



















Timings

4160: MAGNOLIA & STANFORD

12/05/2019

											
Lane Group	EBL	EBT	WBL	WBT	NBU	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	5	4	22	1	2	8	635	19	3	19	1328
Future Volume (vph)	5	4	22	1	2	8	635	19	3	19	1328
Turn Type	Perm	NA	Perm	NA	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA
Protected Phases		6		2	3	3	8		7	7	4
Permitted Phases	6		2		8	8		8	4	4	
Detector Phase	6	6	2	2	3	3	8	8	7	7	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.2	9.2	30.2	30.2	10.0	10.0	21.0	21.0	10.0	10.0	19.0
Total Split (s)	31.0	31.0	31.0	31.0	20.0	20.0	79.0	79.0	20.0	20.0	79.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	15.4%	15.4%	60.8%	60.8%	15.4%	15.4%	60.8%
Yellow Time (s)	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0		-1.0		-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)		3.2		3.2		4.0	4.0	4.0		4.0	4.0
Lead/Lag					Lead	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	None	C-Max
Act Effect Green (s)		9.0		9.0		113.2	110.0	110.0		114.2	112.2
Actuated g/C Ratio		0.07		0.07		0.87	0.85	0.85		0.88	0.86
v/c Ratio		0.09		0.44		0.03	0.24	0.02		0.04	0.50
Control Delay		49.5		38.9		0.9	1.4	0.1		0.3	1.1
Queue Delay		0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		49.5		38.9		0.9	1.4	0.1		0.3	1.1
LOS		D		D		A	A	A		A	A
Approach Delay		49.5		38.9			1.3				1.1
Approach LOS		D		D			A				A

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 61 (47%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 2.4

Intersection LOS: A









Intersection Capacity Utilization 54.8%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite

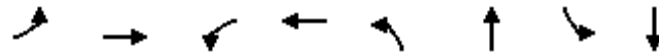
Splits and Phases: 4160: MAGNOLIA & STANFORD

			
Ø2	Ø3	Ø4 (R)	
31 s	20 s	79 s	
			
Ø6	Ø7	Ø8 (R)	
31 s	20 s	79 s	

Timings

4178: MAGNOLIA & MAYS

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔	↔	↑↑↑	↔	↑↑↑
Traffic Volume (vph)	87	3	55	5	15	1203	12	1658
Future Volume (vph)	87	3	55	5	15	1203	12	1658
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		2		2	3	8	7	4
Permitted Phases	2		2					
Detector Phase	2	2	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.2	29.2	29.2	29.2	10.0	17.0	10.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	15.0	25.0	15.0	25.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	21.4%	35.7%	21.4%	35.7%
Yellow Time (s)	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		3.2		3.2	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		12.8		12.8	7.4	45.0	7.6	47.5
Actuated g/C Ratio		0.18		0.18	0.11	0.64	0.11	0.68
v/c Ratio		0.64		0.45	0.11	0.44	0.13	0.57
Control Delay		25.1		17.4	35.2	7.6	33.9	6.7
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		25.1		17.4	35.2	7.6	33.9	6.7
LOS		C		B	D	A	C	A
Approach Delay		25.1		17.4		8.0		7.1
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 41 (59%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 8.8

Intersection LOS: A

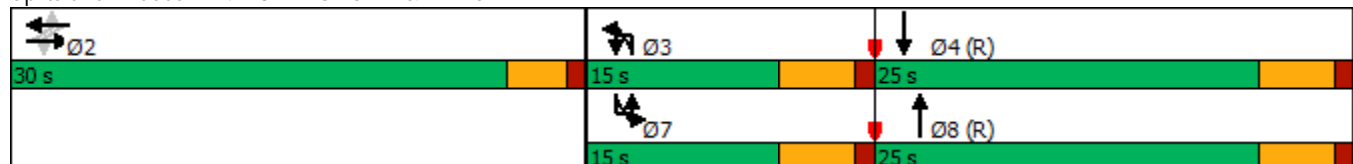
Intersection Capacity Utilization 53.9%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite

























Splits and Phases: 4178: MAGNOLIA & MAYS



Timings

4187: MAGNOLIA & ORANGEWOOD

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	299	105	48	269	56	85	538	37	78	1008	63
Future Volume (vph)	68	299	105	48	269	56	85	538	37	78	1008	63
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6		6	2		2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	9.0	10.0	10.0	9.0	10.0	10.0
Minimum Split (s)	15.0	33.0	33.0	15.0	32.0	32.0	14.0	27.0	27.0	14.3	27.3	27.3
Total Split (s)	20.0	33.0	33.0	20.0	33.0	33.0	20.0	57.0	57.0	20.0	57.0	57.0
Total Split (%)	15.4%	25.4%	25.4%	15.4%	25.4%	25.4%	15.4%	43.8%	43.8%	15.4%	43.8%	43.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.3	4.3	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	44.1	34.8	34.8	42.4	31.3	31.3	71.8	60.6	60.6	69.9	59.6	59.6
Actuated g/C Ratio	0.34	0.27	0.27	0.33	0.24	0.24	0.55	0.47	0.47	0.54	0.46	0.46
v/c Ratio	0.36	0.82	0.28	0.26	0.77	0.17	0.51	0.43	0.07	0.25	0.83	0.12
Control Delay	31.6	60.4	7.6	29.6	58.2	3.2	18.8	19.6	3.9	6.7	24.8	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	60.4	7.6	29.6	58.2	3.2	18.8	19.6	3.9	6.7	24.8	1.1
LOS	C	E	A	C	E	A	B	B	A	A	C	A
Approach Delay		44.5			46.2			18.6			22.2	
Approach LOS		D			D			B			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 62 (48%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 28.7









Intersection LOS: C

Intersection Capacity Utilization 75.2%

ICU Level of Service D

Analysis Period (min) 15

























Splits and Phases: 4187: MAGNOLIA & ORANGEWOOD

			
Ø1	Ø2	Ø3	Ø4 (R)
20 s	33 s	20 s	57 s
			
Ø5	Ø6	Ø7	Ø8 (R)
20 s	33 s	20 s	57 s

Timings

4198: MAGNOLIA & CHAPMAN

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	767	109	176	607	80	57	503	150	114	986	75
Future Volume (vph)	55	767	109	176	607	80	57	503	150	114	986	75
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	36.3	36.3	10.3	34.3	34.3	10.3	35.3	35.3	10.0	33.0	33.0
Total Split (s)	21.0	40.0	40.0	28.0	47.0	47.0	19.0	40.0	40.0	22.0	43.0	43.0
Total Split (%)	16.2%	30.8%	30.8%	21.5%	36.2%	36.2%	14.6%	30.8%	30.8%	16.9%	33.1%	33.1%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Min	Min	None	Min	Min
Act Effect Green (s)	10.3	35.7	35.7	23.7	51.2	51.2	11.8	38.9	38.9	14.8	41.9	41.9
Actuated g/C Ratio	0.08	0.27	0.27	0.18	0.39	0.39	0.09	0.30	0.30	0.11	0.32	0.32
v/c Ratio	0.48	0.98	0.30	0.69	0.51	0.15	0.59	0.58	0.31	0.69	1.05	0.14
Control Delay	68.1	71.4	11.3	62.8	32.7	4.4	63.3	56.4	25.6	80.7	59.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	71.4	11.3	62.8	32.7	4.4	63.3	56.4	25.6	80.7	59.2	1.1
LOS	E	E	B	E	C	A	E	E	C	F	E	A
Approach Delay		64.2			36.2			50.8			57.6	
Approach LOS		E			D			D			E	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 33 (25%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 52.9

Intersection LOS: D

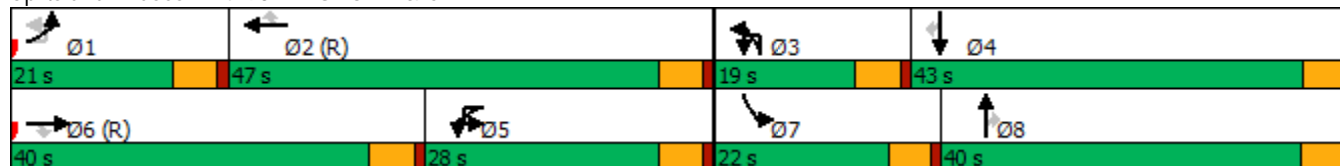
Intersection Capacity Utilization 81.1%

ICU Level of Service D

Analysis Period (min) 15

Description: Econolite NRTOR when children present (NB,SB,EB,WB)
























