
Max Q Clear Time (g_c+I1), s				21.9		3.6		19.8
Green Ext Time (p_c), s				3.0		0.1		4.3

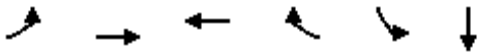
Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	280	0	0	410	130	0	0	0	140	0	390
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850					0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1736	1827	0	1845	1845	1568	0	1900	0	1770	1583	0
Flt Permitted	0.183									0.757		
Satd. Flow (perm)	334	1827	0	1845	1845	1568	0	1900	0	1410	1583	0
Satd. Flow (RTOR)						98					352	
Adj. Flow (vph)	196	304	0	0	446	141	0	0	0	152	0	424
Lane Group Flow (vph)	196	304	0	0	446	141	0	0	0	152	424	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	18.0	50.0		12.0	44.0	44.0	38.0	38.0		38.0	38.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Act Effct Green (s)	47.7	47.7			30.0	30.0				40.3	40.3	
Actuated g/C Ratio	0.48	0.48			0.30	0.30				0.40	0.40	
v/c Ratio	0.61	0.35			0.81	0.26				0.27	0.50	
Control Delay	27.0	21.2			40.0	9.7				22.5	8.5	
Queue Delay	0.0	0.0			0.0	0.0				0.0	0.0	
Total Delay	27.0	21.2			40.0	9.7				22.5	8.5	
LOS	C	C			D	A				C	A	
Approach Delay		23.5			32.8						12.2	
Approach LOS		C			C						B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 39 (39%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

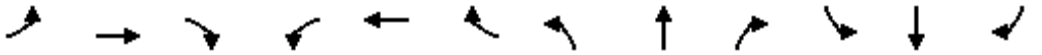
Splits and Phases: 5: Driveway/Derr Road & Home Road





Lane Group	EBL	EBT	WBT	WBR	SBL	SBT
Lane Group Flow (vph)	196	304	446	141	152	424
v/c Ratio	0.61	0.35	0.81	0.26	0.27	0.50
Control Delay	27.0	21.2	40.0	9.7	22.5	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	21.2	40.0	9.7	22.5	8.5
Queue Length 50th (ft)	104	162	259	1	56	0
Queue Length 95th (ft)	113	161	334	50	125	116
Internal Link Dist (ft)		1125	2716			3537
Turn Bay Length (ft)	200			100	100	
Base Capacity (vph)	327	896	701	656	568	848
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	0.60	0.34	0.64	0.21	0.27	0.50

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	280	0	0	410	130	0	0	0	140	0	390
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1845	1845	1845	1900	1900	1900	1863	1863	1900
Adj Flow Rate, veh/h	196	304	0	0	446	141	0	0	0	152	0	424
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	1	1	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
Percent Heavy Veh, %	4	4	4	3	3	3	0	0	0	2	2	2
Cap, veh/h	289	811	0	378	530	451	0	829	0	846	0	691
Arrive On Green	0.10	0.44	0.00	0.00	0.29	0.29	0.00	0.00	0.00	0.44	0.00	0.44
Sat Flow, veh/h	1740	1827	0	1757	1845	1568	0	1900	0	1774	0	1583
Grp Volume(v), veh/h	196	304	0	0	446	141	0	0	0	152	0	424
Grp Sat Flow(s),veh/h/ln	1740	1827	0	1757	1845	1568	0	1900	0	1774	0	1583
Q Serve(g_s), s	7.6	11.1	0.0	0.0	22.7	7.0	0.0	0.0	0.0	5.3	0.0	20.6
Cycle Q Clear(g_c), s	7.6	11.1	0.0	0.0	22.7	7.0	0.0	0.0	0.0	5.3	0.0	20.6
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	811	0	378	530	451	0	829	0	846	0	691
V/C Ratio(X)	0.68	0.37	0.00	0.00	0.84	0.31	0.00	0.00	0.00	0.18	0.00	0.61
Avail Cap(c_a), veh/h	329	811	0	482	701	596	0	829	0	846	0	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.94	0.00	0.94
Uniform Delay (d), s/veh	24.0	18.6	0.0	0.0	33.5	27.9	0.0	0.0	0.0	17.4	0.0	21.7
Incr Delay (d2), s/veh	3.3	0.2	0.0	0.0	6.4	0.4	0.0	0.0	0.0	0.4	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	5.6	0.0	0.0	12.5	3.1	0.0	0.0	0.0	2.7	0.0	9.7
LnGrp Delay(d),s/veh	27.3	18.8	0.0	0.0	39.9	28.3	0.0	0.0	0.0	17.8	0.0	25.5
LnGrp LOS	C	B			D	C				B		C
Approach Vol, veh/h		500			587			0			576	
Approach Delay, s/veh		22.1			37.1			0.0			23.5	
Approach LOS		C			D						C	

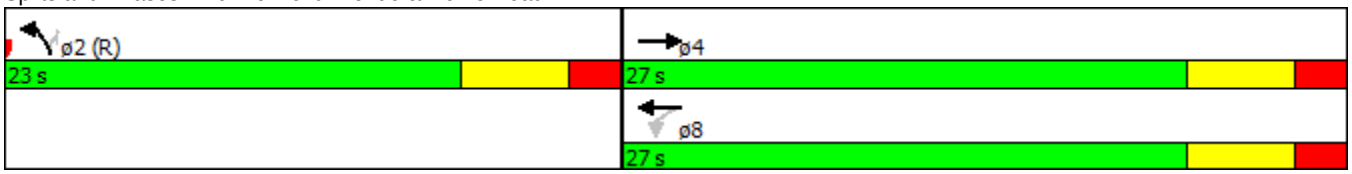
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		49.6	0.0	50.4		49.6	15.7	34.7
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		32.0	6.0	44.0		32.0	12.0	38.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	13.1		22.6	9.6	24.7
Green Ext Time (p_c), s		0.0	0.0	5.5		2.3	0.1	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	200	140	40	280	210	20
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.944					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1758	0	1770	1863	1770	1583
Flt Permitted			0.429		0.950	
Satd. Flow (perm)	1758	0	799	1863	1770	1583
Satd. Flow (RTOR)	87					22
Adj. Flow (vph)	217	152	43	304	228	22
Lane Group Flow (vph)	369	0	43	304	228	22
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Total Split (s)	27.0		27.0	27.0	23.0	23.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	14.8		14.8	14.8	23.2	23.2
Actuated g/C Ratio	0.30		0.30	0.30	0.46	0.46
v/c Ratio	0.64		0.18	0.55	0.28	0.03
Control Delay	12.7		9.9	14.0	10.6	5.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	12.7		9.9	14.0	10.6	5.2
LOS	B		A	B	B	A
Approach Delay	12.7			13.5	10.1	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 20 (40%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Belmont Avenue & Home Road



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	369	43	304	228	22
v/c Ratio	0.64	0.18	0.55	0.28	0.03
Control Delay	12.7	9.9	14.0	10.6	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	9.9	14.0	10.6	5.2
Queue Length 50th (ft)	152	10	76	36	0
Queue Length 95th (ft)	137	m13	m111	92	11
Internal Link Dist (ft)	2716		3133	1033	
Turn Bay Length (ft)		100			175
Base Capacity (vph)	788	335	782	821	746
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.13	0.39	0.28	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	200	140	40	280	210	20
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	217	152	43	304	228	22
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	323	226	276	588	788	703
Arrive On Green	0.32	0.32	0.32	0.32	0.44	0.44
Sat Flow, veh/h	1021	715	1009	1863	1774	1583
Grp Volume(v), veh/h	0	369	43	304	228	22
Grp Sat Flow(s),veh/h/ln	0	1737	1009	1863	1774	1583
Q Serve(g_s), s	0.0	9.2	1.9	6.7	4.1	0.4
Cycle Q Clear(g_c), s	0.0	9.2	11.2	6.7	4.1	0.4
Prop In Lane		0.41	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	549	276	588	788	703
V/C Ratio(X)	0.00	0.67	0.16	0.52	0.29	0.03
Avail Cap(c_a), veh/h	0	729	382	782	788	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.96	0.71	0.71	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.9	19.7	14.0	8.9	7.8
Incr Delay (d2), s/veh	0.0	1.4	0.2	0.5	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.6	0.6	3.5	2.2	0.2
LnGrp Delay(d),s/veh	0.0	16.3	19.9	14.5	9.8	7.9
LnGrp LOS		B	B	B	A	A
Approach Vol, veh/h	369			347	250	
Approach Delay, s/veh	16.3			15.2	9.6	
Approach LOS	B			B	A	

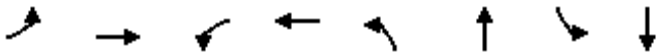
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.2		21.8				21.8
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		17.0		21.0				21.0
Max Q Clear Time (g_c+I1), s		6.1		11.2				13.2
Green Ext Time (p_c), s		0.5		3.0				2.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	90	40	20	190	150	40	260	20	270	530	80
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.954			0.934			0.989			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1743	0	1787	1757	0	1770	3500	0	1770	3468	0
Flt Permitted	0.397			0.667			0.399			0.566		
Satd. Flow (perm)	725	1743	0	1255	1757	0	743	3500	0	1054	3468	0
Satd. Flow (RTOR)		43			79			22			46	
Adj. Flow (vph)	43	98	43	22	207	163	43	283	22	293	576	87
Lane Group Flow (vph)	43	141	0	22	370	0	43	305	0	293	663	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	20.0	20.0		20.0	20.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	13.2	13.2		13.2	13.2		24.8	24.8		24.8	24.8	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.50	0.50		0.50	0.50	
v/c Ratio	0.23	0.29		0.07	0.71		0.12	0.17		0.56	0.38	
Control Delay	12.7	8.0		13.9	22.0		8.2	6.9		14.3	8.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.7	8.0		13.9	22.0		8.2	6.9		14.3	8.2	
LOS	B	A		B	C		A	A		B	A	
Approach Delay		9.1			21.5			7.1			10.1	
Approach LOS		A			C			A			B	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 39 (78%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

