

Existing 2009 PM Peak Hour  
3: Avenue 48 & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		0	300		200	300		150
Storage Lanes	1		1	1		0	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.98		0.99				0.98			0.97
Frt			0.850		0.955				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3324	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3505	1532	1752	3324	0	3400	5036	1529	3400	5036	1528
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			331		113				122			65
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2632			1220			1091			2684	
Travel Time (s)		59.8			27.7			24.8			61.0	
Volume (vph)	27	417	328	81	390	166	225	518	80	187	509	41
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	42	650	512	118	568	242	343	789	122	295	803	65
Lane Group Flow (vph)	42	650	512	118	810	0	343	789	122	295	803	65
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phases	7	4	4	3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	9.0	21.0	21.0	10.0	22.0	0.0	12.0	18.0	18.0	11.0	17.0	17.0
Total Split (%)	15.0%	35.0%	35.0%	16.7%	36.7%	0.0%	20.0%	30.0%	30.0%	18.3%	28.3%	28.3%
Maximum Green (s)	4.0	16.0	16.0	5.0	17.0		7.0	13.0	13.0	6.0	12.0	12.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	None	None	None	Max	Max
Walk Time (s)		5.0	5.0		5.0							
Flash Dont Walk (s)		11.0	11.0		11.0							
Pedestrian Calls (#/hr)		0	0		0							
Act Effct Green (s)	5.0	15.9	15.9	6.0	20.0		8.1	14.2	14.2	7.1	13.2	13.2
Actuated g/C Ratio	0.08	0.28	0.28	0.10	0.35		0.14	0.25	0.25	0.12	0.23	0.23
v/c Ratio	0.30	0.67	0.77	0.66	0.65		0.71	0.63	0.26	0.70	0.69	0.16
Control Delay	32.8	22.5	16.9	46.9	16.8		34.6	22.6	6.2	36.0	24.5	7.3

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6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	32.8	22.5	16.9	46.9	16.8		34.6	22.6	6.2	36.0	24.5	7.3
LOS	C	C	B	D	B		C	C	A	D	C	A
Approach Delay		20.4			20.7			24.3			26.5	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	15	107	53	42	87		62	95	0	54	99	0
Queue Length 95th (ft)	38	144	#133	#111	178		#108	124	31	#91	124	22
Internal Link Dist (ft)		2552			1140			1011			2604	
Turn Bay Length (ft)	200		200	200			300		200	300		150
Base Capacity (vph)	142	1033	685	179	1303		484	1256	473	424	1166	404
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.63	0.75	0.66	0.62		0.71	0.63	0.26	0.70	0.69	0.16

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 56.9

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 23.1

Intersection LOS: C

Intersection Capacity Utilization 59.8%

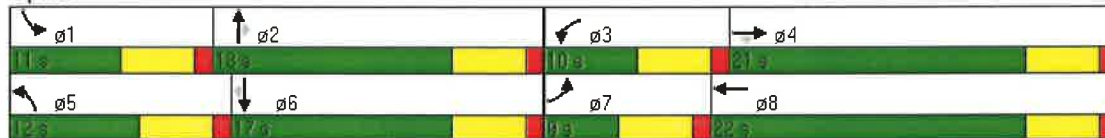
ICU Level of Service B

Analysis Period (min) 15

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

























Queue shown is maximum after two cycles.

Splits and Phases: 3: Avenue 48 & Jefferson Street



Existing 2009 PM Peak Hour  
6: Fred Waring Drive & Jefferson Street

6/7/2010

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225		100	225		100	200		100	200		100
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.98			0.98			0.98			0.98
Frnt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1532	3400	5036	1532	3400	5036	1532	3400	5036	1532
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			192			187			188			201
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1265			1319			2632			886	
Travel Time (s)		28.8			30.0			59.8			20.1	
Volume (vph)	103	736	132	142	519	120	131	448	212	164	565	145
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.92	0.92	0.92	0.91	0.91	0.91
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	150	1071	192	221	809	187	187	638	302	236	813	209
Lane Group Flow (vph)	150	1071	192	221	809	187	187	638	302	236	813	209
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0
Total Split (%)	15.0%	35.0%	35.0%	15.0%	35.0%	35.0%	15.0%	35.0%	35.0%	15.0%	35.0%	35.0%
Maximum Green (s)	4.0	16.0	16.0	4.0	16.0	16.0	4.0	16.0	16.0	4.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	5.0	16.7	16.7	5.0	18.5	18.5	5.0	17.0	17.0	5.0	17.0	17.0
Actuated g/C Ratio	0.08	0.28	0.28	0.08	0.31	0.31	0.08	0.28	0.28	0.08	0.28	0.28
v/c Ratio	0.54	0.76	0.34	0.78	0.52	0.31	0.66	0.44	0.53	0.83	0.57	0.36
Control Delay	34.3	23.8	5.0	48.1	19.0	4.8	39.6	18.8	11.1	53.9	20.1	5.4

Existing 2009 PM Peak Hour  
6: Fred Waring Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	34.3	23.8	5.0	48.1	19.0	4.8	39.6	18.8	11.1	53.9	20.1	5.4
LOS	C	C	A	D	B	A	D	B	B	D	C	A
Approach Delay		22.4			22.1			20.2			24.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	27	128	0	41	90	0	35	68	32	44	91	2
Queue Length 95th (ft)	52	171	40	#81	115	32	#73	98	94	#99	126	44
Internal Link Dist (ft)		1185			1239			2552			806	
Turn Bay Length (ft)	225		100	225		100	200		100	200		100
Base Capacity (vph)	277	1427	572	285	1563	604	285	1434	571	285	1434	580
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.75	0.34	0.78	0.52	0.31	0.66	0.44	0.53	0.83	0.57	0.36

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 59.7

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 22.2

Intersection LOS: C

Intersection Capacity Utilization 56.7%

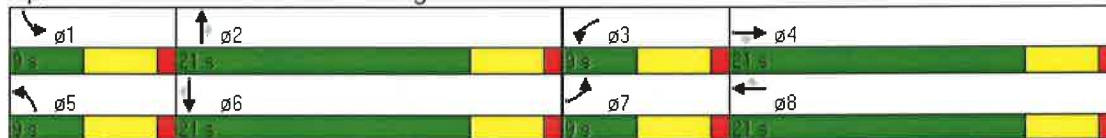
ICU Level of Service B

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 6: Fred Waring Drive & Jefferson Street



Existing 2009 PM Peak Hour  
9: Avenue 48 & Washington Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↖	↖	↑↑↑		↗	↑↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225	0		0	200	
Storage Lanes	1	0		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	0.97	1.00	0.91	0.91	1.00	0.91
Ped Bike Factor			0.99			
Frt		0.850	0.973			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3400	1568	4875	0	1752	5036
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3400	1568	4875	0	1752	5036
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		202	65			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	2592		902			2717
Travel Time (s)	58.9		20.5			61.8
Volume (vph)	518	186	1428	309	350	1417
Confl. Peds. (#/hr)		10		10		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	563	202	1552	336	380	1540
Lane Group Flow (vph)	563	202	1888	0	380	1540
Turn Type		Prot			Prot	
Protected Phases	4	4	2		1	6
Permitted Phases						
Detector Phases	4	4	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.0	21.0	21.0		9.0	21.0
Total Split (s)	21.0	21.0	42.0	0.0	27.0	69.0
Total Split (%)	23.3%	23.3%	46.7%	0.0%	30.0%	76.7%
Maximum Green (s)	16.0	16.0	37.0		22.0	64.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	5.0	5.0	5.0			5.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	17.0	17.0	38.9		22.1	65.0
Actuated g/C Ratio	0.19	0.19	0.43		0.25	0.72
v/c Ratio	0.88	0.44	0.88		0.88	0.42
Control Delay	52.1	8.1	28.9		56.0	5.4

Existing 2009 PM Peak Hour  
 9: Avenue 48 & Washington Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	52.1	8.1	28.9		56.0	5.4
LOS	D	A	C		E	A
Approach Delay	40.5		28.9			15.4
Approach LOS	D		C			B
Queue Length 50th (ft)	161	0	346		205	107
Queue Length 95th (ft)	#251	57	#423		#360	130
Internal Link Dist (ft)	2512		822			2637
Turn Bay Length (ft)	225				200	
Base Capacity (vph)	642	460	2146		444	3638
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	0.88	0.44	0.88		0.86	0.42

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 25.2

Intersection LOS: C

Intersection Capacity Utilization 78.8%

ICU Level of Service D

Analysis Period (min) 15

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

























Queue shown is maximum after two cycles.

Splits and Phases: 9: Avenue 48 & Washington Street



Existing 2009 PM Peak Hour  
10: Fred Waring Drive & Washington Street

6/7/2010

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		1000	150		150	200		125	200		100
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.97			0.97			0.97			0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1526	3400	5036	1526	3400	5036	1526	3400	5036	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			317			233			58			129
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2635			1603			3324			2303	
Travel Time (s)		59.9			36.4			75.5			52.3	
Volume (vph)	275	1048	459	39	686	214	385	1086	59	457	1394	190
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	299	1139	499	42	746	233	418	1180	64	497	1515	207
Lane Group Flow (vph)	299	1139	499	42	746	233	418	1180	64	497	1515	207
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	12.0	24.0	24.0	9.0	21.0	21.0	15.0	29.0	29.0	18.0	32.0	32.0
Total Split (%)	15.0%	30.0%	30.0%	11.3%	26.3%	26.3%	18.8%	36.3%	36.3%	22.5%	40.0%	40.0%
Maximum Green (s)	7.0	19.0	19.0	4.0	16.0	16.0	10.0	24.0	24.0	13.0	27.0	27.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	8.0	23.6	23.6	5.0	17.0	17.0	11.0	25.0	25.0	14.0	28.0	28.0
Actuated g/C Ratio	0.10	0.30	0.30	0.06	0.21	0.21	0.14	0.31	0.31	0.18	0.35	0.35
v/c Ratio	0.88	0.77	0.74	0.20	0.70	0.46	0.89	0.75	0.12	0.84	0.86	0.33
Control Delay	63.6	31.3	18.2	57.5	15.3	4.4	68.7	8.6	0.4	29.7	34.3	15.5

Existing 2009 PM Peak Hour  
 10: Fred Waring Drive & Washington Street

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	63.6	31.3	18.2	57.5	15.3	4.4	68.7	8.6	0.4	29.7	34.3	15.5
LOS	E	C	B	E	B	A	E	A	A	C	C	B
Approach Delay		32.9			14.5			23.4			31.5	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	77	202	82	9	128	50	118	31	0	101	274	64
Queue Length 95th (ft)	#147	#282	#251	m23	35	6	m#161	42	m1	#193	354	143
Internal Link Dist (ft)		2555			1523			3244			2223	
Turn Bay Length (ft)	400		1000	150		150	200		125	200		100
Base Capacity (vph)	340	1486	673	213	1070	508	468	1574	517	595	1763	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.77	0.74	0.20	0.70	0.46	0.89	0.75	0.12	0.84	0.86	0.33

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 7 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 27.4

Intersection LOS: C

Intersection Capacity Utilization 74.8%

ICU Level of Service D

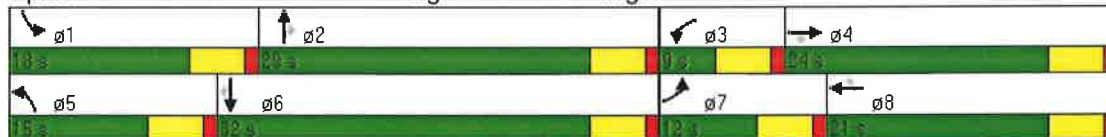
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 10: Fred Waring Drive & Washington Street





Existing 2009 PM Peak Hour  
13: SR-111 & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	200		0	300		250	175		200
Storage Lanes	2		1	2		0	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.97		0.99				0.97			0.97
Fr <sub>t</sub>			0.850		0.971				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3505	1568	3400	3384	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1522	3400	3384	0	3400	5036	1522	3400	5036	1522
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			427		31				149			175
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		840			1276			2684			2668	
Travel Time (s)		19.1			29.0			61.0			60.6	
Volume (vph)	232	958	393	92	888	213	344	398	137	386	508	161
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	252	1041	427	100	965	232	374	433	149	420	552	175
Lane Group Flow (vph)	252	1041	427	100	1197	0	374	433	149	420	552	175
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phases	7	4	4	3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	21.0	32.0	32.0	21.0	32.0	0.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (%)	22.1%	33.7%	33.7%	22.1%	33.7%	0.0%	22.1%	22.1%	22.1%	22.1%	22.1%	22.1%
Maximum Green (s)	16.0	27.0	27.0	16.0	27.0		16.0	16.0	16.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effct Green (s)	13.1	38.2	38.2	9.0	31.9		15.5	18.0	18.0	16.0	18.5	18.5
Actuated g/C Ratio	0.14	0.40	0.40	0.09	0.34		0.16	0.19	0.19	0.17	0.19	0.19
v/c Ratio	0.54	0.74	0.49	0.31	1.03		0.67	0.45	0.36	0.73	0.56	0.40
Control Delay	42.1	29.3	4.4	42.2	67.8		43.7	36.2	8.6	45.7	37.6	8.5