Splits and Phases: 4198: MAGNOLIA & CHAPMAN



Timings

4214: MAGNOLIA & LAMPSON

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	85	222	156	65	195	27	53	570	37	2	52	1144
Future Volume (vph)	85	222	156	65	195	27	53	570	37	2	52	1144
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	pm+pt	NA
Protected Phases	1	6		5	2		3	8		7	7	4
Permitted Phases	6		6	2		2	8		8	4	4	
Detector Phase	1	6	6	5	2	2	3	8	8	7	7	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	30.6	30.6	9.6	32.6	32.6	10.0	28.0	28.0	10.3	10.3	28.3
Total Split (s)	20.0	33.0	33.0	20.0	33.0	33.0	20.0	57.0	57.0	20.0	20.0	57.0
Total Split (%)	15.4%	25.4%	25.4%	15.4%	25.4%	25.4%	15.4%	43.8%	43.8%	15.4%	15.4%	43.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.0	4.0	4.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.0	4.0	4.0		4.3	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	None	C-Max
Act Effect Green (s)	35.8	25.6	25.6	32.5	22.0	22.0	81.5	74.4	74.4		81.4	74.3
Actuated g/C Ratio	0.28	0.20	0.20	0.25	0.17	0.17	0.63	0.57	0.57		0.63	0.57
v/c Ratio	0.39	0.63	0.38	0.31	0.72	0.09	0.25	0.33	0.05		0.13	0.66
Control Delay	37.5	55.6	8.3	35.7	64.2	0.6	15.2	25.1	4.5		2.1	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	37.5	55.6	8.3	35.7	64.2	0.6	15.2	25.1	4.5		2.1	7.5
LOS	D	E	A	D	E	A	B	C	A		A	A
Approach Delay		36.4			51.8			23.1				6.8
Approach LOS		D			D			C				A

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 22 (17%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 20.7

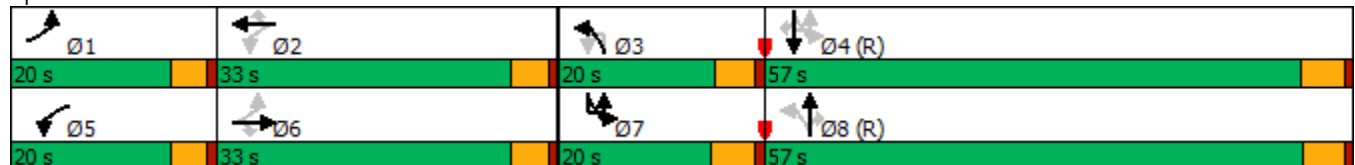
Intersection LOS: C

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4214: MAGNOLIA & LAMPSON



Timings

4214: MAGNOLIA & LAMPSON

12/05/2019



Lane Group	SBR
Lane Configurations	↗
Traffic Volume (vph)	89
Future Volume (vph)	89
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	28.3
Total Split (s)	57.0
Total Split (%)	43.8%
Yellow Time (s)	4.3
All-Red Time (s)	1.0
Lost Time Adjust (s)	-1.0
Total Lost Time (s)	4.3
Lead/Lag	Lag
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effect Green (s)	74.3
Actuated g/C Ratio	0.57
v/c Ratio	0.13
Control Delay	0.4
Queue Delay	0.0
Total Delay	0.4
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Timings

4234: MAGNOLIA & GARDEN GROVE

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	175	540	99	496	77	440	140	965	294
Future Volume (vph)	175	540	99	496	77	440	140	965	294
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	custom
Protected Phases	1	6	5	2	3	8	7	4	
Permitted Phases									1
Detector Phase	1	6	5	2	3	8	7	4	1
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	10.0	33.4	10.0	33.4	10.0	34.4	10.0	34.4	10.0
Total Split (s)	20.0	38.0	20.0	38.0	20.0	52.0	20.0	52.0	20.0
Total Split (%)	15.4%	29.2%	15.4%	29.2%	15.4%	40.0%	15.4%	40.0%	15.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	Max	None	Max	None	C-Max	None	C-Max	None
Act Effect Green (s)	16.0	35.7	14.3	34.0	10.0	48.5	15.5	54.0	16.0
Actuated g/C Ratio	0.12	0.27	0.11	0.26	0.08	0.37	0.12	0.42	0.12
v/c Ratio	1.03	0.50	0.67	0.49	0.36	0.43	0.83	0.79	1.02
Control Delay	126.3	41.0	73.9	42.3	60.6	31.7	100.3	17.2	90.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.3	41.0	73.9	42.3	60.6	31.7	100.3	17.2	90.3
LOS	F	D	E	D	E	C	F	B	F
Approach Delay		61.2		47.5		36.0		41.0	
Approach LOS		E		D		D		D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 72 (55%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 46.1

Intersection LOS: D

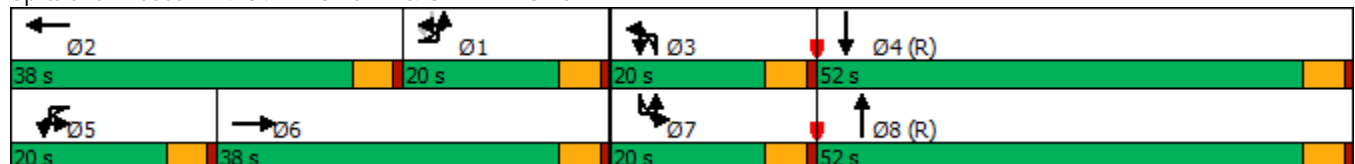
Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

Description: Econolite





















Splits and Phases: 4234: MAGNOLIA & GARDEN GROVE



Timings

4244: MAGNOLIA & TRASK

12/05/2019

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	37	179	450	396	250	474	132	25	1091	107
Future Volume (vph)	37	179	450	396	250	474	132	25	1091	107
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	5	2	3	8		7	4	
Permitted Phases							8			4
Detector Phase	1	6	5	2	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	4.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.8	35.8	9.8	36.8	10.5	29.5	29.5	10.5	30.5	30.5
Total Split (s)	20.0	37.0	20.0	37.0	28.0	63.0	63.0	20.0	55.0	55.0
Total Split (%)	14.3%	26.4%	14.3%	26.4%	20.0%	45.0%	45.0%	14.3%	39.3%	39.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	10.0	17.4	30.0	39.7	23.5	66.5	66.5	12.1	50.5	50.5
Actuated g/C Ratio	0.07	0.12	0.21	0.28	0.17	0.48	0.48	0.09	0.36	0.36
v/c Ratio	0.37	0.76	0.74	0.68	0.99	0.32	0.17	0.20	0.96	0.19
Control Delay	69.2	40.7	59.2	46.4	86.7	21.6	8.1	60.7	61.2	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	40.7	59.2	46.4	86.7	21.6	8.1	60.7	61.2	2.5
LOS	E	D	E	D	F	C	A	E	E	A
Approach Delay		43.4		52.0		38.6			56.1	
Approach LOS		D		D		D			E	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 52 (37%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 49.1