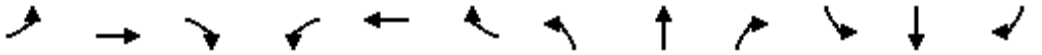
Splits and Phases: 7: Mechanicsburg Road & Home Road/Croft Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	141	22	370	43	305	293	663
v/c Ratio	0.23	0.29	0.07	0.71	0.12	0.17	0.56	0.38
Control Delay	12.7	8.0	13.9	22.0	8.2	6.9	14.3	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	8.0	13.9	22.0	8.2	6.9	14.3	8.2
Queue Length 50th (ft)	16	45	5	73	6	22	56	54
Queue Length 95th (ft)	m26	50	17	#173	20	40	122	85
Internal Link Dist (ft)		3133		843		1034		682
Turn Bay Length (ft)	100		150				475	
Base Capacity (vph)	203	519	351	548	369	1749	523	1746
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.27	0.06	0.68	0.12	0.17	0.56	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	90	40	20	190	150	40	260	20	270	530	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1881	1881	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	98	43	22	207	163	43	283	22	293	576	87
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	4	4	4	1	1	1	2	2	2	2	2	2
Cap, veh/h	226	334	147	412	271	213	423	1607	124	609	1489	224
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	989	1205	529	1255	977	769	769	3330	257	1070	3085	465
Grp Volume(v), veh/h	43	0	141	22	0	370	43	150	155	293	330	333
Grp Sat Flow(s),veh/h/ln	989	0	1734	1255	0	1745	769	1770	1817	1070	1770	1781
Q Serve(g_s), s	2.1	0.0	3.2	0.7	0.0	9.7	1.9	2.4	2.4	10.7	5.9	6.0
Cycle Q Clear(g_c), s	11.8	0.0	3.2	3.9	0.0	9.7	7.8	2.4	2.4	13.1	5.9	6.0
Prop In Lane	1.00		0.30	1.00		0.44	1.00		0.14	1.00		0.26
Lane Grp Cap(c), veh/h	226	0	481	412	0	484	423	854	877	609	854	859
V/C Ratio(X)	0.19	0.00	0.29	0.05	0.00	0.76	0.10	0.18	0.18	0.48	0.39	0.39
Avail Cap(c_a), veh/h	229	0	485	415	0	489	423	854	877	609	854	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.00	0.77	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	14.2	15.7	0.0	16.6	10.7	7.3	7.3	11.0	8.2	8.2
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.1	0.0	7.0	0.5	0.4	0.4	2.7	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.6	0.3	0.0	5.6	0.5	1.3	1.3	3.6	3.2	3.2
LnGrp Delay(d),s/veh	22.3	0.0	14.5	15.8	0.0	23.6	11.2	7.8	7.8	13.7	9.5	9.6
LnGrp LOS	C		B	B		C	B	A	A	B	A	A
Approach Vol, veh/h		184			392			348			956	
Approach Delay, s/veh		16.3			23.1			8.2			10.8	
Approach LOS		B			C			A			B	

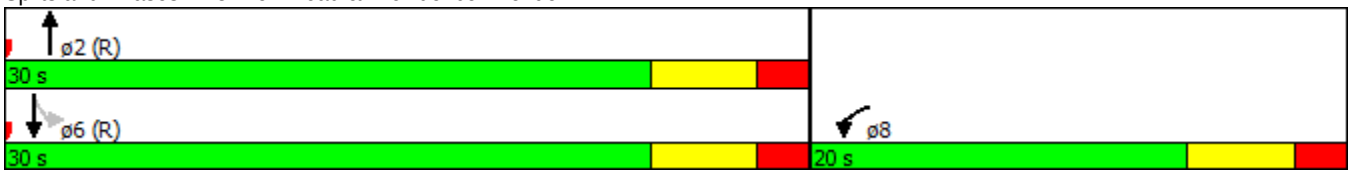
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.1		19.9		30.1		19.9
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		24.0		14.0		24.0		14.0
Max Q Clear Time (g_c+I1), s		9.8		13.8		15.1		11.7
Green Ext Time (p_c), s		6.4		0.1		4.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	100	90	260	30	30	350
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.936		0.986			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1698	0	1819	0	1752	1845
Flt Permitted	0.974				0.569	
Satd. Flow (perm)	1698	0	1819	0	1050	1845
Satd. Flow (RTOR)	90		16			
Adj. Flow (vph)	109	98	283	33	33	380
Lane Group Flow (vph)	207	0	316	0	33	380
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	20.0		30.0		30.0	30.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Act Effct Green (s)	12.3		30.5		30.5	30.5
Actuated g/C Ratio	0.25		0.61		0.61	0.61
v/c Ratio	0.43		0.28		0.05	0.34
Control Delay	12.3		5.8		3.9	5.1
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	12.3		5.8		3.9	5.1
LOS	B		A		A	A
Approach Delay	12.3		5.8			5.0
Approach LOS	B		A			A

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 32 (64%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 6.9	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Derr Road & Providence Avenue



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	316	33	380
v/c Ratio	0.43	0.28	0.05	0.34
Control Delay	12.3	5.8	3.9	5.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.3	5.8	3.9	5.1
Queue Length 50th (ft)	28	68	5	62
Queue Length 95th (ft)	70	133	7	46
Internal Link Dist (ft)	566	3537		893
Turn Bay Length (ft)			50	
Base Capacity (vph)	540	1115	640	1125
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.28	0.05	0.34

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	100	90	260	30	30	350
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1845	1900	1845	1845
Adj Flow Rate, veh/h	109	98	283	33	33	380
Adj No. of Lanes	0	0	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	3	3	3	3
Cap, veh/h	199	179	865	101	600	984
Arrive On Green	0.23	0.23	0.53	0.53	0.53	0.53
Sat Flow, veh/h	880	791	1622	189	1049	1845
Grp Volume(v), veh/h	208	0	0	316	33	380
Grp Sat Flow(s),veh/h/ln	1679	0	0	1811	1049	1845
Q Serve(g_s), s	5.5	0.0	0.0	4.9	0.9	6.1
Cycle Q Clear(g_c), s	5.5	0.0	0.0	4.9	5.8	6.1
Prop In Lane	0.52	0.47		0.10	1.00	
Lane Grp Cap(c), veh/h	381	0	0	966	600	984
V/C Ratio(X)	0.55	0.00	0.00	0.33	0.05	0.39
Avail Cap(c_a), veh/h	470	0	0	966	600	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.88	0.98	0.98
Uniform Delay (d), s/veh	17.1	0.0	0.0	6.6	8.2	6.9
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.8	0.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	2.7	0.3	3.4
LnGrp Delay(d),s/veh	18.3	0.0	0.0	7.4	8.4	8.0
LnGrp LOS	B			A	A	A
Approach Vol, veh/h	208		316			413
Approach Delay, s/veh	18.3		7.4			8.0
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		32.7				32.7		17.3
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		24.0				24.0		14.0
Max Q Clear Time (g_c+I1), s		6.9				8.1		7.5
Green Ext Time (p_c), s		4.0				3.9		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

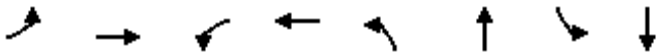
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	20	70	10	20	20	190	60	10	210	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.900			0.900			0.964			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	1462	0	1787	1693	0	1752	1778	0	1752	1832	0
Flt Permitted	0.736			0.453			0.588			0.588		
Satd. Flow (perm)	1195	1462	0	852	1693	0	1085	1778	0	1085	1832	0
Satd. Flow (RTOR)		22			22			19			3	
Adj. Flow (vph)	11	11	22	76	11	22	22	207	65	11	228	11
Lane Group Flow (vph)	11	33	0	76	33	0	22	272	0	11	239	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	14.0	22.0		16.0	24.0		14.0	48.0		14.0	48.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	13.5	12.0		19.5	18.7		69.2	69.0		67.7	66.5	
Actuated g/C Ratio	0.14	0.12		0.20	0.19		0.69	0.69		0.68	0.66	
v/c Ratio	0.06	0.17		0.30	0.10		0.03	0.22		0.01	0.20	
Control Delay	27.8	23.4		32.9	18.3		4.0	4.5		6.5	9.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.8	23.4		32.9	18.3		4.0	4.5		6.5	9.6	
LOS	C	C		C	B		A	A		A	A	
Approach Delay		24.5			28.5			4.5			9.4	
Approach LOS		C			C			A			A	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 81 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.30	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 37.2%	ICU Level of Service A
Analysis Period (min) 15	

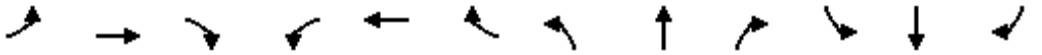
Splits and Phases: 9: Derr Road & Northland Plaza Shopping Center