Existing 2009 PM Peak Hour  
13: SR-111 & Jefferson Street

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	42.1	29.3	4.4	42.2	67.8		43.7	36.2	8.6	45.7	37.6	8.5
LOS	D	C	A	D	E		D	D	A	D	D	A
Approach Delay		25.0			65.8			34.9			36.1	
Approach LOS		C			E			C			D	
Queue Length 50th (ft)	74	286	0	29	~403		109	86	0	123	112	0
Queue Length 95th (ft)	108	382	61	53	#580		155	120	52	174	151	55
Internal Link Dist (ft)		760			1196			2604			2588	
Turn Bay Length (ft)	250			200			300		250	175		200
Base Capacity (vph)	608	1408	867	608	1157		608	954	409	608	981	437
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.74	0.49	0.16	1.03		0.62	0.45	0.36	0.69	0.56	0.40

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 39.7

Intersection LOS: D

Intersection Capacity Utilization 75.8%

ICU Level of Service D

Analysis Period (min) 15

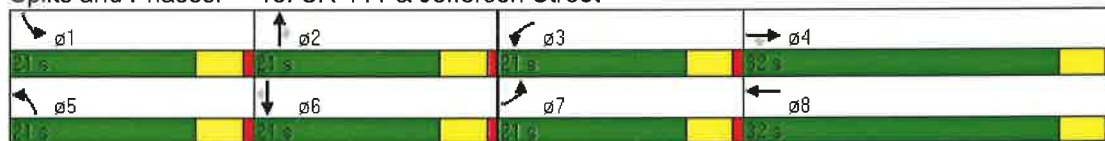
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 13: SR-111 & Jefferson Street



Existing 2009 PM Peak Hour  
14: SR-111 & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1580	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	350		225	550		0	450		175	225		0
Storage Lanes	2		1	2		0	2		1	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	0.91	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor			0.97		0.99				0.97		1.00	
Fr't			0.850		0.947				0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2827	4903	1527	3310	4600	0	3310	4903	1527	3310	4834	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	2827	4903	1486	3310	4600	0	3310	4903	1486	3310	4834	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			379		183				126		17	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			1266			2658			671	
Travel Time (s)		21.1			28.8			60.4			15.3	
Volume (vph)	209	1089	493	155	735	402	364	703	116	497	934	84
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	227	1184	536	168	799	437	396	764	126	540	1015	91
Lane Group Flow (vph)	227	1184	536	168	1236	0	396	764	126	540	1106	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Detector Phases	7	4	4	3	8		5	2	2	1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0	21.0	21.0	21.0		9.0	21.0	21.0	9.0	21.0	
Total Split (s)	13.0	22.0	22.0	21.0	30.0	0.0	14.0	21.0	21.0	16.0	23.0	0.0
Total Split (%)	16.3%	27.5%	27.5%	26.3%	37.5%	0.0%	17.5%	26.3%	26.3%	20.0%	28.8%	0.0%
Maximum Green (s)	8.0	17.0	17.0	16.0	25.0		9.0	16.0	16.0	11.0	18.0	
Yellow Time (s)	4.0	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	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	Max		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0	0		0	
Act Effct Green (s)	9.0	24.5	24.5	10.5	26.0		10.0	17.0	17.0	12.0	19.0	
Actuated g/C Ratio	0.11	0.31	0.31	0.13	0.32		0.12	0.21	0.21	0.15	0.24	
v/c Ratio	0.71	0.79	0.75	0.39	0.76		0.96	0.73	0.30	1.09	0.95	
Control Delay	40.2	23.0	16.5	23.5	19.7		71.7	34.2	7.6	89.5	37.8	

Existing 2009 PM Peak Hour  
14: SR-111 & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	40.2	23.0	16.5	23.5	19.7		71.7	34.2	7.6	89.5	37.8	
LOS	D	C	B	C	B		E	C	A	F	D	
Approach Delay		23.2			20.1			43.2			54.8	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	51	209	181	27	173		103	131	0	~149	201	
Queue Length 95th (ft)	m60	m#267	m230	55	193		#189	173	42	m#245	#293	
Internal Link Dist (ft)		850			1186			2578			591	
Turn Bay Length (ft)	350		225	550			450		175	225		
Base Capacity (vph)	318	1500	718	703	1619		414	1042	415	497	1161	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.71	0.79	0.75	0.24	0.76		0.96	0.73	0.30	1.09	0.95	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 8 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 34.9

Intersection LOS: C

Intersection Capacity Utilization 75.9%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

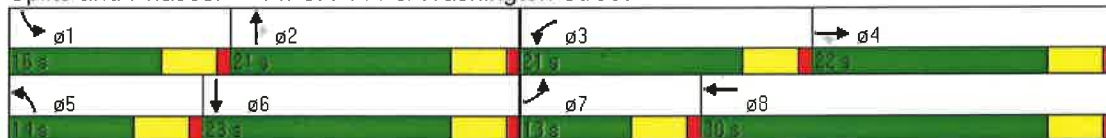
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 14: SR-111 & Washington Street



Existing 2009 PM Peak Hour  
17: Avenue 48 & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		150	0		0	125		0
Storage Lanes	1		0	1		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00				0.98		0.99				0.98
Frt		0.995				0.850		0.966				0.850
Flt Protected	0.950			0.950				0.993		0.950	0.963	
Satd. Flow (prot)	1752	3483	0	1752	3505	1568	0	1748	0	1665	1688	1568
Flt Permitted	0.950			0.950				0.993		0.950	0.963	
Satd. Flow (perm)	1752	3483	0	1752	3505	1532	0	1748	0	1665	1688	1532
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				296		22				223
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2592			2628			875			3025	
Travel Time (s)		58.9			59.7			19.9			68.8	
Volume (vph)	98	307	11	6	282	208	12	56	23	299	40	158
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.84	0.84	0.84	0.93	0.93	0.93
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	134	419	15	9	402	296	19	87	36	421	56	223
Lane Group Flow (vph)	134	434	0	9	402	296	0	142	0	233	244	223
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		1	1	
Permitted Phases						8						1
Detector Phases	7	4		3	8	8	2	2		1	1	1
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	9.0		21.0	21.0	21.0
Total Split (s)	9.0	21.0	0.0	9.0	21.0	21.0	9.0	9.0	0.0	21.0	21.0	21.0
Total Split (%)	15.0%	35.0%	0.0%	15.0%	35.0%	35.0%	15.0%	15.0%	0.0%	35.0%	35.0%	35.0%
Maximum Green (s)	4.0	16.0		4.0	16.0	16.0	4.0	4.0		16.0	16.0	16.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None		Max	Max	Max
Walk Time (s)		5.0			5.0	5.0				5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0				11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0	0				0	0	0
Act Effct Green (s)	5.0	20.5		5.0	13.2	13.2		5.0		17.0	17.0	17.0
Actuated g/C Ratio	0.09	0.36		0.08	0.23	0.23		0.09		0.30	0.30	0.30
v/c Ratio	0.86	0.34		0.07	0.49	0.51		0.81		0.46	0.48	0.36
Control Delay	75.2	14.3		28.1	20.6	6.0		59.3		20.4	20.7	4.8

Existing 2009 PM Peak Hour  
17: Avenue 48 & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	75.2	14.3		28.1	20.6	6.0		59.3		20.4	20.7	4.8
LOS	E	B		C	C	A		E		C	C	A
Approach Delay		28.7			14.6			59.3			15.5	
Approach LOS		C			B			E			B	
Queue Length 50th (ft)	46	50		3	61	0		41		66	69	0
Queue Length 95th (ft)	#141	102		15	96	48		#122		134	142	43
Internal Link Dist (ft)		2512			2548			795			2945	
Turn Bay Length (ft)	200			150		150				125		
Base Capacity (vph)	156	1274		138	993	646		176		504	511	619
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	0.86	0.34		0.07	0.40	0.46		0.81		0.46	0.48	0.36

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 56.3

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 21.7

Intersection LOS: C

Intersection Capacity Utilization 47.1%

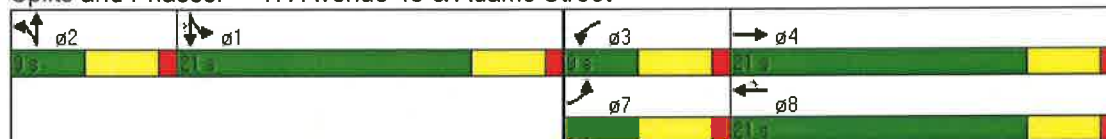
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 17: Avenue 48 & Adams Street



Existing 2009 PM Peak Hour  
18: Fred Waring Drive & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		0	100		100
Storage Lanes	1		1	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98		1.00				0.98			0.98
Fr t			0.850		0.988				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3451	0	1752	1845	1568	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3505	1529	1752	3451	0	1752	1845	1529	1752	1845	1529
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151		12				110			24
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1822			2648			2644			683	
Travel Time (s)		41.4			60.2			60.1			15.5	
Volume (vph)	11	489	139	112	614	52	280	101	101	122	118	22
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	12	532	151	122	667	57	304	110	110	133	128	24
Lane Group Flow (vph)	12	532	151	122	724	0	304	110	110	133	128	24
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phases	7	4	4	3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	9.0	21.0	21.0	9.0	21.0	0.0	18.0	25.0	25.0	15.0	22.0	22.0
Total Split (%)	12.9%	30.0%	30.0%	12.9%	30.0%	0.0%	25.7%	35.7%	35.7%	21.4%	31.4%	31.4%
Maximum Green (s)	4.0	16.0	16.0	4.0	16.0		13.0	20.0	20.0	10.0	17.0	17.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max		None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	5.0	18.0	18.0	5.1	25.5		13.4	14.1	14.1	9.7	10.5	10.5
Actuated g/C Ratio	0.07	0.30	0.30	0.08	0.42		0.22	0.23	0.23	0.16	0.17	0.17
v/c Ratio	0.09	0.51	0.27	0.83	0.50		0.78	0.25	0.25	0.49	0.41	0.09
Control Delay	31.8	21.5	5.5	74.8	17.4		40.3	21.6	6.4	31.0	27.2	10.3

Existing 2009 PM Peak Hour  
 18: Fred Waring Drive & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	31.8	21.5	5.5	74.8	17.4		40.3	21.6	6.4	31.0	27.2	10.3
LOS	C	C	A	E	B		D	C	A	C	C	B
Approach Delay		18.2			25.7			29.2			27.6	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	4	91	0	47	100		109	35	0	46	44	0
Queue Length 95th (ft)	19	146	39	#143	#227		#244	72	33	98	88	17
Internal Link Dist (ft)		1742			2568			2564			603	
Turn Bay Length (ft)	100		100	100			100			100		100
Base Capacity (vph)	131	1043	561	147	1462		405	580	556	302	474	411
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.51	0.27	0.83	0.50		0.75	0.19	0.20	0.44	0.27	0.06

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 60.4

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 24.5

Intersection LOS: C

Intersection Capacity Utilization 54.2%

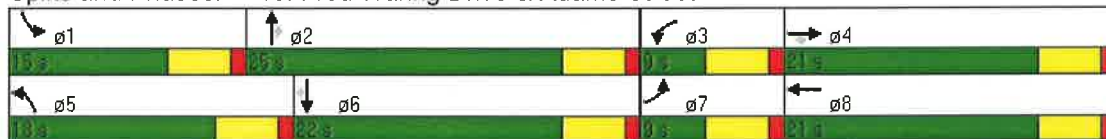
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 18: Fred Waring Drive & Adams Street





Existing 2009 PM Peak Hour  
19: SR-111 & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	575		200	400		150	150		150	150		150
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.98			0.97			0.97
Frts			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1526	3400	5036	1534	3400	3505	1525	3400	3505	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			204			148			58			161
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1285			1329			3025			2276	
Travel Time (s)		29.2			30.2			68.8			51.7	
Volume (vph)	203	1149	188	118	984	136	176	280	53	262	328	148
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	221	1249	204	128	1070	148	191	304	58	285	357	161
Lane Group Flow (vph)	221	1249	204	128	1070	148	191	304	58	285	357	161
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	21.0	21.0
Total Split (s)	15.0	32.0	32.0	12.0	29.0	29.0	14.0	19.0	19.0	17.0	22.0	22.0
Total Split (%)	18.8%	40.0%	40.0%	15.0%	36.3%	36.3%	17.5%	23.8%	23.8%	21.3%	27.5%	27.5%
Maximum Green (s)	10.0	27.0	27.0	7.0	24.0	24.0	9.0	14.0	14.0	12.0	17.0	17.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0	5.0								5.0	5.0
Flash Dont Walk (s)		11.0	11.0								11.0	11.0
Pedestrian Calls (#/hr)		0	0								0	0
Act Effct Green (s)	10.2	30.4	30.4	7.8	25.8	25.8	9.5	16.0	16.0	12.0	18.5	18.5
Actuated g/C Ratio	0.13	0.38	0.38	0.10	0.32	0.32	0.12	0.20	0.20	0.15	0.23	0.23
v/c Ratio	0.51	0.65	0.29	0.39	0.66	0.25	0.47	0.43	0.16	0.56	0.44	0.34
Control Delay	30.1	14.4	5.6	47.7	14.1	2.9	36.9	30.7	9.5	35.9	28.6	6.8

Existing 2009 PM Peak Hour  
19: SR-111 & Adams Street

6/7/2010

	↖	→	↘	↙	←	↖	↘	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	30.1	14.4	5.6	47.7	14.1	2.9	36.9	30.7	9.5	35.9	28.6	6.8
LOS	C	B	A	D	B	A	D	C	A	D	C	A
Approach Delay		15.4			16.1			30.6			26.8	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	32	223	39	28	181	15	46	71	0	68	81	0
Queue Length 95th (ft)	m58	272	m52	m39	203	m17	78	110	30	105	122	46
Internal Link Dist (ft)		1205			1249			2945			2196	
Turn Bay Length (ft)	575		200	400		150	150		150	150		150
Base Capacity (vph)	468	1914	707	340	1622	594	425	702	352	553	809	476
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.65	0.29	0.38	0.66	0.25	0.45	0.43	0.16	0.52	0.44	0.34