Intersection LOS: D

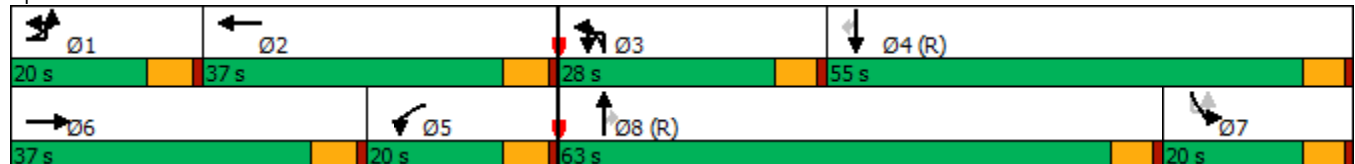
Intersection Capacity Utilization 86.1%

ICU Level of Service E

Analysis Period (min) 15

Description: Econolite





















Splits and Phases: 4244: MAGNOLIA & TRASK



Timings

4160: MAGNOLIA & STANFORD

12/05/2019

												
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	SBR	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	13	0	7	2	796	35	1	12	833	1
Future Volume (vph)	3	1	13	0	7	2	796	35	1	12	833	1
Turn Type	Perm	NA	Perm	NA	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases		6		2	3	3	8		7	7	4	
Permitted Phases	6		2		8	8		8	4	4		4
Detector Phase	6	6	2	2	3	3	8	8	7	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.2	9.2	30.2	30.2	10.0	10.0	21.0	21.0	10.0	10.0	19.0	19.0
Total Split (s)	33.0	33.0	33.0	33.0	20.0	20.0	77.0	77.0	20.0	20.0	77.0	77.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	15.4%	15.4%	59.2%	59.2%	15.4%	15.4%	59.2%	59.2%
Yellow Time (s)	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0		-1.0		-1.0	-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)		3.2		3.2		4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag					Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	None	C-Max	C-Max
Act Effect Green (s)		6.9		6.9		118.1	117.1	117.1		119.0	119.2	119.2
Actuated g/C Ratio		0.05		0.05		0.91	0.90	0.90		0.92	0.92	0.92
v/c Ratio		0.05		0.18		0.02	0.28	0.03		0.02	0.29	0.00
Control Delay		54.4		3.0		0.6	1.1	0.1		0.5	0.8	0.0
Queue Delay		0.0		0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		54.4		3.0		0.6	1.1	0.1		0.5	0.8	0.0
LOS		D		A		A	A	A		A	A	A
Approach Delay		54.4		3.0			1.1				0.8	
Approach LOS		D		A			A				A	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 21 (16%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 1.1

Intersection LOS: A

















Intersection Capacity Utilization 35.0%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite

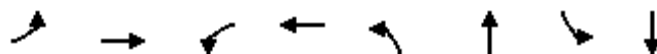
Splits and Phases: 4160: MAGNOLIA & STANFORD

							
Ø2	Ø3	Ø4 (R)	Ø5	Ø6	Ø7	Ø8 (R)	Ø9
33 s	20 s	77 s	33 s	20 s	77 s	33 s	20 s
							
Ø2	Ø3	Ø4 (R)	Ø5	Ø6	Ø7	Ø8 (R)	Ø9
33 s	20 s	77 s	33 s	20 s	77 s	33 s	20 s

Timings

4178: MAGNOLIA & MAYS

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔	↔	↑↑↑	↔	↑↑↑
Traffic Volume (vph)	37	5	25	4	18	1395	23	1267
Future Volume (vph)	37	5	25	4	18	1395	23	1267
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		2		2	3	8	7	4
Permitted Phases	2		2					
Detector Phase	2	2	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.2	29.2	29.2	29.2	10.0	17.0	10.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	15.0	20.0	15.0	20.0
Total Split (%)	46.2%	46.2%	46.2%	46.2%	23.1%	30.8%	23.1%	30.8%
Yellow Time (s)	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		3.2		3.2	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		8.6		8.6	7.4	45.9	8.6	49.3
Actuated g/C Ratio		0.13		0.13	0.11	0.71	0.13	0.76
v/c Ratio		0.33		0.28	0.11	0.44	0.15	0.37
Control Delay		20.3		17.0	30.3	3.6	21.5	2.6
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		20.3		17.0	30.3	3.6	21.5	2.6
LOS		C		B	C	A	C	A
Approach Delay		20.3		17.0		3.9		3.0
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 38 (58%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 4.2

Intersection LOS: A

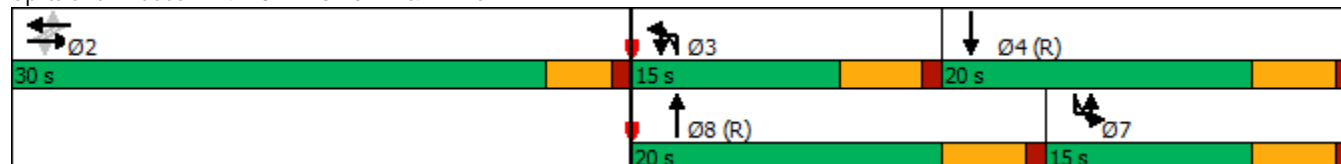
Intersection Capacity Utilization 40.7%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite
























Splits and Phases: 4178: MAGNOLIA & MAYS



Timings

4187: MAGNOLIA & ORANGEWOOD

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	37	114	46	44	110	65	39	598	44	1	39	569
Future Volume (vph)	37	114	46	44	110	65	39	598	44	1	39	569
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	pm+pt	NA
Protected Phases	1	6		5	2		3	8			7	4
Permitted Phases	6		6	2		2	8		8	4	4	
Detector Phase	1	6	6	5	2	2	3	8	8	4	7	4
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	9.0	10.0	10.0	10.0	9.0	10.0
Minimum Split (s)	15.0	33.0	33.0	15.0	32.0	32.0	14.0	26.0	26.0	27.3	14.3	27.3
Total Split (s)	20.0	38.0	38.0	20.0	38.0	38.0	20.0	52.0	52.0	52.0	20.0	52.0
Total Split (%)	15.4%	29.2%	29.2%	15.4%	29.2%	29.2%	15.4%	40.0%	40.0%	40.0%	15.4%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		4.3	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max
Act Effect Green (s)	25.0	16.2	16.2	25.0	16.2	16.2	90.4	83.4	83.4		90.3	82.3
Actuated g/C Ratio	0.19	0.12	0.12	0.19	0.12	0.12	0.70	0.64	0.64		0.69	0.63
v/c Ratio	0.16	0.55	0.17	0.19	0.49	0.25	0.07	0.29	0.05		0.07	0.28
Control Delay	38.4	62.4	1.3	39.0	59.7	4.3	4.6	19.2	5.1		4.6	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	38.4	62.4	1.3	39.0	59.7	4.3	4.6	19.2	5.1		4.6	6.6
LOS	D	E	A	D	E	A	A	B	A		A	A
Approach Delay		43.8			39.1			17.4				6.0
Approach LOS		D			D			B				A

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 38 (29%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 18.7









Intersection LOS: B

Intersection Capacity Utilization 58.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4187: MAGNOLIA & ORANGEWOOD

			
Ø1	Ø2	Ø3	Ø4 (R)
20 s	38 s	20 s	52 s
			
Ø5	Ø6	Ø7	Ø8 (R)
20 s	38 s	20 s	52 s

Timings

4187: MAGNOLIA & ORANGEWOOD

12/05/2019



























Lane Group	SBR
Lane Configurations	↑↑
Traffic Volume (vph)	58
Future Volume (vph)	58
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	27.3
Total Split (s)	52.0
Total Split (%)	40.0%
Yellow Time (s)	4.3
All-Red Time (s)	1.0
Lost Time Adjust (s)	-1.0
Total Lost Time (s)	4.3
Lead/Lag	Lag
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effect Green (s)	82.3
Actuated g/C Ratio	0.63
v/c Ratio	0.07
Control Delay	0.2
Queue Delay	0.0
Total Delay	0.2
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Timings

4198: MAGNOLIA & CHAPMAN

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	455	88	172	516	101	59	525	132	90	526	77
Future Volume (vph)	73	455	88	172	516	101	59	525	132	90	526	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	36.3	36.3	10.3	34.3	34.3	10.3	35.3	35.3	10.0	33.0	33.0
Total Split (s)	16.0	41.0	41.0	21.0	46.0	46.0	19.0	46.0	46.0	22.0	49.0	49.0
Total Split (%)	12.3%	31.5%	31.5%	16.2%	35.4%	35.4%	14.6%	35.4%	35.4%	16.9%	37.7%	37.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Min	Min	None	Min	Min
Act Effect Green (s)	11.7	50.1	50.1	19.7	58.1	58.1	12.1	30.6	30.6	12.7	31.2	31.2
Actuated g/C Ratio	0.09	0.39	0.39	0.15	0.45	0.45	0.09	0.24	0.24	0.10	0.24	0.24
v/c Ratio	0.54	0.37	0.16	0.73	0.35	0.15	0.61	0.70	0.30	0.57	0.68	0.17
Control Delay	70.1	32.2	1.2	69.8	25.9	1.8	69.6	63.2	15.9	53.4	33.5	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.1	32.2	1.2	69.8	25.9	1.8	69.6	63.2	15.9	53.4	33.5	3.7
LOS	E	C	A	E	C	A	E	E	B	D	C	A
Approach Delay		32.5			32.4			55.6			32.7	
Approach LOS		C			C			E			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 14.3 (11%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 38.6