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	33	76	33	22	272	11	239
v/c Ratio	0.06	0.17	0.30	0.10	0.03	0.22	0.01	0.20
Control Delay	27.8	23.4	32.9	18.3	4.0	4.5	6.5	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	23.4	32.9	18.3	4.0	4.5	6.5	9.6
Queue Length 50th (ft)	5	6	37	5	3	28	3	57
Queue Length 95th (ft)	19	35	73	34	m7	104	m9	145
Internal Link Dist (ft)		105		118		893		632
Turn Bay Length (ft)					100		100	
Base Capacity (vph)	209	252	269	384	806	1233	796	1218
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.13	0.28	0.09	0.03	0.22	0.01	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	20	70	10	20	20	190	60	10	210	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1624	1624	1900	1881	1881	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	11	11	22	76	11	22	22	207	65	11	228	11
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	17	17	17	1	1	1	3	3	3	3	3	3
Cap, veh/h	223	51	103	284	80	160	694	789	248	657	1002	48
Arrive On Green	0.02	0.11	0.11	0.05	0.14	0.14	0.03	0.59	0.59	0.02	0.57	0.57
Sat Flow, veh/h	1547	484	969	1792	561	1122	1757	1347	423	1757	1746	84
Grp Volume(v), veh/h	11	0	33	76	0	33	22	0	272	11	0	239
Grp Sat Flow(s),veh/h/ln	1547	0	1453	1792	0	1683	1757	0	1770	1757	0	1830
Q Serve(g_s), s	0.6	0.0	2.1	3.7	0.0	1.7	0.5	0.0	7.5	0.3	0.0	6.4
Cycle Q Clear(g_c), s	0.6	0.0	2.1	3.7	0.0	1.7	0.5	0.0	7.5	0.3	0.0	6.4
Prop In Lane	1.00		0.67	1.00		0.67	1.00		0.24	1.00		0.05
Lane Grp Cap(c), veh/h	223	0	154	284	0	240	694	0	1037	657	0	1050
V/C Ratio(X)	0.05	0.00	0.21	0.27	0.00	0.14	0.03	0.00	0.26	0.02	0.00	0.23
Avail Cap(c_a), veh/h	322	0	232	369	0	303	786	0	1037	770	0	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.00	0.97	0.97	0.00	0.97
Uniform Delay (d), s/veh	38.9	0.0	40.9	37.0	0.0	37.5	8.3	0.0	10.1	8.7	0.0	10.4
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.5	0.0	0.3	0.0	0.0	0.6	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.9	1.9	0.0	0.8	0.2	0.0	3.8	0.1	0.0	3.3
LnGrp Delay(d),s/veh	38.9	0.0	41.6	37.5	0.0	37.7	8.3	0.0	10.7	8.7	0.0	10.9
LnGrp LOS	D		D	D		D	A		B	A		B
Approach Vol, veh/h		44			109			294			250	
Approach Delay, s/veh		40.9			37.6			10.6			10.8	
Approach LOS		D			D			B			B	

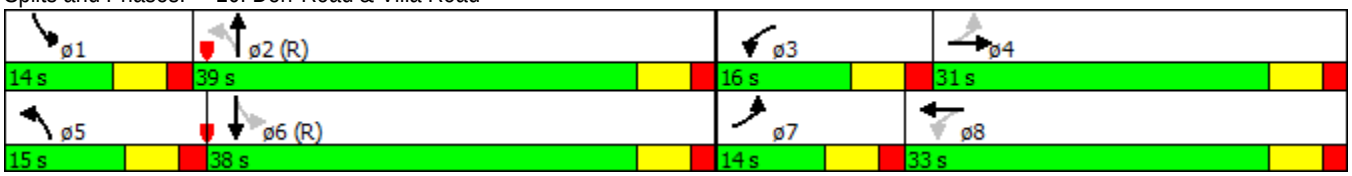
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	64.6	11.3	16.6	8.7	63.4	7.6	20.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	42.0	10.0	16.0	8.0	42.0	8.0	18.0
Max Q Clear Time (g_c+I1), s	2.3	9.5	5.7	4.1	2.5	8.4	2.6	3.7
Green Ext Time (p_c), s	0.0	3.2	0.0	0.2	0.0	3.2	0.0	0.2

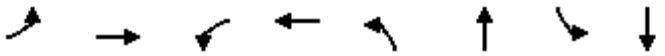
Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	170	80	80	160	40	80	90	50	60	160	50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952			0.970			0.947			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3369	0	1787	1825	0	1752	1747	0	1787	1813	0
Flt Permitted	0.609			0.432			0.581			0.660		
Satd. Flow (perm)	1134	3369	0	813	1825	0	1072	1747	0	1242	1813	0
Satd. Flow (RTOR)		75			12			30			16	
Adj. Flow (vph)	22	185	87	87	174	43	87	98	54	65	174	54
Lane Group Flow (vph)	22	272	0	87	217	0	87	152	0	65	228	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	14.0	31.0		16.0	33.0		15.0	39.0		14.0	38.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	20.0	14.5		25.4	21.4		57.0	50.4		55.8	49.8	
Actuated g/C Ratio	0.20	0.14		0.25	0.21		0.57	0.50		0.56	0.50	
v/c Ratio	0.08	0.49		0.30	0.54		0.13	0.17		0.09	0.25	
Control Delay	24.1	30.7		28.0	38.1		5.3	6.0		10.8	17.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.1	30.7		28.0	38.1		5.3	6.0		10.8	17.9	
LOS	C	C		C	D		A	A		B	B	
Approach Delay		30.2			35.2			5.8			16.3	
Approach LOS		C			D			A			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 99 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

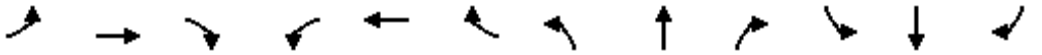
Splits and Phases: 10: Derr Road & Villa Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	272	87	217	87	152	65	228
v/c Ratio	0.08	0.49	0.30	0.54	0.13	0.17	0.09	0.25
Control Delay	24.1	30.7	28.0	38.1	5.3	6.0	10.8	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	30.7	28.0	38.1	5.3	6.0	10.8	17.9
Queue Length 50th (ft)	10	62	42	107	7	20	16	78
Queue Length 95th (ft)	25	94	71	189	21	23	42	162
Internal Link Dist (ft)		616		681		632		459
Turn Bay Length (ft)	100		225		75		50	
Base Capacity (vph)	288	898	303	502	683	895	745	910
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.30	0.29	0.43	0.13	0.17	0.09	0.25

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	170	80	80	160	40	80	90	50	60	160	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1845	1845	1900	1881	1881	1900
Adj Flow Rate, veh/h	22	185	87	87	174	43	87	98	54	65	174	54
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	1	1	1
Cap, veh/h	171	305	138	231	230	57	681	587	324	757	717	223
Arrive On Green	0.03	0.13	0.13	0.06	0.16	0.16	0.05	0.52	0.52	0.05	0.52	0.52
Sat Flow, veh/h	1774	2372	1072	1792	1457	360	1757	1119	617	1792	1378	428
Grp Volume(v), veh/h	22	136	136	87	0	217	87	0	152	65	0	228
Grp Sat Flow(s),veh/h/ln	1774	1770	1674	1792	0	1818	1757	0	1736	1792	0	1806
Q Serve(g_s), s	1.1	7.3	7.7	4.2	0.0	11.4	2.2	0.0	4.6	1.6	0.0	6.9
Cycle Q Clear(g_c), s	1.1	7.3	7.7	4.2	0.0	11.4	2.2	0.0	4.6	1.6	0.0	6.9
Prop In Lane	1.00		0.64	1.00		0.20	1.00		0.36	1.00		0.24
Lane Grp Cap(c), veh/h	171	227	215	231	0	287	681	0	911	757	0	939
V/C Ratio(X)	0.13	0.60	0.63	0.38	0.00	0.76	0.13	0.00	0.17	0.09	0.00	0.24
Avail Cap(c_a), veh/h	264	442	418	308	0	491	743	0	911	811	0	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	41.1	41.3	35.2	0.0	40.3	9.8	0.0	12.4	9.7	0.0	13.2
Incr Delay (d2), s/veh	0.3	2.5	3.0	1.0	0.0	4.1	0.1	0.0	0.4	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.7	3.7	2.1	0.0	6.1	1.1	0.0	2.3	0.8	0.0	3.6
LnGrp Delay(d),s/veh	36.8	43.7	44.4	36.2	0.0	44.4	9.8	0.0	12.8	9.7	0.0	13.8
LnGrp LOS	D	D	D	D		D	A		B	A		B
Approach Vol, veh/h		294			304			239			293	
Approach Delay, s/veh		43.5			42.0			11.7			12.9	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	58.5	11.7	18.8	11.5	58.0	8.7	21.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	33.0	10.0	25.0	9.0	32.0	8.0	27.0
Max Q Clear Time (g_c+I1), s	3.6	6.6	6.2	9.7	4.2	8.9	3.1	13.4
Green Ext Time (p_c), s	0.0	2.2	0.1	2.5	0.1	2.2	0.0	2.3