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 59 (74%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 19.6

Intersection LOS: B

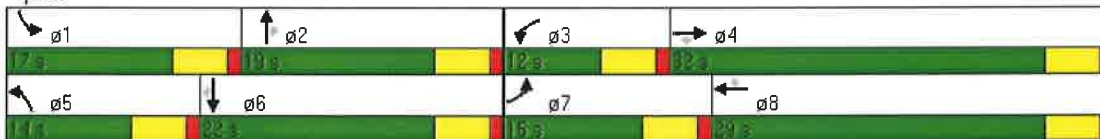
Intersection Capacity Utilization 59.7%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 19: SR-111 & Adams Street



Existing 2009 PM Peak Hour  
22: Avenue 48 & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	150		0	0		0	150		0
Storage Lanes	2		0	1		0	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50		50
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor					0.99							0.97
Frt					0.956							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3400	3505	0	1845	3331	0	0	1845	0	3400	0	1568
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	3400	3505	0	1845	3331	0	0	1845	0	3400	0	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					119							113
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2628			2632			570			2692	
Travel Time (s)		59.7			59.8			13.0			61.2	
Volume (vph)	53	528	0	0	475	197	0	0	0	300	0	82
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	73	728	0	0	676	281	0	0	0	414	0	113
Lane Group Flow (vph)	73	728	0	0	957	0	0	0	0	414	0	113
Turn Type	Prot			Prot			Split			Prot		custom
Protected Phases	7	4		3	8		2	2		1		
Permitted Phases												1
Detector Phases	7	4		3	8		2	2		1		1
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Minimum Split (s)	9.0	21.0		9.0	9.0		9.0	9.0		9.0		9.0
Total Split (s)	9.0	26.0	0.0	9.0	26.0	0.0	10.0	10.0	0.0	15.0	0.0	15.0
Total Split (%)	15.0%	43.3%	0.0%	15.0%	43.3%	0.0%	16.7%	16.7%	0.0%	25.0%	0.0%	25.0%
Maximum Green (s)	4.0	21.0		4.0	21.0		5.0	5.0		10.0		10.0
Yellow Time (s)	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
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		None	None		None		None
Walk Time (s)		5.0										
Flash Dont Walk (s)		11.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	5.1	21.6			17.2					10.3		10.3
Actuated g/C Ratio	0.12	0.53			0.42					0.25		0.25
v/c Ratio	0.19	0.39			0.65					0.48		0.24
Control Delay	21.4	5.7			11.0					17.2		5.9

Existing 2009 PM Peak Hour  
 22: Avenue 48 & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	21.4	5.7			11.0					17.2		5.9
LOS	C	A			B					B		A
Approach Delay		7.1			11.0							
Approach LOS		A			B							
Queue Length 50th (ft)	9	43			91					51		0
Queue Length 95th (ft)	25	66			141					91		30
Internal Link Dist (ft)		2548			2552			490			2612	
Turn Bay Length (ft)	275									150		
Base Capacity (vph)	393	2096			1705					949		507
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	0.19	0.35			0.56					0.44		0.22

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 40.6

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 10.5

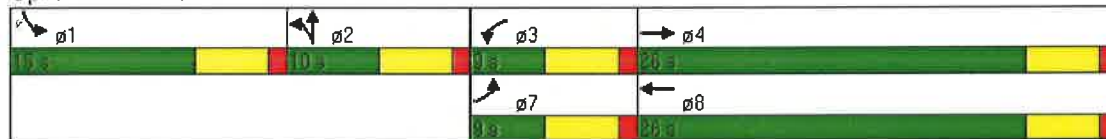
Intersection LOS: B

Intersection Capacity Utilization 54.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 22: Avenue 48 & Dune Palms Road



Existing 2009 PM Peak Hour  
23: Fred Waring Drive & Dune Palms Road

6/7/2010

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50	50	50	50
Trailing Detector (ft)	0		0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor	1.00					0.97
Frt	0.983					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3435	0	1752	3505	1752	1568
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3435	0	1752	3505	1752	1528
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26					205
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	2648			1375	2640	
Travel Time (s)	60.2			31.3	60.0	
Volume (vph)	854	111	99	723	109	122
Confl. Peds. (#/hr)		10				10
Peak Hour Factor	0.84	0.84	0.80	0.80	0.78	0.78
Growth Factor	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	1332	173	162	1184	183	205
Lane Group Flow (vph)	1505	0	162	1184	183	205
Turn Type			Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Detector Phases	4		3	8	2	2
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	41.0	0.0	13.0	54.0	21.0	21.0
Total Split (%)	54.7%	0.0%	17.3%	72.0%	28.0%	28.0%
Maximum Green (s)	36.0		8.0	49.0	16.0	16.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		None	Max	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	37.1		9.0	50.1	13.2	13.2
Actuated g/C Ratio	0.52		0.13	0.70	0.19	0.19
v/c Ratio	0.84		0.73	0.48	0.56	0.46
Control Delay	20.5		52.7	5.9	33.4	7.6

Existing 2009 PM Peak Hour  
 23: Fred Waring Drive & Dune Palms Road

6/7/2010



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	20.5		52.7	5.9	33.4	7.6
LOS	C		D	A	C	A
Approach Delay	20.5			11.6	19.8	
Approach LOS	C			B	B	
Queue Length 50th (ft)	274		70	102	74	0
Queue Length 95th (ft)	358		#139	137	112	31
Internal Link Dist (ft)	2568			1295	2560	
Turn Bay Length (ft)			150			
Base Capacity (vph)	1800		221	2463	397	505
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	0.84		0.73	0.48	0.46	0.41

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 71.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 16.7

Intersection LOS: B

Intersection Capacity Utilization 62.3%

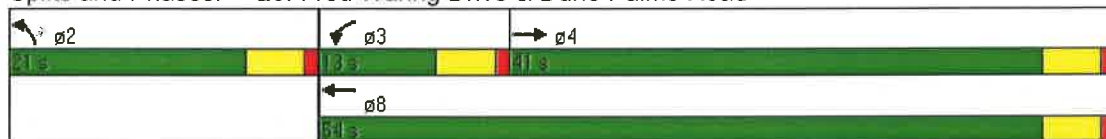
ICU Level of Service B

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 23: Fred Waring Drive & Dune Palms Road



Existing 2009 PM Peak Hour  
24: SR-111 & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	550		150	150		175	200		150
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.97			0.97			0.97
Frnt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1525	3400	5036	1525	3400	3505	1525	3400	3505	1525
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			125			133			117
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1333			1760			2692			3853	
Travel Time (s)		30.3			40.0			61.2			87.6	
Volume (vph)	143	1397	106	118	1085	132	78	134	122	141	174	108
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	155	1518	115	128	1179	143	85	146	133	153	189	117
Lane Group Flow (vph)	155	1518	115	128	1179	143	85	146	133	153	189	117
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	21.0	34.0	34.0	9.0	22.0	22.0	9.0	21.0	21.0	21.0	33.0	33.0
Total Split (%)	24.7%	40.0%	40.0%	10.6%	25.9%	25.9%	10.6%	24.7%	24.7%	24.7%	38.8%	38.8%
Maximum Green (s)	16.0	29.0	29.0	4.0	17.0	17.0	4.0	16.0	16.0	16.0	28.0	28.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0		0	0	0	0	0
Act Effct Green (s)	9.7	32.6	32.6	5.6	29.1	29.1	5.6	9.5	9.5	9.7	13.1	13.1
Actuated g/C Ratio	0.15	0.54	0.54	0.09	0.48	0.48	0.09	0.15	0.15	0.15	0.21	0.21
v/c Ratio	0.30	0.56	0.13	0.42	0.49	0.18	0.28	0.28	0.39	0.29	0.26	0.28
Control Delay	28.9	16.2	5.1	37.0	18.6	6.0	34.6	29.1	9.8	29.0	23.9	7.2

Existing 2009 PM Peak Hour  
24: SR-111 & Dune Palms Road

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	28.9	16.2	5.1	37.0	18.6	6.0	34.6	29.1	9.8	29.0	23.9	7.2
LOS	C	B	A	D	B	A	C	C	A	C	C	A
Approach Delay		16.6			19.0			23.3			21.3	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	31	186	5	27	149	5	18	30	0	30	36	0
Queue Length 95th (ft)	58	268	34	#57	229	44	41	57	45	58	62	37
Internal Link Dist (ft)		1253			1680			2612			3773	
Turn Bay Length (ft)	150		150	550		150	150		175	200		150
Base Capacity (vph)	867	2714	865	303	2408	794	303	892	487	867	1332	652
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.56	0.13	0.42	0.49	0.18	0.28	0.16	0.27	0.18	0.14	0.18

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 60.8

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 18.6

Intersection LOS: B

Intersection Capacity Utilization 54.3%

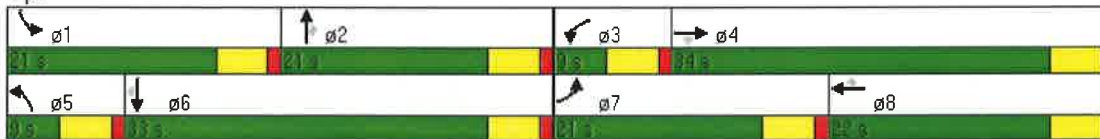
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 24: SR-111 & Dune Palms Road





Existing 2009 PM Peak Hour  
27: Miles Avenue & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		150
Storage Lanes	1		0	1		0	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor		0.98			0.99				0.97			0.97
Frt		0.873			0.939				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	2991	0	1752	3255	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	2991	0	1752	3255	0	3400	5036	1526	3400	5036	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		196			29				16			96
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2656			1279			1256			2632	
Travel Time (s)		60.4			29.1			28.5			59.8	
Volume (vph)	127	23	126	9	16	11	70	671	11	6	766	65
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.73	0.73	0.73	0.50	0.50	0.50	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	228	41	226	24	42	29	103	988	16	9	1127	96
Lane Group Flow (vph)	228	267	0	24	71	0	103	988	16	9	1127	96
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	22.0	34.0	0.0	9.0	21.0	0.0	9.0	28.0	28.0	9.0	28.0	28.0
Total Split (%)	27.5%	42.5%	0.0%	11.3%	26.3%	0.0%	11.3%	35.0%	35.0%	11.3%	35.0%	35.0%
Maximum Green (s)	17.0	29.0		4.0	16.0		4.0	23.0	23.0	4.0	23.0	23.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	15.4	35.4		5.0	19.6		5.0	31.2	31.2	5.0	25.8	25.8
Actuated g/C Ratio	0.19	0.44		0.06	0.24		0.06	0.39	0.39	0.06	0.32	0.32
v/c Ratio	0.68	0.19		0.22	0.09		0.48	0.50	0.03	0.04	0.69	0.17
Control Delay	40.3	5.2		40.7	17.1		38.4	16.6	6.4	35.8	27.0	5.8

Existing 2009 PM Peak Hour  
 27: Miles Avenue & Jefferson Street

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	5.2		40.7	17.1		38.4	16.6	6.4	35.8	27.0	5.8
LOS	D	A		D	B		D	B	A	D	C	A
Approach Delay		21.4			23.1			18.5			25.4	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	105	9		12	8		22	156	1	2	184	0
Queue Length 95th (ft)	134	22		19	11		53	228	m6	9	230	32
Internal Link Dist (ft)		2576			1199			1176			2552	
Turn Bay Length (ft)	150			150			150			150		150
Base Capacity (vph)	394	1433		110	821		213	1964	605	213	1624	557
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.19		0.22	0.09		0.48	0.50	0.03	0.04	0.69	0.17

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 21 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 22.0

Intersection LOS: C

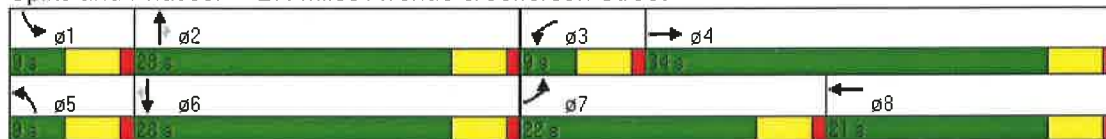
Intersection Capacity Utilization 48.6%

ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 27: Miles Avenue & Jefferson Street



Existing 2009 PM Peak Hour  
28: Miles Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	150		200	200		275
Storage Lanes	1		0	2		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor		0.99			0.98				0.97			0.97
Frt		0.967			0.906				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3369	0	3400	3122	0	1752	5036	1568	1752	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3369	0	3400	3122	0	1752	5036	1526	1752	5036	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42			155				33			172
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4499			3481			3324			2114	
Travel Time (s)		102.3			79.1			75.5			48.0	
Volume (vph)	45	233	66	90	86	143	254	1539	30	43	1285	158
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	49	253	72	98	93	155	276	1673	33	47	1397	172
Lane Group Flow (vph)	49	325	0	98	248	0	276	1673	33	47	1397	172
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	9.0	21.0	0.0	9.0	21.0	0.0	20.0	40.0	40.0	10.0	30.0	30.0
Total Split (%)	11.3%	26.3%	0.0%	11.3%	26.3%	0.0%	25.0%	50.0%	50.0%	12.5%	37.5%	37.5%
Maximum Green (s)	4.0	16.0		4.0	16.0		15.0	35.0	35.0	5.0	25.0	25.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	5.0	18.8		5.0	20.6		15.3	40.0	40.0	6.0	26.7	26.7
Actuated g/C Ratio	0.06	0.24		0.06	0.26		0.19	0.50	0.50	0.08	0.33	0.33
v/c Ratio	0.45	0.39		0.46	0.27		0.83	0.66	0.04	0.36	0.83	0.28
Control Delay	49.3	24.8		43.6	11.3		53.2	7.7	0.5	47.4	18.2	2.5