Intersection LOS: D

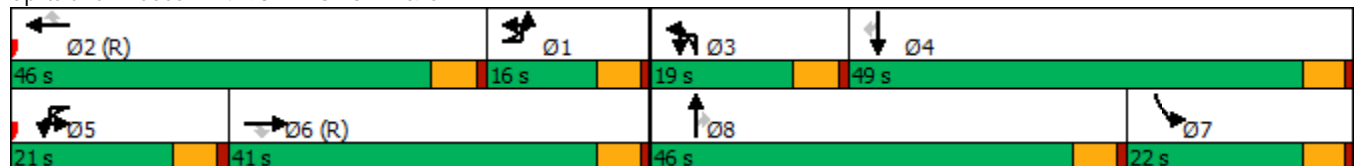
Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

Description: Econolite NRTOR when children present (NB,SB,EB,WB)























Splits and Phases: 4198: MAGNOLIA & CHAPMAN



Timings

4214: MAGNOLIA & LAMPSON

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	45	167	93	46	178	48	1	70	684	35	5	45
Future Volume (vph)	45	167	93	46	178	48	1	70	684	35	5	45
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	1	6		5	2		3	3	8		7	7
Permitted Phases	6		6	2		2	8	8		8	4	4
Detector Phase	1	6	6	5	2	2	3	3	8	8	7	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	30.6	30.6	9.6	32.6	32.6	10.0	10.0	28.0	28.0	10.3	10.3
Total Split (s)	20.0	34.0	34.0	20.0	34.0	34.0	20.0	20.0	56.0	56.0	20.0	20.0
Total Split (%)	15.4%	26.2%	26.2%	15.4%	26.2%	26.2%	15.4%	15.4%	43.1%	43.1%	15.4%	15.4%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.0	4.0	4.0	4.0	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0		-1.0
Total Lost Time (s)	3.6	3.6	3.6	3.6	3.6	3.6		4.0	4.0	4.0		4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	C-Max	C-Max	None	None
Act Effect Green (s)	28.0	20.0	20.0	28.0	20.0	20.0		88.6	81.4	81.4		87.4
Actuated g/C Ratio	0.22	0.15	0.15	0.22	0.15	0.15		0.68	0.63	0.63		0.67
v/c Ratio	0.24	0.58	0.30	0.23	0.69	0.17		0.17	0.35	0.04		0.12
Control Delay	37.4	58.1	10.0	37.4	64.5	1.2		7.5	9.6	0.9		2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	37.4	58.1	10.0	37.4	64.5	1.2		7.5	9.6	0.9		2.2
LOS	D	E	A	D	E	A		A	A	A		A
Approach Delay		40.4			48.7				9.0			
Approach LOS		D			D				A			

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 38 (29%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 17.3

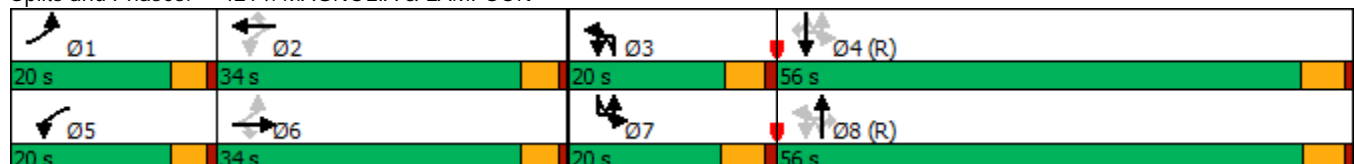
Intersection LOS: B

Intersection Capacity Utilization 51.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4214: MAGNOLIA & LAMPSON



Timings

4214: MAGNOLIA & LAMPSON

12/05/2019



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	702	61
Future Volume (vph)	702	61
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	10.0	10.0
Minimum Split (s)	28.3	28.3
Total Split (s)	56.0	56.0
Total Split (%)	43.1%	43.1%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0
Total Lost Time (s)	4.3	4.3
Lead/Lag	Lag	Lag
Lead-Lag Optimize?		
Recall Mode	C-Max	C-Max
Act Effct Green (s)	80.8	80.8
Actuated g/C Ratio	0.62	0.62
v/c Ratio	0.36	0.08
Control Delay	7.0	1.2
Queue Delay	0.0	0.0
Total Delay	7.0	1.2
LOS	A	A
Approach Delay	6.3	
Approach LOS	A	
Intersection Summary		

Timings

4234: MAGNOLIA & GARDEN GROVE

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	150	549	179	662	180	584	121	618	166
Future Volume (vph)	150	549	179	662	180	584	121	618	166
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	1	6	5	2	3	8	7	4	
Permitted Phases									4
Detector Phase	1	6	5	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	33.0	10.0	32.0	10.0	33.0	10.0	33.0	33.0
Total Split (s)	25.0	41.0	25.0	41.0	20.0	44.0	20.0	44.0	44.0
Total Split (%)	19.2%	31.5%	19.2%	31.5%	15.4%	33.8%	15.4%	33.8%	33.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	Max	None	Max	None	C-Max	None	C-Max	C-Max
Act Effect Green (s)	21.0	37.7	20.3	37.0	14.1	41.4	14.6	41.9	41.9
Actuated g/C Ratio	0.16	0.29	0.16	0.28	0.11	0.32	0.11	0.32	0.32
v/c Ratio	0.66	0.48	0.87	0.58	0.59	0.61	0.70	0.59	0.32
Control Delay	64.2	37.7	84.5	41.8	37.4	48.8	76.6	59.0	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	37.7	84.5	41.8	37.4	48.8	76.6	59.0	27.4
LOS	E	D	F	D	D	D	E	E	C
Approach Delay		43.2		51.3		46.0		55.7	
Approach LOS		D		D		D		E	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 23 (18%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 49.3

Intersection LOS: D

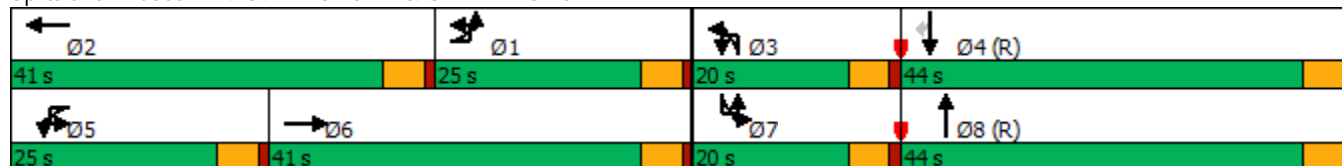
Intersection Capacity Utilization 79.0%

ICU Level of Service D

Analysis Period (min) 15

Description: Econolite

Splits and Phases: 4234: MAGNOLIA & GARDEN GROVE



Timings

4244: MAGNOLIA & TRASK

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	45	183	449	416	278	738	193	65	764	137
Future Volume (vph)	45	183	449	416	278	738	193	65	764	137
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	5	2	3	8		7	4	
Permitted Phases							8			4
Detector Phase	1	6	5	2	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.8	35.8	10.8	36.8	10.5	29.5	29.5	10.5	30.5	30.5
Total Split (s)	20.0	40.0	20.0	40.0	25.0	50.0	50.0	20.0	45.0	45.0
Total Split (%)	15.4%	30.8%	15.4%	30.8%	19.2%	38.5%	38.5%	15.4%	34.6%	34.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	10.1	14.8	31.8	38.7	24.3	53.3	53.3	13.9	40.5	40.5
Actuated g/C Ratio	0.08	0.11	0.24	0.30	0.19	0.41	0.41	0.11	0.31	0.31
v/c Ratio	0.37	0.64	0.59	0.67	0.89	0.52	0.25	0.39	0.71	0.25
Control Delay	63.6	44.2	47.4	38.7	65.9	27.9	6.9	46.4	32.0	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	44.2	47.4	38.7	65.9	27.9	6.9	46.4	32.0	1.8
LOS	E	D	D	D	E	C	A	D	C	A
Approach Delay		47.1		42.2		33.4			28.7	
Approach LOS		D		D		C			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 52 (40%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 36.1