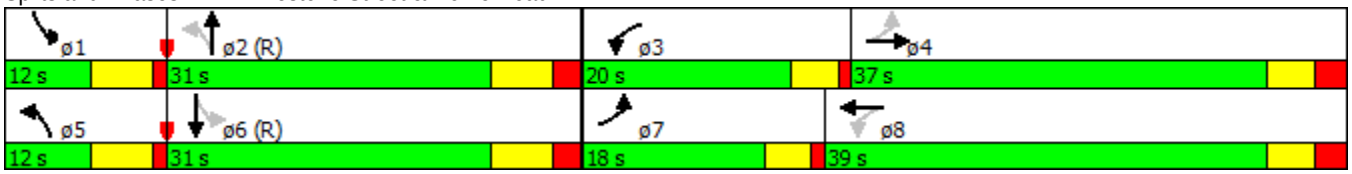
Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

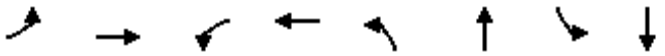
2040 Build Conditions
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	340	20	290	340	100	50	490	250	130	620	200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.992			0.966			0.949			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1866	0	1787	1817	0	1787	3392	0	1787	3442	0
Flt Permitted	0.172			0.258			0.151			0.139		
Satd. Flow (perm)	324	1866	0	485	1817	0	284	3392	0	261	3442	0
Satd. Flow (RTOR)		3			16			85			41	
Adj. Flow (vph)	326	370	22	315	370	109	54	533	272	141	674	217
Lane Group Flow (vph)	326	392	0	315	479	0	54	805	0	141	891	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	18.0	37.0		20.0	39.0		12.0	31.0		12.0	31.0	
Total Lost Time (s)	4.5	6.1		4.5	6.1		5.6	6.8		5.6	6.8	
Act Effct Green (s)	43.3	28.2		45.7	29.4		34.2	26.5		37.2	29.9	
Actuated g/C Ratio	0.43	0.28		0.46	0.29		0.34	0.26		0.37	0.30	
v/c Ratio	0.97	0.74		0.76	0.88		0.28	0.84		0.66	0.84	
Control Delay	65.4	41.4		30.8	33.5		23.7	41.0		39.1	42.2	
Queue Delay	0.0	0.1		0.0	0.4		0.0	0.0		0.0	0.0	
Total Delay	65.4	41.5		30.8	33.9		23.7	41.0		39.1	42.2	
LOS	E	D		C	C		C	D		D	D	
Approach Delay		52.4			32.7			39.9			41.8	
Approach LOS		D			C			D			D	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 75 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 88.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Limestone Street & Home Road

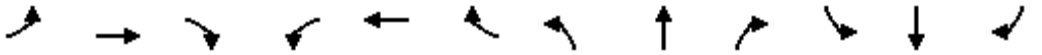




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	326	392	315	479	54	805	141	891
v/c Ratio	0.97	0.74	0.76	0.88	0.28	0.84	0.66	0.84
Control Delay	65.4	41.4	30.8	33.5	23.7	41.0	39.1	42.2
Queue Delay	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	65.4	41.5	30.8	33.9	23.7	41.0	39.1	42.2
Queue Length 50th (ft)	138	221	39	264	21	238	58	287
Queue Length 95th (ft)	#304	321	182	#357	48	#353	#142	#437
Internal Link Dist (ft)		429		385		541		559
Turn Bay Length (ft)			150		200		100	
Base Capacity (vph)	337	578	427	608	196	961	213	1058
Starvation Cap Reductn	0	0	0	14	0	0	0	0
Spillback Cap Reductn	0	8	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.69	0.74	0.81	0.28	0.84	0.66	0.84

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	300	340	20	290	340	100	50	490	250	130	620	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1900	1881	1881	1900
Adj Flow Rate, veh/h	326	370	22	315	370	109	54	533	272	141	674	217
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	356	512	30	429	417	123	186	625	318	222	772	248
Arrive On Green	0.14	0.29	0.29	0.14	0.30	0.30	0.05	0.27	0.27	0.06	0.29	0.29
Sat Flow, veh/h	1792	1758	105	1792	1397	412	1792	2294	1168	1792	2661	856
Grp Volume(v), veh/h	326	0	392	315	0	479	54	415	390	141	453	438
Grp Sat Flow(s),veh/h/ln	1792	0	1863	1792	0	1809	1792	1787	1675	1792	1787	1730
Q Serve(g_s), s	12.8	0.0	18.9	12.1	0.0	25.3	2.1	22.0	22.1	5.7	24.1	24.1
Cycle Q Clear(g_c), s	12.8	0.0	18.9	12.1	0.0	25.3	2.1	22.0	22.1	5.7	24.1	24.1
Prop In Lane	1.00		0.06	1.00		0.23	1.00		0.70	1.00		0.49
Lane Grp Cap(c), veh/h	356	0	542	429	0	540	186	487	457	222	518	502
V/C Ratio(X)	0.92	0.00	0.72	0.73	0.00	0.89	0.29	0.85	0.85	0.64	0.87	0.87
Avail Cap(c_a), veh/h	356	0	576	452	0	595	217	487	457	222	518	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.70	0.00	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	31.8	22.1	0.0	33.5	26.6	34.5	34.5	27.0	33.8	33.8
Incr Delay (d2), s/veh	27.7	0.0	4.2	4.1	0.0	10.5	0.8	16.9	18.1	5.8	18.2	18.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	10.3	6.4	0.0	14.2	1.1	13.1	12.5	3.1	14.4	14.1
LnGrp Delay(d),s/veh	51.7	0.0	36.0	26.2	0.0	44.0	27.5	51.4	52.6	32.8	51.9	52.4
LnGrp LOS	D		D	C		D	C	D	D	C	D	D
Approach Vol, veh/h		718			794			859			1032	
Approach Delay, s/veh		43.2			37.0			50.4			49.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	34.1	18.7	35.2	10.3	35.8	18.0	35.9
Change Period (Y+Rc), s	5.6	* 6.8	4.5	6.1	5.6	* 6.8	4.5	6.1
Max Green Setting (Gmax), s	6.4	* 24	15.5	30.9	6.4	* 24	13.5	32.9
Max Q Clear Time (g_c+I1), s	7.7	24.1	14.1	20.9	4.1	26.1	14.8	27.3
Green Ext Time (p_c), s	0.0	0.1	0.2	3.8	0.0	0.0	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	45.5
HCM 2010 LOS	D

Notes

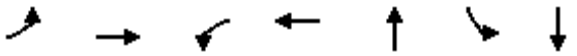
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	660	40	60	620	30	50	10	70	40	10	50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.993			0.927			0.875	
Flt Protected	0.950			0.950				0.981		0.950		
Satd. Flow (prot)	1787	1866	0	1787	1868	0	0	1728	0	1805	1662	0
Flt Permitted	0.255			0.181				0.856		0.647		
Satd. Flow (perm)	480	1866	0	340	1868	0	0	1508	0	1229	1662	0
Satd. Flow (RTOR)		6			5			49			54	
Adj. Flow (vph)	22	717	43	65	674	33	54	11	76	43	11	54
Lane Group Flow (vph)	22	760	0	65	707	0	0	141	0	43	65	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	12.0	68.0		12.0	68.0		20.0	20.0		20.0	20.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Act Effct Green (s)	56.9	52.1		59.3	56.9			26.3		26.3	26.3	
Actuated g/C Ratio	0.57	0.52		0.59	0.57			0.26		0.26	0.26	
v/c Ratio	0.06	0.78		0.23	0.66			0.33		0.13	0.14	
Control Delay	5.3	23.0		7.2	16.7			26.1		36.5	14.2	
Queue Delay	0.0	0.3		0.0	0.1			0.0		0.0	0.0	
Total Delay	5.3	23.3		7.2	16.8			26.1		36.5	14.2	
LOS	A	C		A	B			C		D	B	
Approach Delay		22.8			16.0			26.1			23.1	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 79 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 20.2 Intersection LOS: C
Intersection Capacity Utilization 71.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Grube Street/Kroger & Home Road