Existing 2009 PM Peak Hour  
28: Miles Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	24.8		43.6	11.3		53.2	7.7	0.5	47.4	18.2	2.5
LOS	D	C		D	B		D	A	A	D	B	A
Approach Delay		28.0			20.4			13.9			17.3	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	24	64		24	20		114	65	1	25	63	0
Queue Length 95th (ft)	#60	103		48	50		m147	152	m1	m44	125	m5
Internal Link Dist (ft)		4419			3401			3244			2034	
Turn Bay Length (ft)	200			200			150		200	200		275
Base Capacity (vph)	110	824		213	919		350	2518	779	131	1684	625
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.39		0.46	0.27		0.79	0.66	0.04	0.36	0.83	0.28

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 11 (14%), Referenced to phase 2:SET and 6:NWT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 16.9

Intersection LOS: B

Intersection Capacity Utilization 68.9%

ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 28: Miles Avenue & Washington Street



Existing 2009 PM Peak Hour  
29: Miles Avenue & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	100		0
Storage Lanes	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99			1.00			1.00	
Fr t		0.959			0.962			0.980			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3340	0	1752	3352	0	1752	3424	0	1752	3461	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3340	0	1752	3352	0	1752	3424	0	1752	3461	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			56			29			13	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3481			2620			2613			2644	
Travel Time (s)		79.1			59.5			59.4			60.1	
Volume (vph)	29	252	93	36	111	38	63	377	60	32	349	27
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	40	351	130	53	163	56	90	537	85	46	502	39
Lane Group Flow (vph)	40	481	0	53	219	0	90	622	0	46	541	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0
Total Split (%)	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%
Maximum Green (s)	4.0	16.0		4.0	16.0		4.0	16.0		4.0	16.0	
Yellow Time (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	5.0	17.3		5.0	19.0		5.0	19.3		5.0	17.3	
Actuated g/C Ratio	0.08	0.32		0.09	0.35		0.09	0.35		0.09	0.32	
v/c Ratio	0.27	0.43		0.35	0.18		0.58	0.51		0.30	0.49	
Control Delay	31.6	14.7		32.9	11.4		43.8	17.1		31.5	18.0	

Existing 2009 PM Peak Hour  
29: Miles Avenue & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.6	14.7		32.9	11.4		43.8	17.1		31.5	18.0	
LOS	C	B		C	B		D	B		C	B	
Approach Delay		16.0			15.6			20.5			19.1	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	14	60		19	17		32	97		16	84	
Queue Length 95th (ft)	40	98		48	45		#91	146		44	127	
Internal Link Dist (ft)		3401			2540			2533			2564	
Turn Bay Length (ft)	100			100			100			100		
Base Capacity (vph)	147	1121		151	1202		156	1227		151	1108	
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	0.27	0.43		0.35	0.18		0.58	0.51		0.30	0.49	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 54.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 49.6%

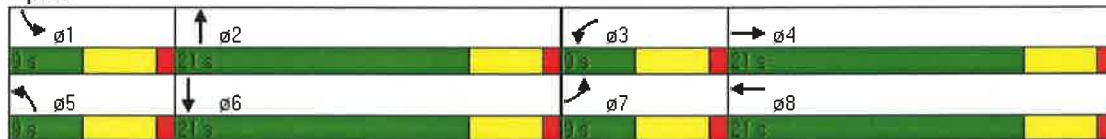
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 29: Miles Avenue & Adams Street



Existing 2009 PM Peak Hour  
30: Miles Avenue & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	150		0	125		0
Storage Lanes	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.970			0.984			0.972			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3384	0	1752	3440	0	1752	3392	0	1752	3424	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3384	0	1752	3440	0	1752	3392	0	1752	3424	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			21			47			29	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2620			2656			1383			2640	
Travel Time (s)		59.5			60.4			31.4			60.0	
Volume (vph)	38	258	63	41	127	15	48	203	47	3	150	24
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.72	0.72	0.72	0.88	0.88	0.88	0.87	0.87	0.87	0.94	0.94	0.94
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	69	469	115	61	189	22	72	306	71	4	209	33
Lane Group Flow (vph)	69	584	0	61	211	0	72	377	0	4	242	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0
Total Split (%)	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%
Maximum Green (s)	4.0	16.0		4.0	16.0		4.0	16.0		4.0	16.0	
Yellow Time (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	5.0	17.5		5.0	17.5		5.0	20.7		5.1	17.5	
Actuated g/C Ratio	0.09	0.33		0.09	0.33		0.09	0.39		0.08	0.33	
v/c Ratio	0.44	0.50		0.39	0.18		0.46	0.28		0.03	0.21	
Control Delay	35.7	16.6		33.5	14.1		36.8	11.5		27.5	13.9	

Existing 2009 PM Peak Hour  
30: Miles Avenue & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.7	16.6		33.5	14.1		36.8	11.5		27.5	13.9	
LOS	D	B		C	B		D	B		C	B	
Approach Delay		18.6			18.5			15.6			14.1	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	24	86		22	27		26	37		1	30	
Queue Length 95th (ft)	46	97		53	48		#65	78		9	55	
Internal Link Dist (ft)		2540			2576			1303			2560	
Turn Bay Length (ft)	200			200			150			125		
Base Capacity (vph)	156	1157		156	1156		156	1358		149	1156	
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	0.50		0.39	0.18		0.46	0.28		0.03	0.21	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 52.8

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 17.1

Intersection LOS: B

Intersection Capacity Utilization 46.8%

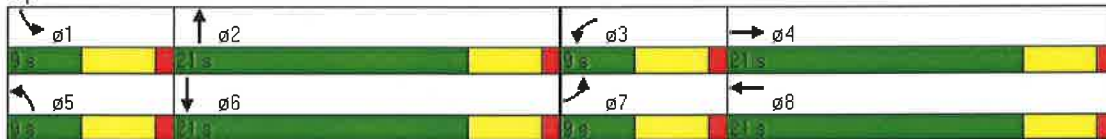
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.
























Splits and Phases: 30: Miles Avenue & Dune Palms Road





Existing 2009 PM Peak Hour  
32: SR-111 & Miles Avenue

6/7/2010

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		200	400		0	75		75	125		0
Storage Lanes	1		1	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96		1.00				0.96			0.96
Frts			0.850		0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3501	0	1752	1845	1568	1752	1845	1568
Flt Permitted	0.950			0.950			0.745			0.728		
Satd. Flow (perm)	1752	3505	1510	1752	3501	0	1374	1845	1507	1343	1845	1507
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49		2				78			135
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1414			4473			454			2121	
Travel Time (s)		32.1			101.7			10.3			48.2	
Volume (vph)	124	1276	37	45	878	7	30	26	46	2	13	91
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.77	0.77	0.77	0.88	0.88	0.88
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	166	1706	49	62	1211	10	51	44	78	3	19	135
Lane Group Flow (vph)	166	1706	49	62	1221	0	51	44	78	3	19	135
Turn Type	Prot		Perm	Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			2	
Permitted Phases			4				2		2	2		2
Detector Phases	7	4	4	3	8		2	2	2	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	13.0	36.0	36.0	9.0	32.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (%)	23.6%	65.5%	65.5%	16.4%	58.2%	0.0%	18.2%	18.2%	18.2%	18.2%	18.2%	18.2%
Maximum Green (s)	8.0	31.0	31.0	4.0	27.0		5.0	5.0	5.0	5.0	5.0	5.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max		None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0							
Flash Dont Walk (s)		11.0	11.0		11.0							
Pedestrian Calls (#/hr)		0	0		0							
Act Effct Green (s)	9.3	42.4	42.4	5.2	36.9		6.3	6.3	6.3	6.3	6.3	6.3
Actuated g/C Ratio	0.15	0.70	0.70	0.08	0.61		0.10	0.10	0.10	0.10	0.10	0.10
v/c Ratio	0.65	0.70	0.05	0.44	0.57		0.37	0.24	0.35	0.02	0.10	0.49
Control Delay	34.1	9.7	2.0	34.1	10.3		30.9	25.9	11.7	22.3	23.5	12.0

Existing 2009 PM Peak Hour  
32: SR-111 & Miles Avenue

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	34.1	9.7	2.0	34.1	10.3		30.9	25.9	11.7	22.3	23.5	12.0
LOS	C	A	A	C	B		C	C	B	C	C	B
Approach Delay		11.6			11.4			20.9			13.6	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	51	207	0	20	143		16	14	0	1	6	0
Queue Length 95th (ft)	#113	300	10	50	205		36	32	23	7	21	39
Internal Link Dist (ft)		1334			4393			374			2041	
Turn Bay Length (ft)	400		200	400			75		75	125		
Base Capacity (vph)	262	2447	1069	142	2127		138	184	221	135	184	273
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.70	0.05	0.44	0.57		0.37	0.24	0.35	0.02	0.10	0.49

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 60.8

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 12.1

Intersection LOS: B

Intersection Capacity Utilization 69.7%

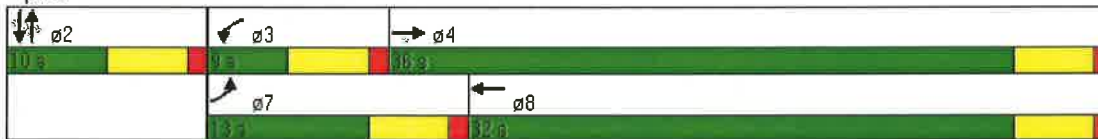
ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 32: SR-111 & Miles Avenue



Existing 2009 PM Peak Hour  
33: SR-111 & La Quinta Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		150	400		0	100		0	100		0
Storage Lanes	2		1	2		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97		1.00				0.97			0.97
Fr <sub>t</sub>			0.850		0.978				0.850			0.850
Fl <sub>t</sub> Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	4906	0	1752	1845	1568	1752	1845	1568
Fl <sub>t</sub> Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1526	3400	4906	0	1752	1845	1526	1752	1845	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179		47				150			61
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1329			1333			571			343	
Travel Time (s)		30.2			30.3			13.0			7.8	
Volume (vph)	60	1087	150	154	879	153	147	24	121	125	35	43
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.84	0.84	0.84	0.92	0.92	0.92
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	86	1565	216	215	1225	213	229	37	189	178	50	61
Lane Group Flow (vph)	86	1565	216	215	1438	0	229	37	189	178	50	61
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phases	7	4	4	3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	9.0	31.0	31.0	10.0	32.0	0.0	17.0	24.0	24.0	15.0	22.0	22.0
Total Split (%)	11.3%	38.8%	38.8%	12.5%	40.0%	0.0%	21.3%	30.0%	30.0%	18.8%	27.5%	27.5%
Maximum Green (s)	4.0	26.0	26.0	5.0	27.0		12.0	19.0	19.0	10.0	17.0	17.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	5.0	27.0	27.0	6.0	29.8		12.8	20.2	20.2	10.8	18.2	18.2
Actuated g/C Ratio	0.06	0.34	0.34	0.08	0.37		0.16	0.25	0.25	0.14	0.23	0.23
v/c Ratio	0.40	0.92	0.34	0.84	0.77		0.82	0.08	0.38	0.75	0.12	0.15
Control Delay	51.3	25.0	3.8	66.0	25.5		57.1	23.6	9.6	55.0	25.7	8.4

Existing 2009 PM Peak Hour  
33: SR-111 & La Quinta Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	51.3	25.0	3.8	66.0	25.5		57.1	23.6	9.6	55.0	25.7	8.4
LOS	D	C	A	E	C		E	C	A	D	C	A
Approach Delay		23.8			30.7			34.6			40.1	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	19	267	21	55	229		112	14	15	87	20	0
Queue Length 95th (ft)	m33	#362	m33	#114	286		#201	34	56	#182	48	29
Internal Link Dist (ft)		1249			1253			491			263	
Turn Bay Length (ft)	400		150	400			100			100		
Base Capacity (vph)	213	1700	634	255	1857		285	467	498	241	421	395
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.92	0.34	0.84	0.77		0.80	0.08	0.38	0.74	0.12	0.15

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 19 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 28.7

Intersection LOS: C

Intersection Capacity Utilization 60.9%

ICU Level of Service B

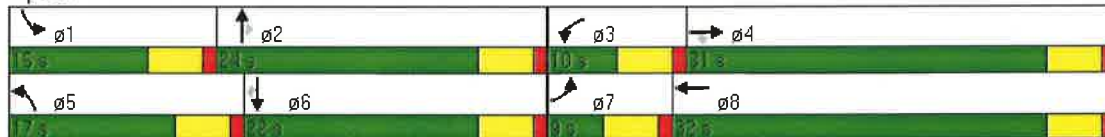
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 33: SR-111 & La Quinta Drive