Intersection LOS: D

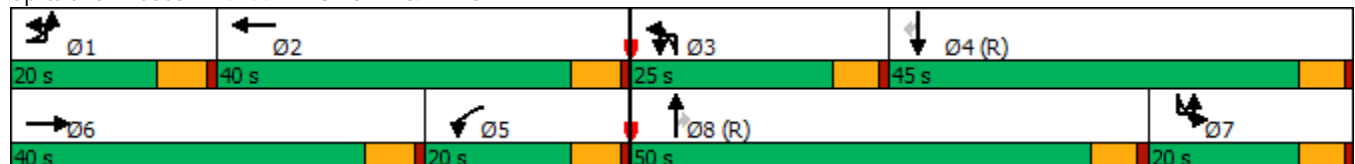
Intersection Capacity Utilization 76.5%

ICU Level of Service D

Analysis Period (min) 15

Description: Econolite





















Splits and Phases: 4244: MAGNOLIA & TRASK



Timings

4160: MAGNOLIA & STANFORD

12/05/2019

												
Lane Group	EBL	EBT	WBL	WBT	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	24	4	1	12	1302	34	2	22	998	1
Future Volume (vph)	10	5	24	4	1	12	1302	34	2	22	998	1
Turn Type	Perm	NA	Perm	NA	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases		6		2	3	3	8		7	7	4	
Permitted Phases	6		2		8	8		8	4	4		4
Detector Phase	6	6	2	2	3	3	8	8	7	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	10.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.2	9.2	30.2	30.2	10.0	10.0	21.0	21.0	10.0	10.0	19.0	19.0
Total Split (s)	31.0	31.0	31.0	31.0	20.0	20.0	79.0	79.0	20.0	20.0	79.0	79.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	15.4%	15.4%	60.8%	60.8%	15.4%	15.4%	60.8%	60.8%
Yellow Time (s)	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0		-1.0		-1.0	-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)		3.2		3.2		4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag					Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	None	C-Max	C-Max
Act Effect Green (s)		9.5		9.5		112.8	109.5	109.5		113.8	111.7	111.7
Actuated g/C Ratio		0.07		0.07		0.87	0.84	0.84		0.88	0.86	0.86
v/c Ratio		0.18		0.50		0.03	0.49	0.03		0.08	0.37	0.00
Control Delay		52.1		36.5		1.8	3.6	0.7		0.9	1.3	0.0
Queue Delay		0.0		0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		52.1		36.5		1.8	3.6	0.7		0.9	1.3	0.0
LOS		D		D		A	A	A		A	A	A
Approach Delay		52.1		36.5			3.6				1.2	
Approach LOS		D		D			A				A	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 53 (41%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 3.9

Intersection LOS: A









Intersection Capacity Utilization 50.2%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite

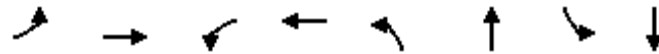
Splits and Phases: 4160: MAGNOLIA & STANFORD

			
Ø2	Ø3	Ø4 (R)	
31 s	20 s	79 s	
			
Ø6	Ø7	Ø8 (R)	
31 s	20 s	79 s	

Timings

4178: MAGNOLIA & MAYS

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↕	↑↑↑	↕	↑↑↑
Traffic Volume (vph)	37	7	21	5	29	1805	34	1494
Future Volume (vph)	37	7	21	5	29	1805	34	1494
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		2		2	3	8	7	4
Permitted Phases	2		2					
Detector Phase	2	2	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.2	29.2	29.2	29.2	10.0	17.0	10.0	17.0
Total Split (s)	33.0	33.0	33.0	33.0	17.0	20.0	17.0	20.0
Total Split (%)	47.1%	47.1%	47.1%	47.1%	24.3%	28.6%	24.3%	28.6%
Yellow Time (s)	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		3.2		3.2	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		8.8		8.8	8.0	48.8	8.3	51.4
Actuated g/C Ratio		0.13		0.13	0.11	0.70	0.12	0.73
v/c Ratio		0.35		0.27	0.18	0.55	0.21	0.44
Control Delay		22.1		17.9	33.0	5.2	36.5	5.6
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		22.1		17.9	33.0	5.2	36.5	5.6
LOS		C		B	C	A	D	A
Approach Delay		22.1		17.9		5.7		6.4
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 31 (44%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 6.6

Intersection LOS: A

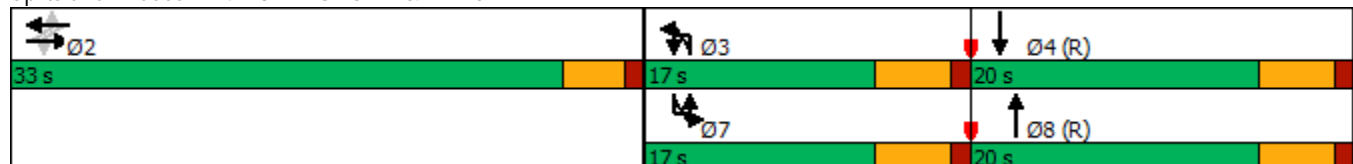
Intersection Capacity Utilization 48.5%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite























Splits and Phases: 4178: MAGNOLIA & MAYS



Timings

4187: MAGNOLIA & ORANGEWOOD

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	61	211	56	62	262	109	4	60	1017	71	3	61
Future Volume (vph)	61	211	56	62	262	109	4	60	1017	71	3	61
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	1	6		5	2		3	3	8		7	7
Permitted Phases	6		6	2		2	8	8		8	4	4
Detector Phase	1	6	6	5	2	2	3	3	8	8	7	7
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	9.0	9.0	10.0	10.0	9.0	9.0
Minimum Split (s)	15.0	33.0	33.0	15.0	32.0	32.0	14.0	14.0	27.0	27.0	14.3	14.3
Total Split (s)	20.0	33.0	33.0	20.0	33.0	33.0	20.0	20.0	57.0	57.0	20.0	20.0
Total Split (%)	15.4%	25.4%	25.4%	15.4%	25.4%	25.4%	15.4%	15.4%	43.8%	43.8%	15.4%	15.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0		-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	C-Max	C-Max	None	None
Act Effect Green (s)	35.5	26.3	26.3	35.5	26.3	26.3		79.9	71.7	71.7		79.8
Actuated g/C Ratio	0.27	0.20	0.20	0.27	0.20	0.20		0.61	0.55	0.55		0.61
v/c Ratio	0.29	0.65	0.16	0.26	0.76	0.30		0.18	0.59	0.10		0.23
Control Delay	33.4	56.0	1.7	32.5	61.7	8.9		2.6	4.1	0.2		6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	33.4	56.0	1.7	32.5	61.7	8.9		2.6	4.1	0.2		6.7
LOS	C	E	A	C	E	A		A	A	A		A
Approach Delay		42.6			44.3				3.8			
Approach LOS		D			D				A			

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 44 (34%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 15.9









Intersection LOS: B

Intersection Capacity Utilization 72.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4187: MAGNOLIA & ORANGEWOOD

			
Ø1	Ø2	Ø3	Ø4 (R)
20 s	33 s	20 s	57 s
			
Ø5	Ø6	Ø7	Ø8 (R)
20 s	33 s	20 s	57 s

Timings

4187: MAGNOLIA & ORANGEWOOD

12/05/2019



























Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	777	65
Future Volume (vph)	777	65
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	10.0	10.0
Minimum Split (s)	27.3	27.3
Total Split (s)	57.0	57.0
Total Split (%)	43.8%	43.8%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0
Total Lost Time (s)	4.3	4.3
Lead/Lag	Lag	Lag
Lead-Lag Optimize?		
Recall Mode	C-Max	C-Max
Act Effct Green (s)	71.6	71.6
Actuated g/C Ratio	0.55	0.55
v/c Ratio	0.45	0.09
Control Delay	8.7	0.6
Queue Delay	0.0	0.0
Total Delay	8.7	0.6
LOS	A	A
Approach Delay	8.0	
Approach LOS	A	
Intersection Summary		