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	22	760	65	707	141	43	65
v/c Ratio	0.06	0.78	0.23	0.66	0.33	0.13	0.14
Control Delay	5.3	23.0	7.2	16.7	26.1	36.5	14.2
Queue Delay	0.0	0.3	0.0	0.1	0.0	0.0	0.0
Total Delay	5.3	23.3	7.2	16.8	26.1	36.5	14.2
Queue Length 50th (ft)	5	271	10	110	49	22	6
Queue Length 95th (ft)	m5	m318	m19	482	118	59	45
Internal Link Dist (ft)		385		1749	320		103
Turn Bay Length (ft)	50		50				
Base Capacity (vph)	351	1159	288	1173	432	323	477
Starvation Cap Reductn	0	83	0	0	0	0	0
Spillback Cap Reductn	0	0	0	31	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.71	0.23	0.62	0.33	0.13	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	660	40	60	620	30	50	10	70	40	10	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	22	717	43	65	674	33	54	11	76	43	11	54
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	280	859	52	259	910	45	195	55	234	438	79	387
Arrive On Green	0.03	0.49	0.49	0.05	0.51	0.51	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1792	1757	105	1792	1779	87	516	197	834	1331	280	1377
Grp Volume(v), veh/h	22	0	760	65	0	707	141	0	0	43	0	65
Grp Sat Flow(s),veh/h/ln	1792	0	1863	1792	0	1866	1547	0	0	1331	0	1657
Q Serve(g_s), s	0.6	0.0	35.2	1.7	0.0	29.8	3.6	0.0	0.0	0.0	0.0	2.9
Cycle Q Clear(g_c), s	0.6	0.0	35.2	1.7	0.0	29.8	6.8	0.0	0.0	2.6	0.0	2.9
Prop In Lane	1.00		0.06	1.00		0.05	0.38		0.54	1.00		0.83
Lane Grp Cap(c), veh/h	280	0	911	259	0	954	484	0	0	438	0	466
V/C Ratio(X)	0.08	0.00	0.83	0.25	0.00	0.74	0.29	0.00	0.00	0.10	0.00	0.14
Avail Cap(c_a), veh/h	339	0	1155	276	0	1157	484	0	0	438	0	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.00	0.62	0.77	0.00	0.77	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	22.1	17.9	0.0	19.2	28.2	0.0	0.0	26.8	0.0	26.9
Incr Delay (d2), s/veh	0.1	0.0	2.8	0.4	0.0	1.6	1.5	0.0	0.0	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	18.6	0.9	0.0	15.7	3.3	0.0	0.0	0.9	0.0	1.4
LnGrp Delay(d),s/veh	15.8	0.0	24.8	18.2	0.0	20.8	29.7	0.0	0.0	27.2	0.0	27.5
LnGrp LOS	B		C	B		C	C			C		C
Approach Vol, veh/h		782			772			141			108	
Approach Delay, s/veh		24.6			20.6			29.7			27.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		34.1	11.0	54.9		34.1	8.7	57.2
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		14.0	6.0	62.0		14.0	6.0	62.0
Max Q Clear Time (g_c+I1), s		8.8	3.7	37.2		4.9	2.6	31.8
Green Ext Time (p_c), s		0.6	0.0	11.7		0.9	0.0	12.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	790	30	90	740	80	170
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1853	0	1770	1863	1770	1425
Flt Permitted			0.115		0.950	
Satd. Flow (perm)	1853	0	214	1863	1770	1425
Satd. Flow (RTOR)	4					185
Adj. Flow (vph)	859	33	98	804	87	185
Lane Group Flow (vph)	892	0	98	804	87	185
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Total Split (s)	68.0		12.0	80.0	20.0	20.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	57.6		67.2	67.2	20.8	20.8
Actuated g/C Ratio	0.58		0.67	0.67	0.21	0.21
v/c Ratio	0.83		0.41	0.64	0.24	0.42
Control Delay	13.3		12.5	10.8	39.5	9.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.3		12.5	10.8	39.5	9.3
LOS	B		B	B	D	A
Approach Delay	13.3			11.0	18.9	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 11 (11%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: N High School Place & Home Road

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	892	98	804	87	185
v/c Ratio	0.83	0.41	0.64	0.24	0.42
Control Delay	13.3	12.5	10.8	39.5	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.3	12.5	10.8	39.5	9.3
Queue Length 50th (ft)	89	9	100	50	0
Queue Length 95th (ft)	121	m45	228	98	61
Internal Link Dist (ft)	1749		1289	740	
Turn Bay Length (ft)		225			
Base Capacity (vph)	1150	237	1378	367	442
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.41	0.58	0.24	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	790	30	90	740	80	170
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	859	33	98	804	87	185
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	986	38	257	1247	374	300
Arrive On Green	0.55	0.55	0.06	0.67	0.21	0.21
Sat Flow, veh/h	1782	68	1774	1863	1774	1425
Grp Volume(v), veh/h	0	892	98	804	87	185
Grp Sat Flow(s),veh/h/ln	0	1851	1774	1863	1774	1425
Q Serve(g_s), s	0.0	41.6	2.2	25.1	4.1	11.8
Cycle Q Clear(g_c), s	0.0	41.6	2.2	25.1	4.1	11.8
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1024	257	1247	374	300
V/C Ratio(X)	0.00	0.87	0.38	0.64	0.23	0.62
Avail Cap(c_a), veh/h	0	1147	264	1378	374	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.59	0.76	0.76	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.3	18.5	9.6	32.8	35.8
Incr Delay (d2), s/veh	0.0	4.2	0.7	0.7	1.5	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.3	1.4	13.0	2.2	5.4
LnGrp Delay(d),s/veh	0.0	23.5	19.2	10.3	34.2	44.9
LnGrp LOS		C	B	B	C	D
Approach Vol, veh/h	892			902	272	
Approach Delay, s/veh	23.5			11.3	41.5	
Approach LOS	C			B	D	

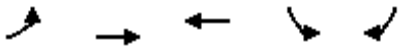
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		27.1	11.6	61.3				72.9
Change Period (Y+Rc), s		6.0	6.0	6.0				6.0
Max Green Setting (Gmax), s		14.0	6.0	62.0				74.0
Max Q Clear Time (g_c+I1), s		13.8	4.2	43.6				27.1
Green Ext Time (p_c), s		0.0	0.0	11.8				19.4

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	890	750	20	30	60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1855	0	1805	1615
Flt Permitted	0.252				0.950	
Satd. Flow (perm)	469	1863	1855	0	1805	1615
Satd. Flow (RTOR)			4			65
Adj. Flow (vph)	54	967	815	22	33	65
Lane Group Flow (vph)	54	967	837	0	33	65
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Total Split (s)	81.0	81.0	81.0		19.0	19.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Act Effct Green (s)	70.3	70.3	70.3		17.7	17.7
Actuated g/C Ratio	0.70	0.70	0.70		0.18	0.18
v/c Ratio	0.16	0.74	0.64		0.10	0.19
Control Delay	4.1	6.7	12.6		39.3	11.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	4.1	6.7	12.6		39.3	11.7
LOS	A	A	B		D	B
Approach Delay		6.5	12.6		21.0	
Approach LOS		A	B		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 22 (22%), Referenced to phase 2: and 6:SBL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

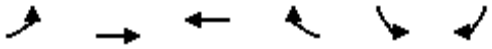
Splits and Phases: 4: Home Road & Northmoor Drive



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	54	967	837	33	65
v/c Ratio	0.16	0.74	0.64	0.10	0.19
Control Delay	4.1	6.7	12.6	39.3	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.1	6.7	12.6	39.3	11.7
Queue Length 50th (ft)	3	60	439	19	0
Queue Length 95th (ft)	m12	238	587	48	39
Internal Link Dist (ft)		1289	1125	460	
Turn Bay Length (ft)	100			50	
Base Capacity (vph)	351	1397	1392	318	338
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.69	0.60	0.10	0.19

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	50	890	750	20	30	60
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	54	967	815	22	33	65
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	272	1153	1117	30	472	422
Arrive On Green	0.62	0.62	0.62	0.62	0.26	0.26
Sat Flow, veh/h	654	1863	1805	49	1810	1615
Grp Volume(v), veh/h	54	967	0	837	33	65
Grp Sat Flow(s),veh/h/ln	654	1863	0	1854	1810	1615
Q Serve(g_s), s	6.3	41.1	0.0	31.4	1.4	3.1
Cycle Q Clear(g_c), s	37.6	41.1	0.0	31.4	1.4	3.1
Prop In Lane	1.00			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	272	1153	0	1148	472	422
V/C Ratio(X)	0.20	0.84	0.00	0.73	0.07	0.15
Avail Cap(c_a), veh/h	357	1397	0	1391	472	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.00	0.42	1.00	1.00
Uniform Delay (d), s/veh	26.3	15.1	0.0	13.2	27.8	28.4
Incr Delay (d2), s/veh	0.2	2.3	0.0	0.7	0.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	21.7	0.0	16.0	0.7	1.5
LnGrp Delay(d),s/veh	26.5	17.4	0.0	13.9	28.1	29.2
LnGrp LOS	C	B		B	C	C
Approach Vol, veh/h		1021	837		98	
Approach Delay, s/veh		17.9	13.9		28.8	
Approach LOS		B	B		C	

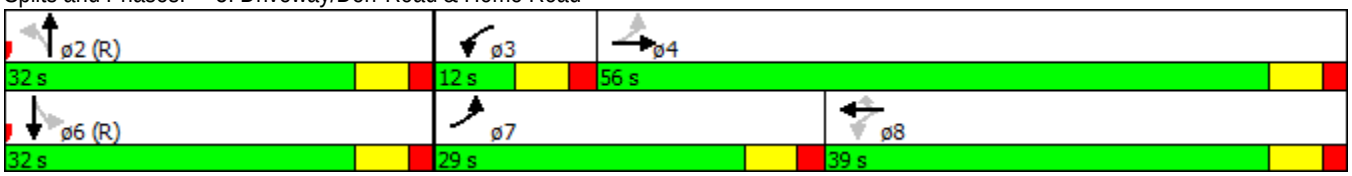
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				67.9		32.1		67.9
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				75.0		13.0		75.0
Max Q Clear Time (g_c+I1), s				43.1		5.1		33.4
Green Ext Time (p_c), s				18.8		0.1		21.7

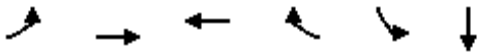
Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	490	0	0	420	270	0	0	0	220	0	330
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850					0.850	
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	0	1863	1863	1583	0	1900	0	1787	1599	0
Flt Permitted	0.156									0.757		
Satd. Flow (perm)	291	1863	0	1863	1863	1583	0	1900	0	1424	1599	0
Satd. Flow (RTOR)						172					488	
Adj. Flow (vph)	391	533	0	0	457	293	0	0	0	239	0	359
Lane Group Flow (vph)	391	533	0	0	457	293	0	0	0	239	359	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Total Split (s)	29.0	56.0		12.0	39.0	39.0	32.0	32.0		32.0	32.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Act Effct Green (s)	57.0	57.0			29.1	29.1				31.0	31.0	
Actuated g/C Ratio	0.57	0.57			0.29	0.29				0.31	0.31	
v/c Ratio	0.80	0.50			0.84	0.50				0.54	0.43	
Control Delay	33.5	5.5			43.2	14.4				38.2	5.5	
Queue Delay	0.0	0.0			0.0	0.0				0.0	0.0	
Total Delay	33.5	5.5			43.2	14.4				38.2	5.5	
LOS	C	A			D	B				D	A	
Approach Delay		17.3			31.9						18.5	
Approach LOS		B			C						B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 50 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 77.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Driveway/Derr Road & Home Road