Existing 2009 PM Peak Hour  
35: Avenue 47 & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↗	↗	↗	↗	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	200		0	250		0
Storage Lanes	0		0	0		1	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.91
Ped Bike Factor		0.99				0.97		1.00			1.00	
Frt		0.966				0.850		0.994				
Flt Protected		0.988			0.959		0.950			0.950		
Satd. Flow (prot)	0	1748	0	0	1769	1568	1752	4996	0	1752	5035	0
Flt Permitted		0.988			0.959		0.950			0.950		
Satd. Flow (perm)	0	1748	0	0	1769	1523	1752	4996	0	1752	5035	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				76		8				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			677			2717			2658	
Travel Time (s)		6.8			15.4			61.8			60.4	
Volume (vph)	4	8	4	39	7	49	9	1001	43	24	1381	3
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.57	0.57	0.57	0.85	0.85	0.85	0.92	0.92	0.92	0.82	0.82	0.82
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	9	18	9	60	11	76	13	1425	61	38	2206	5
Lane Group Flow (vph)	0	36	0	0	71	76	13	1486	0	38	2211	0
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases						7						
Detector Phases	4	4		7	7	7	5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	21.0	9.0	21.0		9.0	21.0	
Total Split (s)	21.0	21.0	0.0	21.0	21.0	21.0	9.0	38.0	0.0	10.0	39.0	0.0
Total Split (%)	23.3%	23.3%	0.0%	23.3%	23.3%	23.3%	10.0%	42.2%	0.0%	11.1%	43.3%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0	16.0	4.0	33.0		5.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		8.3			10.1	10.1	5.3	51.6		6.4	53.9	
Actuated g/C Ratio		0.10			0.13	0.13	0.06	0.66		0.08	0.69	
v/c Ratio		0.20			0.32	0.29	0.12	0.45		0.28	0.63	
Control Delay		26.8			29.8	10.8	36.7	10.0		37.3	11.4	

Existing 2009 PM Peak Hour  
35: Avenue 47 & Washington Street

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		26.8			29.8	10.8	36.7	10.0		37.3	11.4	
LOS		C			C	B	D	B		D	B	
Approach Delay		26.8			19.9			10.3			11.9	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		7			19	0	4	55		11	104	
Queue Length 95th (ft)		22			63	31	23	256		43	386	
Internal Link Dist (ft)		220			597			2637			2578	
Turn Bay Length (ft)						100	200			250		
Base Capacity (vph)		342			372	380	110	3321		134	3491	
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		0.11			0.19	0.20	0.12	0.45		0.28	0.63	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 77.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 11.7

Intersection LOS: B

Intersection Capacity Utilization 52.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 35: Avenue 47 & Washington Street



Existing 2009 PM Peak Hour  
38: Westward Ho Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	100		0
Storage Lanes	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.91
Ped Bike Factor		0.97			0.99			1.00			1.00	
Frnt		0.876			0.956			0.999			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1568	0	1752	1745	0	1752	5029	0	1752	4987	0
Flt Permitted	0.800			0.800			0.950			0.950		
Satd. Flow (perm)	1476	1568	0	1476	1745	0	1752	5029	0	1752	4987	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81			7			4			30	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5249			1348			2668			1328	
Travel Time (s)		119.3			30.6			60.6			30.2	
Volume (vph)	42	11	53	5	10	4	61	733	7	2	807	48
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.86	0.86	0.86	0.79	0.79	0.79	0.86	0.86	0.86	0.80	0.80	0.80
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	64	17	81	8	17	7	93	1117	11	3	1321	79
Lane Group Flow (vph)	64	98	0	8	24	0	93	1128	0	3	1400	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Detector Phases	4	4		4	4		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		9.0	21.0		9.0	21.0	
Total Split (s)	9.0	9.0	0.0	9.0	9.0	0.0	9.0	22.0	0.0	9.0	22.0	0.0
Total Split (%)	22.5%	22.5%	0.0%	22.5%	22.5%	0.0%	22.5%	55.0%	0.0%	22.5%	55.0%	0.0%
Maximum Green (s)	4.0	4.0		4.0	4.0		4.0	17.0		4.0	17.0	
Yellow Time (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)	5.0	5.0		5.0	5.0		5.3	27.8		5.3	24.2	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.13	0.70		0.13	0.60	
v/c Ratio	0.35	0.37		0.04	0.11		0.40	0.32		0.01	0.46	
Control Delay	21.7	10.9		16.2	14.7		21.9	4.2		19.0	3.8	

Existing 2009 PM Peak Hour  
 38: Westward Ho Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.7	10.9		16.2	14.7		21.9	4.2		19.0	3.8	
LOS	C	B		B	B		C	A		B	A	
Approach Delay		15.2			15.1			5.6			3.8	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	13	4		2	3		20	26		1	43	
Queue Length 95th (ft)	37	30		9	15		48	80		m4	83	
Internal Link Dist (ft)		5169			1268			2588			1248	
Turn Bay Length (ft)	100			100			100			100		
Base Capacity (vph)	185	267		185	224		232	3496		232	3029	
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	0.35	0.37		0.04	0.11		0.40	0.32		0.01	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 40

Actuated Cycle Length: 40

Offset: 38 (95%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

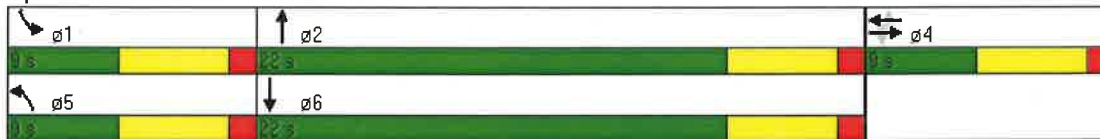
Intersection Signal Delay: 5.4 Intersection LOS: A

Intersection Capacity Utilization 47.1% ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 38: Westward Ho Drive & Jefferson Street





Existing 2009 PM Peak Hour  
41: Westward Ho Drive & Adams Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↕		↘	↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	100	
Storage Lanes	1	1		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor		0.98	0.99			
Fr <sub>t</sub>		0.850	0.975			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	1568	3395	0	1752	3505
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1752	1532	3395	0	1752	3505
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		77	45			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	5249		2276			2613
Travel Time (s)	119.3		51.7			59.4
Volume (vph)	69	38	509	102	69	481
Confl. Peds. (#/hr)		10		10		
Peak Hour Factor	0.65	0.65	0.89	0.89	0.82	0.82
Growth Factor	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	139	77	749	150	110	768
Lane Group Flow (vph)	139	77	899	0	110	768
Turn Type		Perm			Prot	
Protected Phases	4		2		1	6
Permitted Phases		4				
Detector Phases	4	4	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.0	21.0	21.0		9.0	21.0
Total Split (s)	21.0	21.0	27.0	0.0	12.0	39.0
Total Split (%)	35.0%	35.0%	45.0%	0.0%	20.0%	65.0%
Maximum Green (s)	16.0	16.0	22.0		7.0	34.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	5.0	5.0	5.0			5.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	12.5	12.5	36.4		8.9	48.3
Actuated g/C Ratio	0.18	0.18	0.54		0.13	0.71
v/c Ratio	0.44	0.23	0.49		0.49	0.31
Control Delay	23.3	6.8	11.5		29.6	4.5

Existing 2009 PM Peak Hour  
 41: Westward Ho Drive & Adams Street

6/7/2010

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	23.3	6.8	11.5		29.6	4.5
LOS	C	A	B		C	A
Approach Delay	17.4		11.5			7.6
Approach LOS	B		B			A
Queue Length 50th (ft)	39	0	103		32	45
Queue Length 95th (ft)	55	12	172		69	75
Internal Link Dist (ft)	5169		2196			2533
Turn Bay Length (ft)	150				100	
Base Capacity (vph)	439	442	1848		227	2504
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	0.32	0.17	0.49		0.48	0.31

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 67.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 10.4

Intersection LOS: B

Intersection Capacity Utilization 45.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 41: Westward Ho Drive & Adams Street



Existing 2009 PM Peak Hour  
42: SR-111 & Depot Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350		150	250		150	100		0	50		0
Storage Lanes	2		1	2		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98			0.98			0.96		0.96	
Frt			0.850			0.850			0.850		0.870	
Flt Protected	0.950			0.950			0.950	0.965		0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	1665	1691	1568	1752	1543	0
Flt Permitted	0.950			0.950			0.950	0.965		0.950		
Satd. Flow (perm)	3400	5036	1537	3400	5036	1533	1665	1691	1513	1752	1543	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			339			54			168		117	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1760			840			1007			753	
Travel Time (s)		40.0			19.1			22.9			17.1	
Volume (vph)	206	1364	312	217	1176	50	227	38	155	87	17	108
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	224	1483	339	236	1278	54	247	41	168	95	18	117
Lane Group Flow (vph)	224	1483	339	236	1278	54	140	148	168	95	135	0
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		1	1	
Permitted Phases			4			8			2			
Detector Phases	7	4	4	3	8	8	2	2	2	1	1	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	9.0	9.0	9.0	21.0	21.0	9.0	9.0	9.0	9.0	9.0	
Total Split (s)	9.0	25.0	25.0	10.0	26.0	26.0	11.0	11.0	11.0	9.0	9.0	0.0
Total Split (%)	16.4%	45.5%	45.5%	18.2%	47.3%	47.3%	20.0%	20.0%	20.0%	16.4%	16.4%	0.0%
Maximum Green (s)	4.0	20.0	20.0	5.0	21.0	21.0	6.0	6.0	6.0	4.0	4.0	
Yellow Time (s)	4.0	4.0	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	1.0	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)					5.0	5.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	5.5	23.8	23.8	6.6	24.5	24.5	7.6	7.6	7.6	5.5	5.5	
Actuated g/C Ratio	0.11	0.51	0.51	0.13	0.52	0.52	0.15	0.15	0.15	0.11	0.11	
v/c Ratio	0.58	0.58	0.36	0.52	0.49	0.07	0.55	0.57	0.45	0.48	0.48	
Control Delay	32.5	14.3	3.0	28.1	12.6	3.9	34.2	35.2	9.1	35.3	14.7	

Existing 2009 PM Peak Hour  
42: SR-111 & Depot Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	32.5	14.3	3.0	28.1	12.6	3.9	34.2	35.2	9.1	35.3	14.7	
LOS	C	B	A	C	B	A	C	D	A	D	B	
Approach Delay		14.4			14.6			25.3			23.2	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	37	149	0	39	117	0	47	49	0	31	6	
Queue Length 95th (ft)	#82	198	41	#76	158	17	#120	#128	45	#88	#57	
Internal Link Dist (ft)		1680			760			927			673	
Turn Bay Length (ft)	350		150	250		150	100			50		
Base Capacity (vph)	385	2546	944	456	2618	823	257	261	376	198	279	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.58	0.58	0.36	0.52	0.49	0.07	0.54	0.57	0.45	0.48	0.48	

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 47.1

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 64.7%

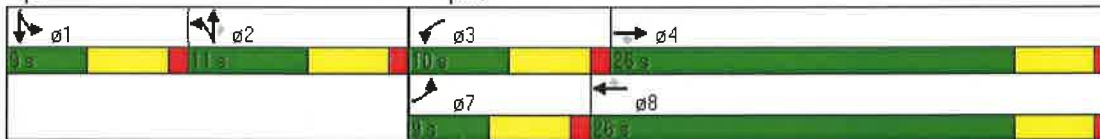
ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 42: SR-111 & Depot Drive



Existing 2009 PM Peak Hour  
45: Pebble Beach Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor		0.97			0.98			1.00			1.00	
Frt		0.850			0.923			0.995			0.996	
Flt Protected	0.950				0.981		0.950			0.950		
Satd. Flow (prot)	1752	1526	0	0	1645	0	1752	5004	0	1752	5010	0
Flt Permitted	0.765				0.908		0.950			0.950		
Satd. Flow (perm)	1411	1526	0	0	1522	0	1752	5004	0	1752	5010	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		272			39			7			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		407			583			1328			1256	
Travel Time (s)		9.3			13.3			30.2			28.5	
Volume (vph)	2	0	12	17	1	25	15	761	25	33	809	22
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.70	0.70	0.70	0.83	0.83	0.83	0.96	0.96	0.96	0.82	0.82	0.82
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	4	0	22	27	2	39	20	1038	34	53	1292	35
Lane Group Flow (vph)	4	22	0	0	68	0	20	1072	0	53	1327	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Detector Phases	4	4		4	4		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	27.0	27.0	0.0	27.0	27.0	0.0	15.0	37.0	0.0	16.0	38.0	0.0
Total Split (%)	33.8%	33.8%	0.0%	33.8%	33.8%	0.0%	18.8%	46.3%	0.0%	20.0%	47.5%	0.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		10.0	32.0		11.0	33.0	
Yellow Time (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	8.3	8.3			8.3		7.5	58.1		8.9	61.6	
Actuated g/C Ratio	0.10	0.10			0.10		0.09	0.73		0.11	0.77	
v/c Ratio	0.03	0.05			0.35		0.12	0.29		0.27	0.34	
Control Delay	31.0	0.3			22.6		29.5	7.5		53.5	0.8	

Existing 2009 PM Peak Hour  
45: Pebble Beach Drive & Jefferson Street

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	31.0	0.3			22.6		29.5	7.5		53.5	0.8	
LOS	C	A			C		C	A		D	A	
Approach Delay		5.0			22.6			7.9			2.8	
Approach LOS		A			C			A			A	
Queue Length 50th (ft)	2	0			14		9	102		29	5	
Queue Length 95th (ft)	8	0			43		m23	123		m44	13	
Internal Link Dist (ft)		327			503			1248			1176	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	406	633			465		241	3639		263	3862	
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	0.03			0.15		0.08	0.29		0.20	0.34	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 63 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 5.5