Timings

4198: MAGNOLIA & CHAPMAN









12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	794	82	223	640	141	92	947	199	112	748	83
Future Volume (vph)	98	794	82	223	640	141	92	947	199	112	748	83
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	36.3	36.3	10.3	34.3	34.3	10.3	35.3	35.3	10.0	33.0	33.0
Total Split (s)	22.0	42.0	42.0	24.0	44.0	44.0	23.0	44.0	44.0	20.0	41.0	41.0
Total Split (%)	16.9%	32.3%	32.3%	18.5%	33.8%	33.8%	17.7%	33.8%	33.8%	15.4%	31.5%	31.5%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Min	Min	None	Min	Min
Act Effect Green (s)	13.1	38.3	38.3	19.7	44.9	44.9	16.2	41.6	41.6	13.5	38.9	38.9
Actuated g/C Ratio	0.10	0.29	0.29	0.15	0.35	0.35	0.12	0.32	0.32	0.10	0.30	0.30
v/c Ratio	0.61	0.85	0.19	0.95	0.56	0.25	0.76	0.92	0.34	0.67	0.78	0.15
Control Delay	70.2	53.0	4.9	100.5	37.5	6.1	77.4	37.4	6.0	55.1	48.3	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	53.0	4.9	100.5	37.5	6.1	77.4	37.4	6.0	55.1	48.3	11.7
LOS	E	D	A	F	D	A	E	D	A	E	D	B
Approach Delay		50.7			47.1			37.1			45.9	
Approach LOS		D			D			D			D	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 40 (31%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 44.6
Intersection LOS: D
Intersection Capacity Utilization 84.7%
ICU Level of Service E
Analysis Period (min) 15
Description: Econolite NRTOR when children present (NB,SB,EB,WB)























Splits and Phases: 4198: MAGNOLIA & CHAPMAN

 Ø1	 Ø2 (R)	 Ø3	 Ø4
22 s	44 s	23 s	41 s
 Ø6 (R)	 Ø5	 Ø7	 Ø8
42 s	24 s	20 s	44 s

Timings

4214: MAGNOLIA & LAMPSON

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	103	306	119	47	226	49	3	129	1113	64	8	71
Future Volume (vph)	103	306	119	47	226	49	3	129	1113	64	8	71
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	1	6		5	2		3	3	8		7	7
Permitted Phases	6		6	2		2	8	8		8	4	4
Detector Phase	1	6	6	5	2	2	3	3	8	8	7	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	30.6	30.6	9.6	32.6	32.6	10.0	10.0	28.0	28.0	10.3	10.3
Total Split (s)	20.0	33.0	33.0	20.0	33.0	33.0	20.0	20.0	57.0	57.0	20.0	20.0
Total Split (%)	15.4%	25.4%	25.4%	15.4%	25.4%	25.4%	15.4%	15.4%	43.8%	43.8%	15.4%	15.4%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.0	4.0	4.0	4.0	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0		-1.0
Total Lost Time (s)	3.6	3.6	3.6	3.6	3.6	3.6		4.0	4.0	4.0		4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	C-Max	C-Max	None	None
Act Effect Green (s)	39.5	28.9	28.9	32.4	23.3	23.3		80.2	69.1	69.1		76.8
Actuated g/C Ratio	0.30	0.22	0.22	0.25	0.18	0.18		0.62	0.53	0.53		0.59
v/c Ratio	0.43	0.73	0.27	0.26	0.74	0.16		0.40	0.66	0.09		0.33
Control Delay	37.1	57.1	7.8	33.1	64.3	1.0		9.6	11.3	0.2		12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	37.1	57.1	7.8	33.1	64.3	1.0		9.6	11.3	0.2		12.6
LOS	D	E	A	C	E	A		A	B	A		B
Approach Delay		42.1			50.1				10.6			
Approach LOS		D			D				B			

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 58 (45%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 21.7









Intersection LOS: C

Intersection Capacity Utilization 69.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4214: MAGNOLIA & LAMPSON

			
Ø1	Ø2	Ø3	Ø4 (R)
20 s	33 s	20 s	57 s
			
Ø5	Ø6	Ø7	Ø8 (R)
20 s	33 s	20 s	57 s

Timings

4214: MAGNOLIA & LAMPSON

12/05/2019



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	856	125
Future Volume (vph)	856	125
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	10.0	10.0
Minimum Split (s)	28.3	28.3
Total Split (s)	57.0	57.0
Total Split (%)	43.8%	43.8%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0
Total Lost Time (s)	4.3	4.3
Lead/Lag	Lag	Lag
Lead-Lag Optimize?		
Recall Mode	C-Max	C-Max
Act Effct Green (s)	67.4	67.4
Actuated g/C Ratio	0.52	0.52
v/c Ratio	0.52	0.18
Control Delay	18.9	3.1
Queue Delay	0.0	0.0
Total Delay	18.9	3.1
LOS	B	A
Approach Delay	16.5	
Approach LOS	B	
Intersection Summary		

Timings

4234: MAGNOLIA & GARDEN GROVE

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Traffic Volume (vph)	250	823	184	809	139	925	182	677	242
Future Volume (vph)	250	823	184	809	139	925	182	677	242
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	1	6	5	2	3	8	7	4	
Permitted Phases									4
Detector Phase	1	6	5	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	33.0	10.0	32.0	10.0	33.0	10.0	33.0	33.0
Total Split (s)	25.0	34.0	24.0	33.0	18.0	49.0	23.0	54.0	54.0
Total Split (%)	19.2%	26.2%	18.5%	25.4%	13.8%	37.7%	17.7%	41.5%	41.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Recall Mode	None	Max	None	Max	None	C-Max	None	C-Max	C-Max
Act Effect Green (s)	21.0	30.6	19.4	29.0	14.0	45.9	18.1	50.0	50.0
Actuated g/C Ratio	0.16	0.24	0.15	0.22	0.11	0.35	0.14	0.38	0.38
v/c Ratio	1.02	0.85	0.87	0.95	0.49	0.85	0.82	0.54	0.39
Control Delay	114.4	54.9	86.0	67.0	59.8	47.8	63.5	37.6	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.4	54.9	86.0	67.0	59.8	47.8	63.5	37.6	16.0
LOS	F	D	F	E	E	D	E	D	B
Approach Delay		67.9		70.3		49.6		37.2	
Approach LOS		E		E		D		D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 56.7

Intersection LOS: E

Intersection Capacity Utilization 86.9%

ICU Level of Service E

Analysis Period (min) 15

Description: Econolite





















Splits and Phases: 4234: MAGNOLIA & GARDEN GROVE

← Ø2	↖ Ø1	↓ Ø4 (R)	↗ Ø3
33 s	25 s	54 s	18 s
↙ Ø5	→ Ø6	↘ Ø7	↑ Ø8 (R)
24 s	34 s	23 s	49 s

Timings

4244: MAGNOLIA & TRASK

12/05/2019

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	79	301	589	555	170	1050	283	59	822	109
Future Volume (vph)	79	301	589	555	170	1050	283	59	822	109
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	5	2	3	8		7	4	
Permitted Phases							8			4
Detector Phase	1	6	5	2	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.8	35.8	10.8	36.8	10.5	29.5	29.5	10.5	30.5	30.5
Total Split (s)	20.0	40.0	24.0	44.0	22.0	56.0	56.0	20.0	54.0	54.0
Total Split (%)	14.3%	28.6%	17.1%	31.4%	15.7%	40.0%	40.0%	14.3%	38.6%	38.6%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	12.4	22.8	31.6	42.0	17.5	57.5	57.5	11.9	49.5	49.5
Actuated g/C Ratio	0.09	0.16	0.23	0.30	0.12	0.41	0.41	0.08	0.35	0.35
v/c Ratio	0.53	0.74	0.84	0.85	0.83	0.74	0.36	0.49	0.68	0.18
Control Delay	72.8	58.4	63.5	52.3	77.4	29.7	8.4	72.1	41.8	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	58.4	63.5	52.3	77.4	29.7	8.4	72.1	41.8	2.1
LOS	E	E	E	D	E	C	A	E	D	A
Approach Delay		60.7		56.9		31.1			39.4	
Approach LOS		E		E		C			D	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 51 (36%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 44.6