Lane Group	EBL	EBT	WBT	WBR	SBL	SBT
Lane Group Flow (vph)	391	533	457	293	239	359
v/c Ratio	0.80	0.50	0.84	0.50	0.54	0.43
Control Delay	33.5	5.5	43.2	14.4	38.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	5.5	43.2	14.4	38.2	5.5
Queue Length 50th (ft)	135	55	262	35	119	6
Queue Length 95th (ft)	#246	159	362	97	199	54
Internal Link Dist (ft)		1125	2716			3537
Turn Bay Length (ft)	200			100	100	
Base Capacity (vph)	506	1080	614	637	441	832
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	0.77	0.49	0.74	0.46	0.54	0.43

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	360	490	0	0	420	270	0	0	0	220	0	330
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1900	1900	1881	1881	1900
Adj Flow Rate, veh/h	391	533	0	0	457	293	0	0	0	239	0	359
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	427	972	0	316	521	443	0	681	0	714	0	573
Arrive On Green	0.18	0.52	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.36	0.00	0.36
Sat Flow, veh/h	1774	1863	0	1774	1863	1583	0	1900	0	1792	0	1599
Grp Volume(v), veh/h	391	533	0	0	457	293	0	0	0	239	0	359
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	1863	1583	0	1900	0	1792	0	1599
Q Serve(g_s), s	15.6	19.2	0.0	0.0	23.4	16.4	0.0	0.0	0.0	9.9	0.0	18.6
Cycle Q Clear(g_c), s	15.6	19.2	0.0	0.0	23.4	16.4	0.0	0.0	0.0	9.9	0.0	18.6
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	427	972	0	316	521	443	0	681	0	714	0	573
V/C Ratio(X)	0.92	0.55	0.00	0.00	0.88	0.66	0.00	0.00	0.00	0.33	0.00	0.63
Avail Cap(c_a), veh/h	512	972	0	421	615	523	0	681	0	714	0	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.00	0.00	0.78	0.78	0.00	0.00	0.00	0.91	0.00	0.91
Uniform Delay (d), s/veh	23.7	16.0	0.0	0.0	34.4	31.8	0.0	0.0	0.0	23.8	0.0	26.6
Incr Delay (d2), s/veh	13.3	0.4	0.0	0.0	9.8	1.9	0.0	0.0	0.0	1.2	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	9.9	0.0	0.0	13.5	7.4	0.0	0.0	0.0	5.1	0.0	8.9
LnGrp Delay(d),s/veh	37.0	16.4	0.0	0.0	44.1	33.7	0.0	0.0	0.0	24.9	0.0	31.2
LnGrp LOS	D	B			D	C				C		C
Approach Vol, veh/h		924			750			0			598	
Approach Delay, s/veh		25.1			40.1			0.0			28.7	
Approach LOS		C			D						C	

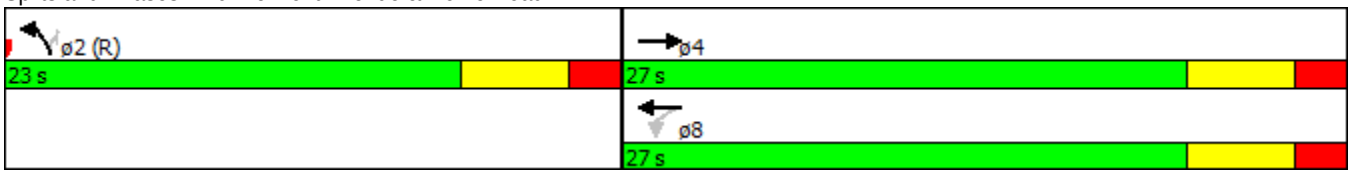
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		41.8	0.0	58.2		41.8	24.2	34.0
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		26.0	6.0	50.0		26.0	23.0	33.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	21.2		20.6	17.6	25.4
Green Ext Time (p_c), s		0.0	0.0	8.4		1.5	0.6	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	320	190	30	420	300	50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1770	0	1770	1863	1770	1583
Flt Permitted			0.249		0.950	
Satd. Flow (perm)	1770	0	464	1863	1770	1583
Satd. Flow (RTOR)	74					54
Adj. Flow (vph)	348	207	33	457	326	54
Lane Group Flow (vph)	555	0	33	457	326	54
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Total Split (s)	27.0		27.0	27.0	23.0	23.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	18.1		18.1	18.1	19.9	19.9
Actuated g/C Ratio	0.36		0.36	0.36	0.40	0.40
v/c Ratio	0.81		0.20	0.68	0.46	0.08
Control Delay	20.1		10.1	15.0	15.1	4.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	20.1		10.1	15.0	15.1	4.6
LOS	C		B	B	B	A
Approach Delay	20.1			14.6	13.6	
Approach LOS	C			B	B	

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 30 (60%), Referenced to phase 2:NBL and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Belmont Avenue & Home Road



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	555	33	457	326	54
v/c Ratio	0.81	0.20	0.68	0.46	0.08
Control Delay	20.1	10.1	15.0	15.1	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	10.1	15.0	15.1	4.6
Queue Length 50th (ft)	93	6	91	72	0
Queue Length 95th (ft)	218	m10	m135	138	17
Internal Link Dist (ft)	2716		3133	1033	
Turn Bay Length (ft)		100			175
Base Capacity (vph)	786	194	782	705	663
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.71	0.17	0.58	0.46	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	320	190	30	420	300	50
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	348	207	33	457	326	54
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	433	257	240	735	648	578
Arrive On Green	0.39	0.39	0.39	0.39	0.37	0.37
Sat Flow, veh/h	1096	652	850	1863	1774	1583
Grp Volume(v), veh/h	0	555	33	457	326	54
Grp Sat Flow(s),veh/h/ln	0	1748	850	1863	1774	1583
Q Serve(g_s), s	0.0	14.1	1.8	9.8	7.1	1.1
Cycle Q Clear(g_c), s	0.0	14.1	15.9	9.8	7.1	1.1
Prop In Lane		0.37	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	690	240	735	648	578
V/C Ratio(X)	0.00	0.80	0.14	0.62	0.50	0.09
Avail Cap(c_a), veh/h	0	734	262	782	648	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.85	0.53	0.53	1.00	1.00
Uniform Delay (d), s/veh	0.0	13.4	20.5	12.1	12.3	10.4
Incr Delay (d2), s/veh	0.0	5.3	0.1	0.7	2.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	0.4	5.1	3.9	0.5
LnGrp Delay(d),s/veh	0.0	18.7	20.6	12.9	15.1	10.7
LnGrp LOS		B	C	B	B	B
Approach Vol, veh/h	555			490	380	
Approach Delay, s/veh	18.7			13.4	14.5	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		24.3		25.7				25.7
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		17.0		21.0				21.0
Max Q Clear Time (g_c+I1), s		9.1		16.1				17.9
Green Ext Time (p_c), s		0.8		2.7				1.9

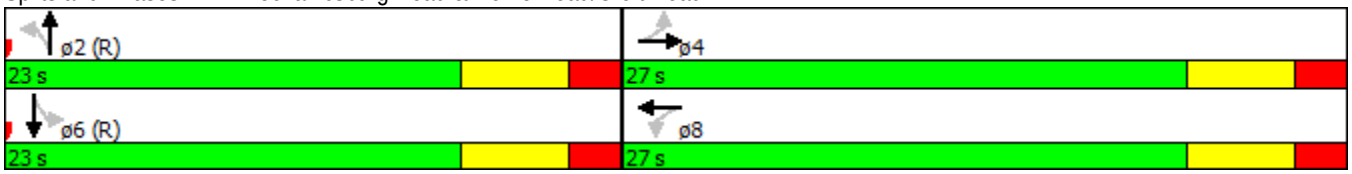
Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

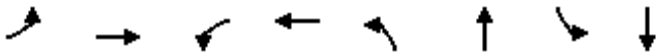
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	200	80	50	230	340	70	460	60	250	510	100
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.957			0.910			0.983			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1748	0	1805	1729	0	1770	3479	0	1736	3384	0
Flt Permitted	0.216			0.562			0.372			0.439		
Satd. Flow (perm)	395	1748	0	1068	1729	0	693	3479	0	802	3384	0
Satd. Flow (RTOR)		50			158			31			50	
Adj. Flow (vph)	87	217	87	54	250	370	76	500	65	272	554	109
Lane Group Flow (vph)	87	304	0	54	620	0	76	565	0	272	663	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	27.0	27.0		27.0	27.0		23.0	23.0		23.0	23.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	18.5	18.5		18.5	18.5		19.5	19.5		19.5	19.5	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.39	0.39		0.39	0.39	
v/c Ratio	0.60	0.45		0.14	0.84		0.28	0.41		0.87	0.49	
Control Delay	21.0	5.4		10.2	22.5		15.7	12.4		49.4	12.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.0	5.4		10.2	22.5		15.7	12.4		49.4	12.9	
LOS	C	A		B	C		B	B		D	B	
Approach Delay		8.9			21.5			12.8			23.6	
Approach LOS		A			C			B			C	