Intersection LOS: A

Intersection Capacity Utilization 45.8%

ICU Level of Service A

Analysis Period (min) 15























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

Splits and Phases: 45: Pebble Beach Drive & Jefferson Street



Existing 2009 PM Peak Hour  
48: SR-111 & Mountain Cove Drive

6/7/2010

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	575		250	550		475	0		0	0		0
Storage Lanes	1		1	1		1	0		1	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96			0.96			0.97			0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1752	1568	0	1752	1568
Flt Permitted	0.950			0.950				0.750			0.742	
Satd. Flow (perm)	1752	3505	1498	1752	3505	1498	0	1383	1526	0	1369	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			29			8			33			8
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4473			1886			727			469	
Travel Time (s)		101.7			42.9			16.5			10.7	
Volume (vph)	4	1297	23	25	906	6	13	0	18	6	0	4
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97	0.71	0.71	0.71	0.63	0.63	0.63
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	6	1808	32	34	1224	8	24	0	33	12	0	8
Lane Group Flow (vph)	6	1808	32	34	1224	8	0	24	33	0	12	8
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			2	
Permitted Phases			4			8	2		2	2		2
Detector Phases	7	4	4	3	8	8	2	2	2	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	21.0	38.0	38.0	21.0	38.0	38.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (%)	26.3%	47.5%	47.5%	26.3%	47.5%	47.5%	26.3%	26.3%	26.3%	26.3%	26.3%	26.3%
Maximum Green (s)	16.0	33.0	33.0	16.0	33.0	33.0	16.0	16.0	16.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	6.8	49.5	49.5	8.1	52.7	52.7		17.0	17.0		17.0	17.0
Actuated g/C Ratio	0.08	0.62	0.62	0.10	0.66	0.66		0.21	0.21		0.21	0.21
v/c Ratio	0.04	0.83	0.03	0.19	0.53	0.01		0.08	0.09		0.04	0.02
Control Delay	34.0	19.1	4.3	44.9	3.3	0.9		26.2	10.3		25.6	14.8

Existing 2009 PM Peak Hour  
48: SR-111 & Mountain Cove Drive

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	34.0	19.1	4.3	44.9	3.3	0.9		26.2	10.3		25.6	14.8
LOS	C	B	A	D	A	A		C	B		C	B
Approach Delay		18.9			4.4			17.0			21.3	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	3	260	1	19	46	0		10	0		5	0
Queue Length 95th (ft)	14	#643	13	m34	63	m0		23	14		13	7
Internal Link Dist (ft)		4393			1806			647			389	
Turn Bay Length (ft)	575		250	550		475						
Base Capacity (vph)	372	2171	939	372	2308	989		294	350		291	331
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.02	0.83	0.03	0.09	0.53	0.01		0.08	0.09		0.04	0.02

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:, Start of Green, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 13.1

Intersection LOS: B

Intersection Capacity Utilization 83.6%

ICU Level of Service E

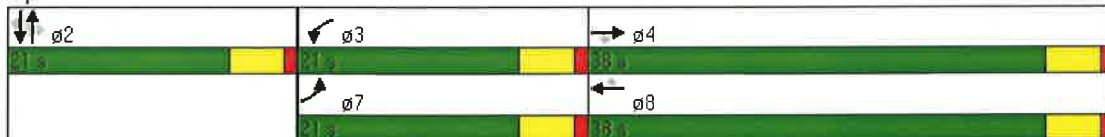
Analysis Period (min) 15

# 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.

Splits and Phases: 48: SR-111 & Mountain Cove Drive





Existing 2009 PM Peak Hour  
51: SR-111 & Channel Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		0	0		0	0		0
Storage Lanes	1		1	1		1	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	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96			0.96		0.98			0.98	
Frt			0.850			0.850		0.865			0.876	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	1557	0	1752	1580	0
Flt Permitted	0.950			0.950			0.696			0.699		
Satd. Flow (perm)	1752	3505	1498	1752	3505	1498	1284	1557	0	1289	1580	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			37		80			78	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1886			930			408			309	
Travel Time (s)		42.9			21.1			9.3			7.0	
Volume (vph)	53	1250	60	35	817	26	59	5	43	46	11	53
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.84	0.84	0.84	0.93	0.93	0.93	0.70	0.70	0.70	0.89	0.89	0.89
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	83	1949	94	49	1151	37	110	9	80	68	16	78
Lane Group Flow (vph)	83	1949	94	49	1151	37	110	89	0	68	94	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2				2
Permitted Phases			4			8	2			2		
Detector Phases	7	4	4	3	8	8	2	2		2	2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0	21.0	21.0	21.0		21.0	21.0	
Total Split (s)	13.0	50.0	50.0	9.0	46.0	46.0	21.0	21.0	0.0	21.0	21.0	0.0
Total Split (%)	16.3%	62.5%	62.5%	11.3%	57.5%	57.5%	26.3%	26.3%	0.0%	26.3%	26.3%	0.0%
Maximum Green (s)	8.0	45.0	45.0	4.0	41.0	41.0	16.0	16.0		16.0	16.0	
Yellow Time (s)	4.0	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	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	C-Max	C-Max		C-Max	C-Max	
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	8.4	49.6	49.6	5.0	44.7	44.7	17.0	17.0		17.0	17.0	
Actuated g/C Ratio	0.10	0.62	0.62	0.06	0.56	0.56	0.21	0.21		0.21	0.21	
v/c Ratio	0.45	0.90	0.10	0.45	0.59	0.04	0.40	0.23		0.25	0.24	
Control Delay	49.8	10.6	0.2	53.1	8.6	1.8	32.4	9.6		24.3	8.9	

Existing 2009 PM Peak Hour  
51: SR-111 & Channel Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	49.8	10.6	0.2	53.1	8.6	1.8	32.4	9.6		24.3	8.9	
LOS	D	B	A	D	A	A	C	A		C	A	
Approach Delay		11.7			10.1			22.2			15.3	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	37	451	2	23	204	3	48	4		23	6	
Queue Length 95th (ft)	m59	#80	m0	m29	m237	m3	71	23		m43	m22	
Internal Link Dist (ft)		1806			850			328			229	
Turn Bay Length (ft)	100			150								
Base Capacity (vph)	197	2173	964	110	1958	853	273	394		274	397	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.42	0.90	0.10	0.45	0.59	0.04	0.40	0.23		0.25	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 43 (54%), Referenced to phase 2:NBSB and 6:, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 11.9

Intersection LOS: B

Intersection Capacity Utilization 71.9%

ICU Level of Service C

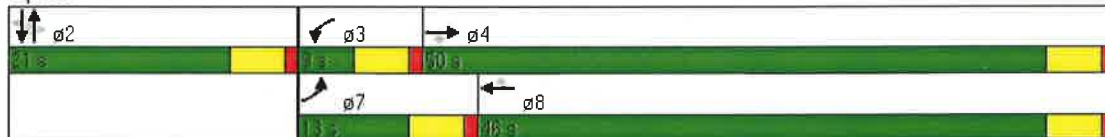
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 51: SR-111 & Channel Drive



Existing 2009 PM Peak Hour  
53: Fred Waring Drive & Warner Trail

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	225		125	200		0	100		50
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00				0.96		0.99				0.97
Frt		0.995				0.850		0.941				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5004	0	1752	5036	1568	1752	1718	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	5004	0	1752	5036	1501	1752	1718	0	1752	1845	1528
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				77		40				30
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2966			2635			2373			721	
Travel Time (s)		67.4			59.9			53.9			16.4	
Volume (vph)	61	1286	44	21	796	52	41	45	29	56	72	18
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.87	0.87	0.87	0.88	0.88	0.88	0.78	0.78	0.78	0.78	0.78	0.78
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	92	1936	66	31	1185	77	69	76	49	94	121	30
Lane Group Flow (vph)	92	2002	0	31	1185	77	69	125	0	94	121	30
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	13.0	35.0	0.0	10.0	32.0	32.0	9.0	21.0	0.0	9.0	21.0	21.0
Total Split (%)	17.3%	46.7%	0.0%	13.3%	42.7%	42.7%	12.0%	28.0%	0.0%	12.0%	28.0%	28.0%
Maximum Green (s)	8.0	30.0		5.0	27.0	27.0	4.0	16.0		4.0	16.0	16.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.0	31.0		6.0	28.0	28.0	5.0	17.0		5.0	17.0	17.0
Actuated g/C Ratio	0.12	0.41		0.08	0.37	0.37	0.07	0.23		0.07	0.23	0.23
v/c Ratio	0.44	0.97		0.22	0.63	0.13	0.59	0.30		0.80	0.29	0.08
Control Delay	37.9	35.8		36.4	21.1	4.8	56.3	18.9		81.2	26.3	9.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	37.9	35.8		36.4	21.1	4.8	56.3	18.9		81.2	26.3	9.8
LOS	D	D		D	C	A	E	B		F	C	A
Approach Delay		35.9			20.5			32.2			45.3	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	41	321		14	161	0	32	32		44	47	0

Existing 2009 PM Peak Hour  
 53: Fred Waring Drive & Warner Trail

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	81	#415		38	199	24	#69	62		#99	77	16
Internal Link Dist (ft)		2886			2555			2293			641	
Turn Bay Length (ft)	150			225		125	200			100		50
Base Capacity (vph)	210	2073		140	1880	609	117	420		117	418	370
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.44	0.97		0.22	0.63	0.13	0.59	0.30		0.80	0.29	0.08

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 31.1

Intersection LOS: C

Intersection Capacity Utilization 60.5%

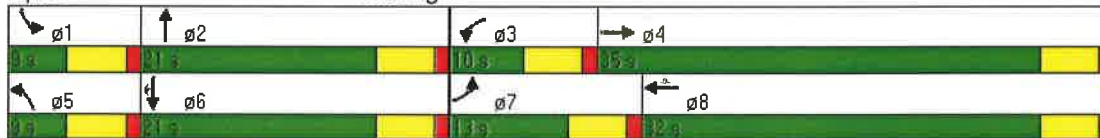
ICU Level of Service B

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 53: Fred Waring Drive & Warner Trail



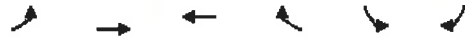
Existing 2009 PM Peak Hour  
54: Miles Avenue & Warner Trail

6/7/2010

	↖	→	←	↗	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↕	↗		↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	
Trailing Detector (ft)	0	0	0		0	
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.98		0.99	
Frt			0.916		0.948	
Flt Protected	0.950				0.970	
Satd. Flow (prot)	1752	3505	3144	0	1682	0
Flt Permitted	0.950				0.970	
Satd. Flow (perm)	1752	3505	3144	0	1682	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			112		60	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		2121	4499		2373	
Travel Time (s)		48.2	102.3		53.9	
Volume (vph)	21	134	61	78	79	49
Confl. Peds. (#/hr)				10		10
Peak Hour Factor	0.84	0.84	0.91	0.91	0.84	0.84
Growth Factor	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	33	209	88	112	123	76
Lane Group Flow (vph)	33	209	200	0	199	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Detector Phases	7	4	8		6	
Minimum Initial (s)	4.0	4.0	4.0		4.0	
Minimum Split (s)	9.0	21.0	21.0		21.0	
Total Split (s)	10.0	33.0	23.0	0.0	22.0	0.0
Total Split (%)	18.2%	60.0%	41.8%	0.0%	40.0%	0.0%
Maximum Green (s)	5.0	28.0	18.0		17.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	Max		None	
Walk Time (s)		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)	6.2	32.1	28.3		10.9	
Actuated g/C Ratio	0.11	0.66	0.58		0.21	
v/c Ratio	0.17	0.09	0.11		0.49	
Control Delay	22.0	4.5	4.7		14.3	

Existing 2009 PM Peak Hour  
 54: Miles Avenue & Warner Trail

6/7/2010



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	22.0	4.5	4.7		14.3	
LOS	C	A	A		B	
Approach Delay		6.9	4.7		14.3	
Approach LOS		A	A		B	
Queue Length 50th (ft)	6	9	3		23	
Queue Length 95th (ft)	27	23	26		69	
Internal Link Dist (ft)		2041	4419		2293	
Turn Bay Length (ft)	150					
Base Capacity (vph)	197	2393	1870		581	
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	0.17	0.09	0.11		0.34	

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 48.8

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 8.5

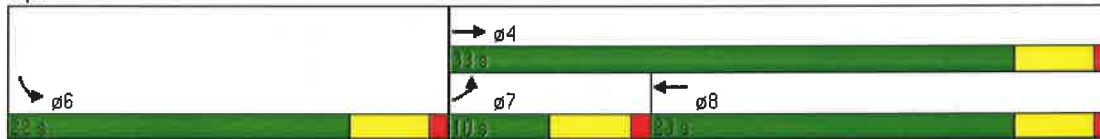
Intersection LOS: A

Intersection Capacity Utilization 37.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 54: Miles Avenue & Warner Trail



Existing 2009 PM Peak Hour  
55: Mountain View & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		0	150		0
Storage Lanes	1		0	1		1	1		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor		0.97				0.97		1.00			1.00	
Frt		0.850				0.850		0.997			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1526	0	1752	1845	1568	1752	5018	0	3400	5029	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1526	0	1752	1845	1526	1752	5018	0	3400	5029	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		132				139		5			2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		724			745			2303			1902	
Travel Time (s)		16.5			16.9			52.3			43.2	
Volume (vph)	13	0	10	20	1	187	6	1237	28	102	1424	14
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.64	0.64	0.64	0.84	0.84	0.84	0.97	0.97	0.97	0.93	0.93	0.93
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	27	0	20	31	2	292	8	1671	38	144	2006	20
Lane Group Flow (vph)	27	20	0	31	2	292	8	1709	0	144	2026	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Detector Phases	7	4		3	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	21.0		9.0	21.0	
Total Split (s)	9.0	21.0	0.0	9.0	21.0	21.0	9.0	41.0	0.0	9.0	41.0	0.0
Total Split (%)	11.3%	26.3%	0.0%	11.3%	26.3%	26.3%	11.3%	51.3%	0.0%	11.3%	51.3%	0.0%
Maximum Green (s)	4.0	16.0		4.0	16.0	16.0	4.0	36.0		4.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	5.0	11.3		9.2	13.4	13.4	6.0	43.7		7.3	53.2	
Actuated g/C Ratio	0.06	0.14		0.12	0.17	0.17	0.08	0.55		0.09	0.66	
v/c Ratio	0.25	0.06		0.15	0.01	0.78	0.06	0.62		0.46	0.61	
Control Delay	41.5	0.4		32.8	25.0	31.4	40.0	9.8		48.0	3.5	