Intersection LOS: D

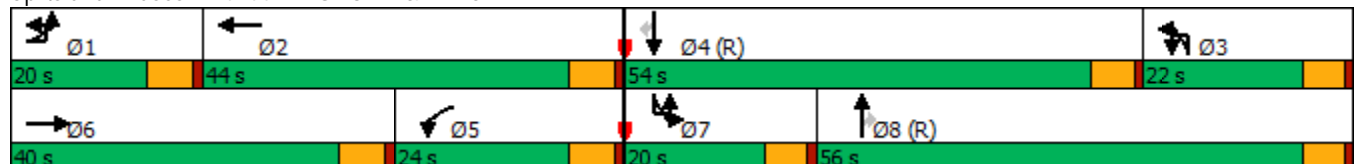
Intersection Capacity Utilization 78.5%

ICU Level of Service D

Analysis Period (min) 15

Description: Econolite


Splits and Phases: 4244: MAGNOLIA & TRASK



Timings

4160: MAGNOLIA & STANFORD

12/05/2019

										
Lane Group	WBL	WBT	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Ø6
Lane Configurations										
Traffic Volume (vph)	26	1	1	941	25	1	16	981	1	
Future Volume (vph)	26	1	1	941	25	1	16	981	1	
Turn Type	Perm	NA	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	
Protected Phases		2	3	8		7	7	4		6
Permitted Phases	2		8		8	4	4		4	
Detector Phase	2	2	3	8	8	7	7	4	4	
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	10.0	10.0	5.0	5.0	10.0	10.0	5.0
Minimum Split (s)	30.2	30.2	10.0	21.0	21.0	10.0	10.0	19.0	19.0	9.2
Total Split (s)	32.0	32.0	20.0	78.0	78.0	20.0	20.0	78.0	78.0	32.0
Total Split (%)	24.6%	24.6%	15.4%	60.0%	60.0%	15.4%	15.4%	60.0%	60.0%	25%
Yellow Time (s)	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)		3.2	4.0	4.0	4.0		4.0	4.0	4.0	
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?										
Recall Mode	None	None	None	C-Max	C-Max	None	None	C-Max	C-Max	None
Act Effect Green (s)		9.2	113.7	111.9	111.9		114.8	114.2	114.2	
Actuated g/C Ratio		0.07	0.87	0.86	0.86		0.88	0.88	0.88	
v/c Ratio		0.44	0.00	0.35	0.03		0.04	0.36	0.00	
Control Delay		43.3	1.0	1.3	0.0		0.7	3.0	0.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay		43.3	1.0	1.3	0.0		0.7	3.0	0.0	
LOS		D	A	A	A		A	A	A	
Approach Delay		43.3		1.3				2.9		
Approach LOS		D		A				A		

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 67 (52%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 3.2

Intersection LOS: A

Intersection Capacity Utilization 40.1%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite

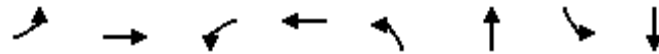
Splits and Phases: 4160: MAGNOLIA & STANFORD

	Ø2		Ø3		Ø4 (R)
32 s		20 s		78 s	
	Ø6		Ø7		Ø8 (R)
32 s		20 s		78 s	

Timings

4178: MAGNOLIA & MAYS

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔	↔	↑↑↑	↔	↑↑↑
Traffic Volume (vph)	63	10	13	16	24	1662	34	1459
Future Volume (vph)	63	10	13	16	24	1662	34	1459
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		2		2	3	8	7	4
Permitted Phases	2		2					
Detector Phase	2	2	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	29.2	29.2	29.2	29.2	10.0	17.0	10.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	16.0	24.0	16.0	24.0
Total Split (%)	42.9%	42.9%	42.9%	42.9%	22.9%	34.3%	22.9%	34.3%
Yellow Time (s)	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		3.2		3.2	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		10.1		10.1	7.8	47.4	8.3	50.2
Actuated g/C Ratio		0.14		0.14	0.11	0.68	0.12	0.72
v/c Ratio		0.45		0.27	0.16	0.51	0.21	0.44
Control Delay		25.1		15.3	36.7	6.4	36.5	3.2
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		25.1		15.3	36.7	6.4	36.5	3.2
LOS		C		B	D	A	D	A
Approach Delay		25.1		15.3		6.9		4.1
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 22 (31%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 6.4

Intersection LOS: A

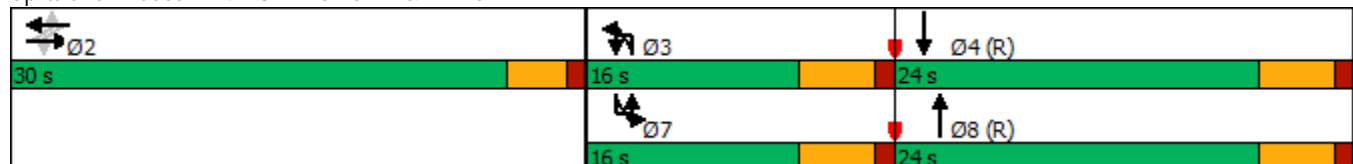
Intersection Capacity Utilization 53.7%

ICU Level of Service A

Analysis Period (min) 15

Description: Econolite
























Splits and Phases: 4178: MAGNOLIA & MAYS



Timings

4187: MAGNOLIA & ORANGEWOOD

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	59	144	66	47	164	80	7	62	823	58	55	680
Future Volume (vph)	59	144	66	47	164	80	7	62	823	58	55	680
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6		5	2		3	3	8		7	4
Permitted Phases	6		6	2		2	8	8		8	4	
Detector Phase	1	6	6	5	2	2	3	3	8	8	7	4
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	9.0	9.0	10.0	10.0	9.0	10.0
Minimum Split (s)	15.0	33.0	33.0	15.0	32.0	32.0	14.0	14.0	27.0	27.0	14.3	27.3
Total Split (s)	20.0	33.0	33.0	20.0	33.0	33.0	20.0	20.0	57.0	57.0	20.0	57.0
Total Split (%)	15.4%	25.4%	25.4%	15.4%	25.4%	25.4%	15.4%	15.4%	43.8%	43.8%	15.4%	43.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.3	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	28.5	19.5	19.5	28.0	19.2	19.2		87.1	79.1	79.1	87.0	79.0
Actuated g/C Ratio	0.22	0.15	0.15	0.22	0.15	0.15		0.67	0.61	0.61	0.67	0.61
v/c Ratio	0.26	0.58	0.23	0.20	0.63	0.28		0.15	0.42	0.07	0.13	0.35
Control Delay	38.1	59.7	4.0	36.5	61.8	6.5		3.7	8.0	0.2	7.4	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	38.1	59.7	4.0	36.5	61.8	6.5		3.7	8.0	0.2	7.4	9.9
LOS	D	E	A	D	E	A		A	A	A	A	A
Approach Delay		41.3			42.5				7.2			8.9
Approach LOS		D			D				A			A

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 26 (20%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 16.2









Intersection LOS: B

Intersection Capacity Utilization 65.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4187: MAGNOLIA & ORANGEWOOD

			
Ø1	Ø2	Ø3	Ø4 (R)
20 s	33 s	20 s	57 s
			
Ø5	Ø6	Ø7	Ø8 (R)
20 s	33 s	20 s	57 s

Timings

4187: MAGNOLIA & ORANGEWOOD

12/05/2019



























Lane Group	SBR
Lane Configurations	7
Traffic Volume (vph)	68
Future Volume (vph)	68
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	27.3
Total Split (s)	57.0
Total Split (%)	43.8%
Yellow Time (s)	4.3
All-Red Time (s)	1.0
Lost Time Adjust (s)	-1.0
Total Lost Time (s)	4.3
Lead/Lag	Lag
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effect Green (s)	79.0
Actuated g/C Ratio	0.61
v/c Ratio	0.09
Control Delay	0.4
Queue Delay	0.0
Total Delay	0.4
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Timings

4198: MAGNOLIA & CHAPMAN

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	606	76	198	550	116	79	634	198	111	708	71
Future Volume (vph)	76	606	76	198	550	116	79	634	198	111	708	71
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2			8			4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	36.3	36.3	10.3	34.3	34.3	10.3	35.3	35.3	10.0	33.0	33.0
Total Split (s)	15.6	41.6	41.6	19.5	45.5	45.5	19.5	45.5	45.5	23.4	49.4	49.4
Total Split (%)	12.0%	32.0%	32.0%	15.0%	35.0%	35.0%	15.0%	35.0%	35.0%	18.0%	38.0%	38.0%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Min	Min	None	Min	Min
Act Effect Green (s)	11.3	40.5	40.5	22.0	51.3	51.3	13.0	36.4	36.4	14.1	37.5	37.5
Actuated g/C Ratio	0.09	0.31	0.31	0.17	0.39	0.39	0.10	0.28	0.28	0.11	0.29	0.29
v/c Ratio	0.55	0.60	0.17	0.74	0.41	0.19	0.68	0.69	0.36	0.63	0.75	0.13
Control Delay	71.4	41.6	3.4	68.6	31.1	6.0	55.0	45.8	20.2	60.4	41.0	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	41.6	3.4	68.6	31.1	6.0	55.0	45.8	20.2	60.4	41.0	4.9
LOS	E	D	A	E	C	A	E	D	C	E	D	A
Approach Delay		40.9			36.4			41.5			40.6	
Approach LOS		D			D			D			D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 14.3 (11%), Referenced to phase 2:WBT and 6:EBT, Start of 1st Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 39.8