Intersection Summary

Cycle Length: 50
Actuated Cycle Length: 50
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 18.2 — Intersection LOS: B
Intersection Capacity Utilization 91.4% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 7: Mechanicsburg Road & Home Road/Croft Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	87	304	54	620	76	565	272	663
v/c Ratio	0.60	0.45	0.14	0.84	0.28	0.41	0.87	0.49
Control Delay	21.0	5.4	10.2	22.5	15.7	12.4	49.4	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	5.4	10.2	22.5	15.7	12.4	49.4	12.9
Queue Length 50th (ft)	16	24	9	107	16	61	76	73
Queue Length 95th (ft)	m20	27	26	#265	45	98	#202	116
Internal Link Dist (ft)		3133		843		1034		682
Turn Bay Length (ft)	100		150				475	
Base Capacity (vph)	165	763	448	817	270	1378	313	1352
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.40	0.12	0.76	0.28	0.41	0.87	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	200	80	50	230	340	70	460	60	250	510	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1900	1900	1863	1863	1900	1827	1827	1900
Adj Flow Rate, veh/h	87	217	87	54	250	370	76	500	65	272	554	109
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	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
Percent Heavy Veh, %	4	4	4	0	0	0	2	2	2	4	4	4
Cap, veh/h	217	521	209	469	291	431	285	1072	139	322	984	193
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	785	1241	498	1092	693	1026	769	3152	408	826	2895	568
Grp Volume(v), veh/h	87	0	304	54	0	620	76	280	285	272	331	332
Grp Sat Flow(s),veh/h/ln	785	0	1739	1092	0	1719	769	1770	1791	826	1736	1727
Q Serve(g_s), s	4.6	0.0	6.1	1.8	0.0	16.4	4.5	6.2	6.2	10.8	7.8	7.8
Cycle Q Clear(g_c), s	21.0	0.0	6.1	8.0	0.0	16.4	12.3	6.2	6.2	17.0	7.8	7.8
Prop In Lane	1.00		0.29	1.00		0.60	1.00		0.23	1.00		0.33
Lane Grp Cap(c), veh/h	217	0	730	469	0	722	285	602	609	322	590	587
V/C Ratio(X)	0.40	0.00	0.42	0.12	0.00	0.86	0.27	0.47	0.47	0.85	0.56	0.56
Avail Cap(c_a), veh/h	217	0	730	469	0	722	285	602	609	322	590	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.00	0.59	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	10.2	13.0	0.0	13.2	18.5	12.9	13.0	21.5	13.5	13.5
Incr Delay (d2), s/veh	0.7	0.0	0.2	0.1	0.0	10.2	2.3	2.6	2.6	23.0	3.8	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	2.9	0.6	0.0	9.6	1.1	3.5	3.5	5.8	4.3	4.3
LnGrp Delay(d),s/veh	23.8	0.0	10.4	13.1	0.0	23.3	20.8	15.5	15.5	44.5	17.3	17.4
LnGrp LOS	C		B	B		C	C	B	B	D	B	B
Approach Vol, veh/h		391			674			641			935	
Approach Delay, s/veh		13.4			22.5			16.1			25.2	
Approach LOS		B			C			B			C	

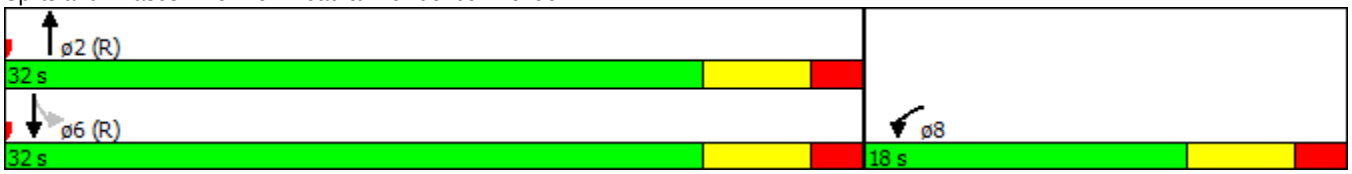
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.0		27.0		23.0		27.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		17.0		21.0		17.0		21.0
Max Q Clear Time (g_c+I1), s		14.3		23.0		19.0		18.4
Green Ext Time (p_c), s		2.1		0.0		0.0		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	110	520	60	110	460
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.917		0.986			
Flt Protected	0.981				0.950	
Satd. Flow (prot)	1692	0	1855	0	1787	1881
Flt Permitted	0.981				0.341	
Satd. Flow (perm)	1692	0	1855	0	641	1881
Satd. Flow (RTOR)	120		17			
Adj. Flow (vph)	76	120	565	65	120	500
Lane Group Flow (vph)	196	0	630	0	120	500
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Total Split (s)	18.0		32.0		32.0	32.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Act Effct Green (s)	12.0		30.8		30.8	30.8
Actuated g/C Ratio	0.24		0.62		0.62	0.62
v/c Ratio	0.39		0.55		0.30	0.43
Control Delay	9.9		8.4		5.7	4.7
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	9.9		8.4		5.7	4.7
LOS	A		A		A	A
Approach Delay	9.9		8.4			4.9
Approach LOS	A		A			A

Intersection Summary	
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 44 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Derr Road & Providence Avenue



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	630	120	500
v/c Ratio	0.39	0.55	0.30	0.43
Control Delay	9.9	8.4	5.7	4.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.9	8.4	5.7	4.7
Queue Length 50th (ft)	18	173	11	58
Queue Length 95th (ft)	60	284	28	95
Internal Link Dist (ft)	566	3537		893
Turn Bay Length (ft)			50	
Base Capacity (vph)	497	1149	395	1159
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.55	0.30	0.43

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	110	520	60	110	460
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1900	1881	1900	1881	1881
Adj Flow Rate, veh/h	76	120	565	65	120	500
Adj No. of Lanes	0	0	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	1	1	1
Cap, veh/h	145	228	887	102	380	1007
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	644	1017	1657	191	801	1881
Grp Volume(v), veh/h	197	0	0	630	120	500
Grp Sat Flow(s),veh/h/ln	1670	0	0	1848	801	1881
Q Serve(g_s), s	5.2	0.0	0.0	12.0	6.2	8.4
Cycle Q Clear(g_c), s	5.2	0.0	0.0	12.0	18.2	8.4
Prop In Lane	0.39	0.61		0.10	1.00	
Lane Grp Cap(c), veh/h	375	0	0	989	380	1007
V/C Ratio(X)	0.53	0.00	0.00	0.64	0.32	0.50
Avail Cap(c_a), veh/h	401	0	0	989	380	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.69	0.95	0.95
Uniform Delay (d), s/veh	17.0	0.0	0.0	8.2	14.6	7.3
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.2	2.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	6.5	1.6	4.8
LnGrp Delay(d),s/veh	18.2	0.0	0.0	10.3	16.7	9.0
LnGrp LOS	B			B	B	A
Approach Vol, veh/h	197		630			620
Approach Delay, s/veh	18.2		10.3			10.5
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		32.8				32.8		17.2
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		26.0				26.0		12.0
Max Q Clear Time (g_c+I1), s		14.0				20.2		7.2
Green Ext Time (p_c), s		6.2				3.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

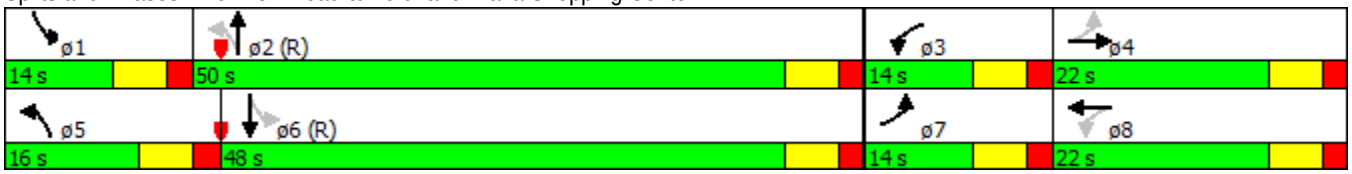
Notes

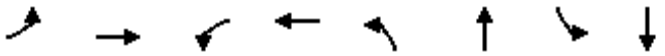
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	10	80	70	10	20	120	280	80	20	300	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.867			0.900			0.967			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1631	0	1687	1598	0	1752	1784	0	1770	1853	0
Flt Permitted	0.736			0.604			0.445			0.528		
Satd. Flow (perm)	1385	1631	0	1073	1598	0	821	1784	0	984	1853	0
Satd. Flow (RTOR)		87			22			18			2	
Adj. Flow (vph)	54	11	87	76	11	22	130	304	87	22	326	11
Lane Group Flow (vph)	54	98	0	76	33	0	130	391	0	22	337	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	14.0	22.0		14.0	22.0		16.0	50.0		14.0	48.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	16.9	12.0		18.4	14.8		67.5	64.6		60.1	53.9	
Actuated g/C Ratio	0.17	0.12		0.18	0.15		0.68	0.65		0.60	0.54	
v/c Ratio	0.21	0.36		0.31	0.13		0.21	0.34		0.03	0.34	
Control Delay	30.6	15.2		33.0	22.5		6.2	9.5		6.8	16.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	30.6	15.2		33.0	22.5		6.2	9.5		6.8	16.2	
LOS	C	B		C	C		A	A		A	B	
Approach Delay		20.7			29.9			8.7			15.6	
Approach LOS		C			C			A			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 86 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: Derr Road & Northland Plaza Shopping Center