Existing 2009 PM Peak Hour  
55: Mountain View & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	41.5	0.4		32.8	25.0	31.4	40.0	9.8		48.0	3.5	
LOS	D	A		C	C	C	D	A		D	A	
Approach Delay		24.0			31.5			9.9			6.5	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	13	0		15	1	71	4	241		40	40	
Queue Length 95th (ft)	27	0		39	6	135	m4	m364		m48	m64	
Internal Link Dist (ft)		644			665			2223			1822	
Turn Bay Length (ft)	150			150		150	150			150		
Base Capacity (vph)	110	428		202	392	434	131	2741		311	3344	
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	0.25	0.05		0.15	0.01	0.67	0.06	0.62		0.46	0.61	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 75 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 10.0

Intersection LOS: A

Intersection Capacity Utilization 61.7%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 55: Mountain View & Washington Street





Existing 2009 PM Peak Hour  
57: Ave of the States & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		175	0		0	300		0	275		0
Storage Lanes	1		1	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	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor			0.97		0.99			1.00			1.00	
Frnt			0.850		0.937			0.990			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1752	1709	0	1752	4971	0	1752	5004	0
Flt Permitted	0.671			0.736			0.950			0.950		
Satd. Flow (perm)	1238	1845	1526	1358	1709	0	1752	4971	0	1752	5004	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			194		41			17			7	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1273			347			1902			1097	
Travel Time (s)		28.9			7.9			43.2			24.9	
Volume (vph)	69	19	111	109	38	27	162	1235	84	49	1335	43
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.96	0.96	0.96	0.85	0.85	0.85
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	121	33	194	193	67	48	221	1685	115	76	2057	66
Lane Group Flow (vph)	121	33	194	193	115	0	221	1800	0	76	2123	0
Turn Type	Perm		Perm	Perm			Prot			Prot		
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4								
Detector Phases	4	4	4	4	4		1	6		5	2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	21.0	21.0	21.0	21.0	21.0	0.0	21.0	38.0	0.0	21.0	38.0	0.0
Total Split (%)	26.3%	26.3%	26.3%	26.3%	26.3%	0.0%	26.3%	47.5%	0.0%	26.3%	47.5%	0.0%
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		16.0	33.0		16.0	33.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		Max	Max	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)	15.3	15.3	15.3	15.3	15.3		15.0	34.0		18.7	37.7	
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.19	0.42		0.23	0.47	
v/c Ratio	0.51	0.09	0.43	0.74	0.32		0.67	0.85		0.19	0.90	
Control Delay	36.6	26.3	7.7	48.4	20.5		52.4	12.6		40.2	13.5	

Existing 2009 PM Peak Hour  
57: Ave of the States & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.6	26.3	7.7	48.4	20.5		52.4	12.6		40.2	13.5	
LOS	D	C	A	D	C		D	B		D	B	
Approach Delay		19.5			38.0			16.9			14.4	
Approach LOS		B			D			B			B	
Queue Length 50th (ft)	53	13	0	89	31		121	246		40	355	
Queue Length 95th (ft)	85	30	28	125	56		m185	80		m44	m363	
Internal Link Dist (ft)		1193			267			1822			1017	
Turn Bay Length (ft)	175		175				300			275		
Base Capacity (vph)	263	392	477	289	395		372	2122		409	2360	
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	0.46	0.08	0.41	0.67	0.29		0.59	0.85		0.19	0.90	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 35 (44%), Referenced to phase 6:NBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 71.4%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 57: Ave of the States & Washington Street



Existing 2009 PM Peak Hour  
59: 42nd Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	300		125	300		100
Storage Lanes	2		0	2		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor		0.99			0.99				0.97			0.97
Frt		0.937			0.956				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3247	0	3400	3325	0	1752	5036	1568	1752	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3247	0	3400	3325	0	1752	5036	1526	1752	5036	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		194			71				171			121
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1523			1701			1097			2644	
Travel Time (s)		34.6			38.7			24.9			60.1	
Volume (vph)	235	301	218	275	184	75	170	1042	173	119	998	148
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	371	475	344	383	256	105	242	1484	246	162	1362	202
Lane Group Flow (vph)	371	819	0	383	361	0	242	1484	246	162	1362	202
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	21.0	21.0	0.0	21.0	21.0	0.0	14.0	27.0	27.0	11.0	24.0	24.0
Total Split (%)	26.3%	26.3%	0.0%	26.3%	26.3%	0.0%	17.5%	33.8%	33.8%	13.8%	30.0%	30.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		9.0	22.0	22.0	6.0	19.0	19.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)	14.4	18.9		14.6	19.1		10.5	23.0	23.0	7.5	20.0	20.0
Actuated g/C Ratio	0.18	0.24		0.18	0.24		0.13	0.29	0.29	0.09	0.25	0.25
v/c Ratio	0.61	0.89		0.62	0.43		1.05	1.02	0.44	0.99	1.08	0.43
Control Delay	34.4	37.3		34.5	22.7		88.5	50.4	12.7	84.3	73.7	14.3

Existing 2009 PM Peak Hour  
59: 42nd Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	37.3		34.5	22.7		88.5	50.4	12.7	84.3	73.7	14.3
LOS	C	D		C	C		F	D	B	F	E	B
Approach Delay		36.4			28.8			50.4			67.7	
Approach LOS		D			C			D			E	
Queue Length 50th (ft)	88	162		91	63		~131	~306	81	~76	~295	70
Queue Length 95th (ft)	115	#246		130	107		m#193	#397	m106	m#134	#386	m96
Internal Link Dist (ft)		1443			1621			1017			2564	
Turn Bay Length (ft)	250			175			300		125	300		100
Base Capacity (vph)	723	917		723	849		230	1448	561	164	1259	472
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.89		0.53	0.43		1.05	1.02	0.44	0.99	1.08	0.43

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 11 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 49.9

Intersection LOS: D

Intersection Capacity Utilization 81.7%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

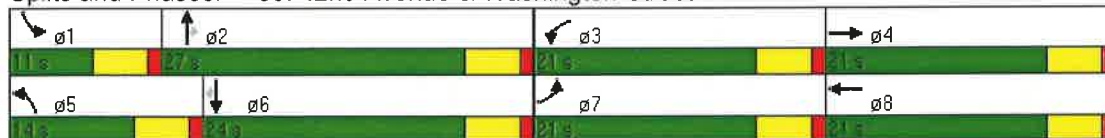
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 59: 42nd Avenue & Washington Street



Existing 2009 PM Peak Hour  
62: 41st Avenue & Washington Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↑↑		↘	↑↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	0		0	1	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Ped Bike Factor						
Frt	0.889		0.995			
Flt Protected	0.991				0.950	
Satd. Flow (prot)	1625	0	5011	0	1752	5036
Flt Permitted	0.991				0.950	
Satd. Flow (perm)	1625	0	5011	0	1752	5036
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	1565		2644			1877
Travel Time (s)	35.6		60.1			42.7
Volume (vph)	11	51	1246	41	32	1360
Confl. Peds. (#/hr)	10	10		10	10	
Peak Hour Factor	0.74	0.74	0.90	0.90	0.89	0.89
Growth Factor	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	19	90	1814	60	47	2002
Lane Group Flow (vph)	109	0	1874	0	47	2002
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 49.4%

ICU Level of Service A

Analysis Period (min) 15

Existing 2009 PM Peak Hour  
64: Harris Lane & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	150		0	150		0
Storage Lanes	1		0	0		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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor		0.97			0.99			1.00			1.00	
Frt		0.854			0.961			0.998			0.997	
Flt Protected	0.950				0.969		0.950			0.950		
Satd. Flow (prot)	1752	1534	0	0	1705	0	1752	5023	0	1752	5017	0
Flt Permitted	0.730				0.540		0.950			0.950		
Satd. Flow (perm)	1347	1534	0	0	950	0	1752	5023	0	1752	5017	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		354			12			3			4	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		671			359			1877			715	
Travel Time (s)		15.3			8.2			42.7			16.3	
Volume (vph)	28	6	238	17	2	8	83	1156	17	22	1137	21
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	42	9	354	27	3	12	114	1594	23	31	1602	30
Lane Group Flow (vph)	42	363	0	0	42	0	114	1617	0	31	1632	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4				2			6	
Detector Phases	4	4		4	4		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	21.0	36.0	0.0	21.0	36.0	0.0
Total Split (%)	28.8%	28.8%	0.0%	28.8%	28.8%	0.0%	26.3%	45.0%	0.0%	26.3%	45.0%	0.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		16.0	31.0		16.0	31.0	
Yellow Time (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max C-Max			Max C-Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	10.5	10.5		10.5	10.5		25.5	32.0		25.5	32.0	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.32	0.40		0.32	0.40	
v/c Ratio	0.24	0.71		0.31	0.31		0.20	0.80		0.06	0.81	
Control Delay	32.3	12.4		28.7	28.7		37.5	11.0		19.7	20.5	

Existing 2009 PM Peak Hour  
64: Harris Lane & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	32.3	12.4			28.7		37.5	11.0		19.7	20.5	
LOS	C	B			C		D	B		B	C	
Approach Delay		14.4			28.7			12.8			20.5	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)	20	4			14		53	266		7	306	
Queue Length 95th (ft)	42	64			36		m64	m274		m8	m323	
Internal Link Dist (ft)		591			279			1797			635	
Turn Bay Length (ft)	100						150			150		
Base Capacity (vph)	320	634			235		558	2011		558	2009	
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	0.13	0.57			0.18		0.20	0.80		0.06	0.81	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 39 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 16.5

Intersection LOS: B

Intersection Capacity Utilization 67.1%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 64: Harris Lane & Washington Street



Existing 2009 PM Peak Hour  
66: Country Club Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	125		225	150		0	200		200
Storage Lanes	2		0	1		1	2		0	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Ped Bike Factor		0.99				0.97		1.00				0.97
Frnt		0.959				0.850		0.996				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3337	0	1752	3505	1568	3400	5013	0	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3337	0	1752	3505	1526	3400	5013	0	3400	5036	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60				132		4				545
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			351			715			811	
Travel Time (s)		7.5			8.0			16.3			18.4	
Volume (vph)	488	348	129	59	191	171	201	913	22	168	1025	504
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.91	0.91	0.91	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	703	501	186	88	284	255	280	1272	31	239	1460	718
Lane Group Flow (vph)	703	687	0	88	284	255	280	1303	0	239	1460	718
Turn Type	Split			Split		Perm.	Prot			Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						6
Detector Phases	4	4		8	8	8	5	2		1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	21.0	21.0	0.0	21.0	21.0	21.0	11.0	28.0	0.0	10.0	27.0	27.0
Total Split (%)	26.3%	26.3%	0.0%	26.3%	26.3%	26.3%	13.8%	35.0%	0.0%	12.5%	33.8%	33.8%
Maximum Green (s)	16.0	16.0		16.0	16.0	16.0	6.0	23.0		5.0	22.0	22.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	0
Act Effct Green (s)	17.0	17.0		13.7	13.7	13.7	9.7	24.6		8.7	23.6	23.6
Actuated g/C Ratio	0.21	0.21		0.17	0.17	0.17	0.12	0.31		0.11	0.30	0.30
v/c Ratio	0.97	0.91		0.29	0.47	0.69	0.68	0.84		0.64	0.98	0.86
Control Delay	60.5	46.2		30.4	32.0	24.7	26.9	26.9		48.6	40.8	16.7



Existing 2009 PM Peak Hour  
66: Country Club Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	60.5	46.2		30.4	32.0	24.7	26.9	26.9		48.6	40.8	16.7
LOS	E	D		C	C	C	C	C		D	D	B
Approach Delay		53.4			28.8			26.9			34.4	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	180	163		39	67	56	42	264		56	~166	41
Queue Length 95th (ft)	#291	#265		74	97	123	m#103	#315		m#121	#361	m#284
Internal Link Dist (ft)		248			271			635			731	
Turn Bay Length (ft)	175			125		225	150			200		200
Base Capacity (vph)	723	756		372	745	428	413	1543		371	1484	834
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.97	0.91		0.24	0.38	0.60	0.68	0.84		0.64	0.98	0.86

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 3 (4%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 36.2

Intersection LOS: D

Intersection Capacity Utilization 73.8%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

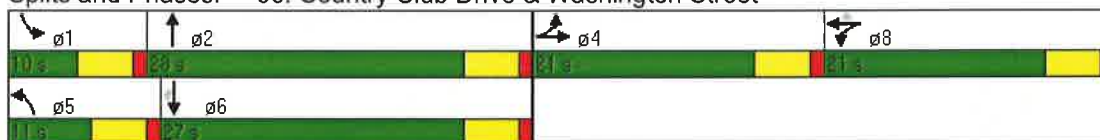
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 66: Country Club Drive & Washington Street