Intersection LOS: D














Intersection Capacity Utilization 77.8%

ICU Level of Service D

Analysis Period (min) 15

Description: Econolite NRTOR when children present (NB,SB,EB,WB)























Splits and Phases: 4198: MAGNOLIA & CHAPMAN

							
Ø2 (R)			Ø1		Ø3		Ø4
45.5 s			15.6 s		19.5 s		49.4 s
							
Ø5	Ø6 (R)			Ø7		Ø8	
19.5 s	41.6 s			23.4 s		45.5 s	

Timings

4214: MAGNOLIA & LAMPSON

12/05/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	73	206	98	84	205	57	4	74	823	44	4	61
Future Volume (vph)	73	206	98	84	205	57	4	74	823	44	4	61
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	1	6		5	2		3	3	8		7	7
Permitted Phases	6		6	2		2	8	8		8	4	4
Detector Phase	1	6	6	5	2	2	3	3	8	8	7	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	30.6	30.6	9.6	32.6	32.6	10.0	10.0	28.0	28.0	10.3	10.3
Total Split (s)	20.0	33.0	33.0	20.0	33.0	33.0	20.0	20.0	57.0	57.0	20.0	20.0
Total Split (%)	15.4%	25.4%	25.4%	15.4%	25.4%	25.4%	15.4%	15.4%	43.8%	43.8%	15.4%	15.4%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.0	4.0	4.0	4.0	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0		-1.0
Total Lost Time (s)	3.6	3.6	3.6	3.6	3.6	3.6		4.0	4.0	4.0		4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	C-Max	C-Max	None	None
Act Effect Green (s)	31.7	20.8	20.8	33.7	23.7	23.7		83.4	75.8	75.8		81.7
Actuated g/C Ratio	0.24	0.16	0.16	0.26	0.18	0.18		0.64	0.58	0.58		0.63
v/c Ratio	0.31	0.67	0.30	0.38	0.65	0.17		0.20	0.43	0.06		0.18
Control Delay	36.7	61.2	10.2	38.5	59.0	2.3		7.8	14.1	0.6		3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	36.7	61.2	10.2	38.5	59.0	2.3		7.8	14.1	0.6		3.9
LOS	D	E	B	D	E	A		A	B	A		A
Approach Delay		43.2			44.7				12.9			
Approach LOS		D			D				B			

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 16 (12%), Referenced to phase 4:SBTL and 8:NBTL, Start of 1st Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 18.3









Intersection LOS: B

Intersection Capacity Utilization 57.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4214: MAGNOLIA & LAMPSON

 Ø1	 Ø2	 Ø3	 Ø4 (R)
20 s	33 s	20 s	57 s
 Ø5	 Ø6	 Ø7	 Ø8 (R)
20 s	33 s	20 s	57 s

Timings

4214: MAGNOLIA & LAMPSON

12/05/2019



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	765	98
Future Volume (vph)	765	98
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	10.0	10.0
Minimum Split (s)	28.3	28.3
Total Split (s)	57.0	57.0
Total Split (%)	43.8%	43.8%
Yellow Time (s)	4.3	4.3
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0
Total Lost Time (s)	4.3	4.3
Lead/Lag	Lag	Lag
Lead-Lag Optimize?		
Recall Mode	C-Max	C-Max
Act Effct Green (s)	73.2	73.2
Actuated g/C Ratio	0.56	0.56
v/c Ratio	0.42	0.13
Control Delay	4.2	0.5
Queue Delay	0.0	0.0
Total Delay	4.2	0.5
LOS	A	A
Approach Delay	3.8	
Approach LOS	A	
Intersection Summary		

Timings

4234: MAGNOLIA & GARDEN GROVE

12/05/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	←	↑↑↑	←	↑↑↑	←	↑↑	←	↑↑	←
Traffic Volume (vph)	189	683	182	746	173	658	161	782	228
Future Volume (vph)	189	683	182	746	173	658	161	782	228
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	1	6	5	2	3	8	7	4	
Permitted Phases									4
Detector Phase	1	6	5	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	33.4	10.0	33.4	10.0	34.4	10.0	34.4	34.4
Total Split (s)	25.0	41.0	25.0	41.0	20.0	44.0	20.0	44.0	44.0
Total Split (%)	19.2%	31.5%	19.2%	31.5%	15.4%	33.8%	15.4%	33.8%	33.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Recall Mode	None	Max	None	Max	None	C-Max	None	C-Max	C-Max
Act Effect Green (s)	21.0	37.7	20.3	37.0	16.0	40.3	15.7	40.0	40.0
Actuated g/C Ratio	0.16	0.29	0.16	0.28	0.12	0.31	0.12	0.31	0.31
v/c Ratio	0.80	0.58	0.87	0.63	0.53	0.71	0.85	0.78	0.42
Control Delay	75.3	40.3	84.5	43.1	58.8	44.1	85.3	32.8	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.3	40.3	84.5	43.1	58.8	44.1	85.3	32.8	3.6
LOS	E	D	F	D	E	D	F	C	A
Approach Delay		47.6		51.6		47.4		34.5	
Approach LOS		D		D		D		C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 61 (47%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 44.8

Intersection LOS: D

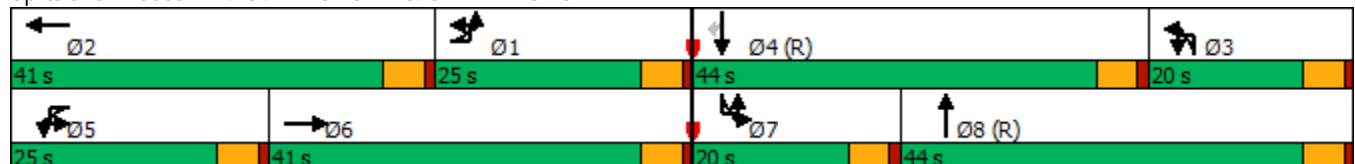
Intersection Capacity Utilization 81.2%

ICU Level of Service D

Analysis Period (min) 15

Description: Econolite





















Splits and Phases: 4234: MAGNOLIA & GARDEN GROVE



Timings

4244: MAGNOLIA & TRASK

12/05/2019

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	45	245	582	602	325	890	263	51	849	170
Future Volume (vph)	45	245	582	602	325	890	263	51	849	170
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	5	2	3	8		7	4	
Permitted Phases							8			4
Detector Phase	1	6	5	2	3	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.8	35.8	10.8	36.8	10.5	29.5	29.5	10.5	30.5	30.5
Total Split (s)	20.0	36.0	32.0	48.0	31.0	52.0	52.0	20.0	41.0	41.0
Total Split (%)	14.3%	25.7%	22.9%	34.3%	22.1%	37.1%	37.1%	14.3%	29.3%	29.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	10.8	26.7	27.2	45.5	26.5	58.2	58.2	11.6	41.0	41.0
Actuated g/C Ratio	0.08	0.19	0.19	0.32	0.19	0.42	0.42	0.08	0.29	0.29
v/c Ratio	0.41	0.57	0.97	0.87	1.06	0.63	0.33	0.47	0.85	0.32
Control Delay	69.8	45.2	86.0	50.8	109.7	28.9	9.6	71.5	56.6	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.8	45.2	86.0	50.8	109.7	28.9	9.6	71.5	56.6	7.1
LOS	E	D	F	D	F	C	A	E	E	A
Approach Delay		48.3		64.5		43.4			49.7	
Approach LOS		D		E		D			D	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 126 (90%), Referenced to phase 4:SBT and 8:NBT, Start of 1st Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 52.4

Intersection LOS: D

Intersection Capacity Utilization 88.0%

ICU Level of Service E

Analysis Period (min) 15

Description: Econolite

Splits and Phases: 4244: MAGNOLIA & TRASK