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	54	98	76	33	130	391	22	337
v/c Ratio	0.21	0.36	0.31	0.13	0.21	0.34	0.03	0.34
Control Delay	30.6	15.2	33.0	22.5	6.2	9.5	6.8	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	15.2	33.0	22.5	6.2	9.5	6.8	16.2
Queue Length 50th (ft)	26	6	38	6	13	36	2	131
Queue Length 95th (ft)	58	54	76	35	42	237	m8	269
Internal Link Dist (ft)		105		118		893		632
Turn Bay Length (ft)					100		100	
Base Capacity (vph)	276	334	251	305	649	1158	672	999
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.29	0.30	0.11	0.20	0.34	0.03	0.34

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	10	80	70	10	20	120	280	80	20	300	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1776	1776	1900	1845	1845	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	11	87	76	11	22	130	304	87	22	326	11
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	1	1	1	7	7	7	3	3	3	2	2	2
Cap, veh/h	303	22	172	239	66	133	612	774	221	552	949	32
Arrive On Green	0.05	0.12	0.12	0.05	0.13	0.13	0.06	0.56	0.56	0.03	0.53	0.53
Sat Flow, veh/h	1792	183	1444	1691	530	1059	1757	1380	395	1774	1792	60
Grp Volume(v), veh/h	54	0	98	76	0	33	130	0	391	22	0	337
Grp Sat Flow(s),veh/h/ln	1792	0	1626	1691	0	1589	1757	0	1775	1774	0	1852
Q Serve(g_s), s	2.6	0.0	5.6	3.9	0.0	1.9	3.3	0.0	12.4	0.6	0.0	10.5
Cycle Q Clear(g_c), s	2.6	0.0	5.6	3.9	0.0	1.9	3.3	0.0	12.4	0.6	0.0	10.5
Prop In Lane	1.00		0.89	1.00		0.67	1.00		0.22	1.00		0.03
Lane Grp Cap(c), veh/h	303	0	194	239	0	199	612	0	995	552	0	981
V/C Ratio(X)	0.18	0.00	0.51	0.32	0.00	0.17	0.21	0.00	0.39	0.04	0.00	0.34
Avail Cap(c_a), veh/h	363	0	260	285	0	254	685	0	995	645	0	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.82	0.00	0.82	0.90	0.00	0.90
Uniform Delay (d), s/veh	35.9	0.0	41.3	36.1	0.0	39.1	9.8	0.0	12.4	10.4	0.0	13.5
Incr Delay (d2), s/veh	0.3	0.0	2.0	0.8	0.0	0.4	0.1	0.0	1.0	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.6	1.8	0.0	0.8	1.6	0.0	6.3	0.3	0.0	5.6
LnGrp Delay(d),s/veh	36.2	0.0	43.3	36.8	0.0	39.4	9.9	0.0	13.3	10.4	0.0	14.4
LnGrp LOS	D		D	D		D	A		B	B		B
Approach Vol, veh/h		152			109			521			359	
Approach Delay, s/veh		40.8			37.6			12.5			14.1	
Approach LOS		D			D			B			B	

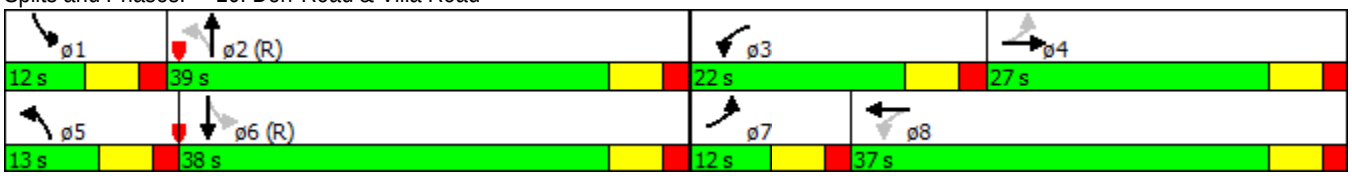
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	62.1	11.3	17.9	11.8	59.0	10.7	18.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	44.0	8.0	16.0	10.0	42.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.6	14.4	5.9	7.6	5.3	12.5	4.6	3.9
Green Ext Time (p_c), s	0.0	4.8	0.0	0.4	0.1	4.8	0.0	0.5

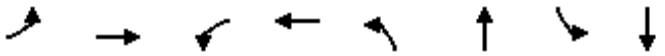
Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	310	130	170	270	40	120	180	120	60	160	50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.956			0.981			0.940			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3417	0	1787	1845	0	1787	1768	0	1805	1832	0
Flt Permitted	0.470			0.223			0.528			0.485		
Satd. Flow (perm)	884	3417	0	420	1845	0	993	1768	0	922	1832	0
Satd. Flow (RTOR)		58			8			36			16	
Adj. Flow (vph)	87	337	141	185	293	43	130	196	130	65	174	54
Lane Group Flow (vph)	87	478	0	185	336	0	130	326	0	65	228	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	12.0	27.0		22.0	37.0		13.0	39.0		12.0	38.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Act Effct Green (s)	23.5	17.5		36.1	26.6		48.1	41.4		44.6	37.8	
Actuated g/C Ratio	0.24	0.18		0.36	0.27		0.48	0.41		0.45	0.38	
v/c Ratio	0.33	0.74		0.57	0.68		0.24	0.43		0.14	0.32	
Control Delay	24.3	41.2		28.7	39.4		11.4	18.7		15.1	23.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.3	41.2		28.7	39.4		11.4	18.7		15.1	23.7	
LOS	C	D		C	D		B	B		B	C	
Approach Delay		38.6			35.6			16.6			21.8	
Approach LOS		D			D			B			C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 8 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 29.6	Intersection LOS: C
Intersection Capacity Utilization 63.9%	ICU Level of Service B
Analysis Period (min) 15	

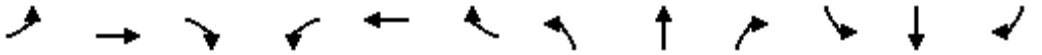
Splits and Phases: 10: Derr Road & Villa Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	87	478	185	336	130	326	65	228
v/c Ratio	0.33	0.74	0.57	0.68	0.24	0.43	0.14	0.32
Control Delay	24.3	41.2	28.7	39.4	11.4	18.7	15.1	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	41.2	28.7	39.4	11.4	18.7	15.1	23.7
Queue Length 50th (ft)	36	134	82	193	34	137	20	97
Queue Length 95th (ft)	63	183	121	267	43	239	48	170
Internal Link Dist (ft)		616		681		632		459
Turn Bay Length (ft)	100		225		75		50	
Base Capacity (vph)	262	763	370	577	541	752	471	702
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.63	0.50	0.58	0.24	0.43	0.14	0.32

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	310	130	170	270	40	120	180	120	60	160	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	337	141	185	293	43	130	196	130	65	174	54
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	0	0	0
Cap, veh/h	231	449	185	303	369	54	564	449	298	478	578	179
Arrive On Green	0.05	0.18	0.18	0.10	0.23	0.23	0.06	0.43	0.43	0.05	0.42	0.42
Sat Flow, veh/h	1792	2473	1016	1792	1604	235	1792	1057	701	1810	1392	432
Grp Volume(v), veh/h	87	242	236	185	0	336	130	0	326	65	0	228
Grp Sat Flow(s),veh/h/ln	1792	1787	1702	1792	0	1840	1792	0	1758	1810	0	1824
Q Serve(g_s), s	3.9	12.8	13.2	8.1	0.0	17.2	4.1	0.0	13.1	2.0	0.0	8.4
Cycle Q Clear(g_c), s	3.9	12.8	13.2	8.1	0.0	17.2	4.1	0.0	13.1	2.0	0.0	8.4
Prop In Lane	1.00		0.60	1.00		0.13	1.00		0.40	1.00		0.24
Lane Grp Cap(c), veh/h	231	325	309	303	0	424	564	0	747	478	0	758
V/C Ratio(X)	0.38	0.74	0.76	0.61	0.00	0.79	0.23	0.00	0.44	0.14	0.00	0.30
Avail Cap(c_a), veh/h	241	375	357	405	0	570	582	0	747	495	0	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.5	38.7	38.9	29.1	0.0	36.2	15.2	0.0	20.3	15.6	0.0	19.5
Incr Delay (d2), s/veh	1.0	6.8	8.2	2.0	0.0	5.5	0.2	0.0	1.8	0.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.9	6.9	4.1	0.0	9.3	2.1	0.0	6.7	1.0	0.0	4.4
LnGrp Delay(d),s/veh	32.5	45.5	47.0	31.1	0.0	41.7	15.4	0.0	22.1	15.7	0.0	20.5
LnGrp LOS	C	D	D	C		D	B		C	B		C
Approach Vol, veh/h		565			521			456			293	
Approach Delay, s/veh		44.1			37.9			20.2			19.5	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	48.5	16.3	24.2	12.0	47.5	11.5	29.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	16.0	21.0	7.0	32.0	6.0	31.0
Max Q Clear Time (g_c+I1), s	4.0	15.1	10.1	15.2	6.1	10.4	5.9	19.2
Green Ext Time (p_c), s	0.0	3.1	0.2	2.4	0.0	3.3	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C