Existing 2009 PM Peak Hour  
69: I-10 EB Off-Ramp & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		175	0		0	0		0	150		0
Storage Lanes	1		2	0		0	0		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50					50		50	50	
Trailing Detector (ft)	0	0	0					0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.88	1.00	1.00	1.00	1.00	0.91	0.91	0.97	0.91	1.00
Ped Bike Factor			0.98					0.99				
Frt			0.850					0.963				
Flt Protected	0.950	0.950								0.950		
Satd. Flow (prot)	1665	1665	2760	0	0	0	0	4817	0	3400	5036	0
Flt Permitted	0.950	0.950								0.950		
Satd. Flow (perm)	1665	1665	2702	0	0	0	0	4817	0	3400	5036	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160					136				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		503			681			811			556	
Travel Time (s)		11.4			15.5			18.4			12.6	
Volume (vph)	165	0	646	0	0	0	0	1262	418	142	971	0
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.85	0.97	0.97	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	177	0	695	0	0	0	0	1301	431	154	1055	0
Lane Group Flow (vph)	89	88	695	0	0	0	0	1732	0	154	1055	0
Turn Type	Split		Perm								Prot	
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Detector Phases	4	4	4					2		1	6	
Minimum Initial (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Minimum Split (s)	9.0	9.0	9.0					21.0		9.0	21.0	
Total Split (s)	30.0	30.0	30.0	0.0	0.0	0.0	0.0	40.0	0.0	10.0	50.0	0.0
Total Split (%)	37.5%	37.5%	37.5%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	12.5%	62.5%	0.0%
Maximum Green (s)	25.0	25.0	25.0					35.0		5.0	45.0	
Yellow Time (s)	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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Recall Mode	None	None	None					None		None	C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)	22.2	22.2	22.2					38.4		7.4	49.8	
Actuated g/C Ratio	0.28	0.28	0.28					0.48		0.09	0.62	
v/c Ratio	0.19	0.19	0.80					0.73		0.49	0.34	
Control Delay	21.6	21.6	27.7					13.5		34.7	11.3	

Existing 2009 PM Peak Hour  
69: I-10 EB Off-Ramp & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0					0.0		0.0	0.0	
Total Delay	21.6	21.6	27.7					13.5		34.7	11.3	
LOS	C	C	C					B		C	B	
Approach Delay		26.5						13.5			14.3	
Approach LOS		C						B			B	
Queue Length 50th (ft)	34	33	137					129		31	118	
Queue Length 95th (ft)	68	67	199					m178		m48	m171	
Internal Link Dist (ft)		423			601			731				476
Turn Bay Length (ft)	175		175							150		
Base Capacity (vph)	541	541	986					2381		314	3133	
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	0.16	0.16	0.70					0.73		0.49	0.34	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 75 (94%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 16.7

Intersection LOS: B

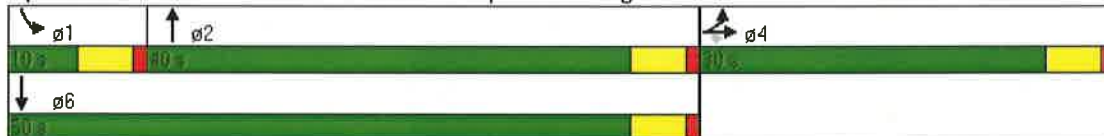
Intersection Capacity Utilization 59.9%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 69: I-10 EB Off-Ramp & Washington Street



Existing 2009 PM Peak Hour  
72: Varner Road & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	275		275	200		0	125		0
Storage Lanes	1		0	2		1	2		1	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.97	0.91	0.91	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor		0.98			0.99	0.97			0.97		1.00	
Frt		0.891			0.939	0.850			0.850		0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3062	0	3400	3118	1427	3400	5036	1568	3400	4883	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3062	0	3400	3118	1389	3400	5036	1526	3400	4883	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		146			92	100			692		52	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		441			793			556			2019	
Travel Time (s)		10.0			18.0			12.6			45.9	
Volume (vph)	10	45	121	484	88	126	283	546	596	141	444	92
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.67	0.67	0.67	0.86	0.86	0.86	0.97	0.97	0.97	0.92	0.92	0.92
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	20	88	237	737	134	192	382	737	805	201	632	131
Lane Group Flow (vph)	20	325	0	737	226	100	382	737	805	201	763	0
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phases	7	4		3	8	8	5	2	2	1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	
Total Split (s)	9.0	21.0	0.0	22.0	34.0	34.0	14.0	28.0	28.0	9.0	23.0	0.0
Total Split (%)	11.3%	26.3%	0.0%	27.5%	42.5%	42.5%	17.5%	35.0%	35.0%	11.3%	28.8%	0.0%
Maximum Green (s)	4.0	16.0		17.0	29.0	29.0	9.0	23.0	23.0	4.0	18.0	
Yellow Time (s)	4.0	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	1.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		5.0			5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	5.0	11.0		18.0	29.4	29.4	14.3	25.1	25.1	9.8	20.6	
Actuated g/C Ratio	0.06	0.14		0.22	0.37	0.37	0.18	0.31	0.31	0.12	0.26	
v/c Ratio	0.18	0.59		0.96	0.19	0.17	0.63	0.47	0.84	0.48	0.59	
Control Delay	39.6	21.7		48.9	13.2	8.2	38.6	14.6	15.0	38.1	26.8	

Existing 2009 PM Peak Hour  
72: Varner Road & Washington Street

6/7/2010

	↖	→	↘	↙	←	↖	↘	↑	↖	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	
Total Delay	39.6	21.7		48.9	13.2	8.2	38.6	14.6	18.8	38.1	26.8	
LOS	D	C		D	B	A	D	B	B	D	C	
Approach Delay		22.7			37.5			21.1			29.2	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	10	43		164	30	10	76	80	76	47	117	
Queue Length 95th (ft)	23	47		m#274	m43	m21	m#145	109	#468	#94	157	
Internal Link Dist (ft)		361			713			476			1939	
Turn Bay Length (ft)	200			275		275	200			125		
Base Capacity (vph)	110	766		765	1260	597	610	1583	954	417	1297	
Starvation Cap Reductn	0	0		0	0	0	0	0	88	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.18	0.42		0.96	0.18	0.17	0.63	0.47	0.93	0.48	0.59	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 35 (44%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 27.1

Intersection LOS: C

Intersection Capacity Utilization 73.8%

ICU Level of Service D

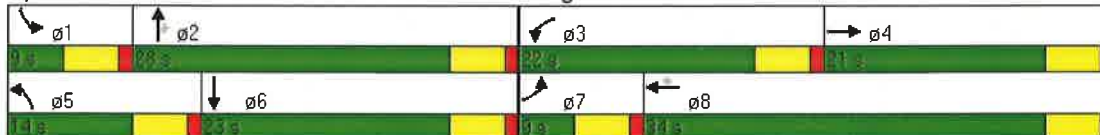
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 72: Varner Road & Washington Street



Existing 2009 PM Peak Hour  
75: Varner Road & I-10 WB Off-Ramp

6/7/2010

	→	↘	↷	↖	←	↙	↸	↗	↵
Lane Group	EBT	EBR	EBR2	WBL	WBT	NBL	NBR	NEL	NER
Lane Configurations	↑↑↑		↑	↑↑	↑↑	↑↑	↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		200		0	150	0	0
Storage Lanes		1		2		2	1	0	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50	50	50	50	50		
Trailing Detector (ft)	0		0	0	0	0	0		
Turning Speed (mph)		9	9	15		15	9	15	9
Lane Util. Factor	0.91	1.00	1.00	0.97	0.95	0.97	1.00	1.00	1.00
Ped Bike Factor			0.97				0.97		
Frt			0.850				0.850		
Flt Protected				0.950		0.950			
Satd. Flow (prot)	5036	0	1568	3400	3505	3400	1568	0	0
Flt Permitted				0.950		0.950			
Satd. Flow (perm)	5036	0	1526	3400	3505	3400	1526	0	0
Right Turn on Red			Yes				Yes		
Satd. Flow (RTOR)			327				125		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30				30	30		30	
Link Distance (ft)	793				871	1130		947	
Travel Time (s)	18.0				19.8	25.7		21.5	
Volume (vph)	553	0	242	62	486	872	85	0	0
Confl. Peds. (#/hr)			10				10		
Peak Hour Factor	0.97	0.97	0.97	0.91	0.91	0.86	0.86	0.92	0.92
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	747	0	327	89	700	1328	129	0	0
Lane Group Flow (vph)	747	0	327	89	700	1328	129	0	0
Turn Type			Perm	Prot			Perm		
Protected Phases	4			3	8	2			
Permitted Phases			4				2		
Detector Phases	4		4	3	8	2	2		
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0	4.0		
Minimum Split (s)	21.0		21.0	9.0	21.0	21.0	21.0		
Total Split (s)	24.0	0.0	24.0	10.0	34.0	46.0	46.0	0.0	0.0
Total Split (%)	30.0%	0.0%	30.0%	12.5%	42.5%	57.5%	57.5%	0.0%	0.0%
Maximum Green (s)	19.0		19.0	5.0	29.0	41.0	41.0		
Yellow Time (s)	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		
Lead/Lag	Lag		Lag	Lead					
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0		
Recall Mode	C-Max		C-Max	None	C-Max	None	None		
Walk Time (s)	5.0		5.0		5.0	5.0	5.0		
Flash Dont Walk (s)	11.0		11.0		11.0	11.0	11.0		
Pedestrian Calls (#/hr)	0		0		0	0	0		
Act Effct Green (s)	25.4		25.4	7.0	34.2	37.8	37.8		
Actuated g/C Ratio	0.32		0.32	0.09	0.43	0.47	0.47		
v/c Ratio	0.47		0.46	0.30	0.47	0.83	0.16		
Control Delay	20.3		5.4	37.4	18.6	23.1	2.7		

Existing 2009 PM Peak Hour  
75: Varner Road & I-10 WB Off-Ramp

6/7/2010

	→	↘	↗	←	↙	↘	↗	↖	↗
Lane Group	EBT	EBR	EBR2	WBL	WBT	NBL	NBR	NEL	NER
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0		
Total Delay	20.3		5.4	37.4	18.6	23.1	2.7		
LOS	C		A	D	B	C	A		
Approach Delay	15.8				20.7	21.3			
Approach LOS	B				C	C			
Queue Length 50th (ft)	114		17	21	131	273	1		
Queue Length 95th (ft)	m154		m37	44	192	303	22		
Internal Link Dist (ft)	713				791	1050		867	
Turn Bay Length (ft)				200			150		
Base Capacity (vph)	1599		708	296	1500	1785	861		
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	0.47		0.46	0.30	0.47	0.74	0.15		

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 59 (74%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 19.4

Intersection LOS: B

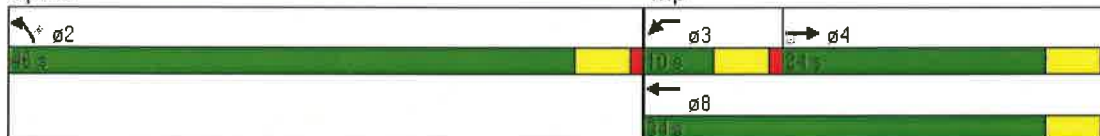
Intersection Capacity Utilization 59.9%

ICU Level of Service B

Analysis Period (min) 15























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

Splits and Phases: 75: Varner Road & I-10 WB Off-Ramp



Existing 2009 PM Peak Hour  
80: Fred Waring Drive & Palm Royale Drive

6/7/2010

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	125		0	0		0	50		50
Storage Lanes	1		1	1		0	0		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor			0.96		1.00							0.97
Frt			0.850		0.993							0.850
Flt Protected	0.950			0.950				0.955		0.950	0.950	
Satd. Flow (prot)	1752	5036	1568	1752	4990	0	0	1762	1845	1665	1665	1568
Flt Permitted	0.950			0.950				0.955		0.950	0.950	
Satd. Flow (perm)	1752	5036	1498	1752	4990	0	0	1762	1845	1665	1665	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			21		10							34
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1603			1835			347			441	
Travel Time (s)		36.4			41.7			7.9			10.0	
Volume (vph)	16	970	23	4	709	36	13	1	0	26	0	20
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.79	0.79	0.79	0.99	0.99	0.99	0.58	0.58	0.58	0.77	0.77	0.77
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	27	1608	38	5	938	48	29	2	0	44	0	34
Lane Group Flow (vph)	27	1608	38	5	986	0	0	31	0	22	22	34
Turn Type	Prot		Perm	Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		5	5		2	2	
Permitted Phases			4						5			2
Detector Phases	7	4	4	3	8		5	5	5	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	9.0	29.0	29.0	9.0	29.0	0.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (%)	11.3%	36.3%	36.3%	11.3%	36.3%	0.0%	26.3%	26.3%	26.3%	26.3%	26.3%	26.3%
Maximum Green (s)	4.0	24.0	24.0	4.0	24.0		16.0	16.0	16.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0		0	0	0	0	0	0
Act Effct Green (s)	5.0	32.2	32.2	5.0	30.4			17.0		17.0	17.0	17.0
Actuated g/C Ratio	0.06	0.40	0.40	0.06	0.38			0.21		0.21	0.21	0.21
v/c Ratio	0.25	0.79	0.06	0.05	0.52			0.08		0.06	0.06	0.10
Control Delay	50.9	11.8	1.5	36.2	21.0			26.1		25.8	25.8	10.3



Existing 2009 PM Peak Hour  
80: Fred Waring Drive & Palm Royale Drive

6/7/2010

	↖	→	↘	↙	←	↖	↘	↑	↖	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Total Delay	50.9	11.8	1.5	36.2	21.0			26.1		25.8	25.8	10.3
LOS	D	B	A	D	C			C		C	C	B
Approach Delay		12.2			21.0			26.1			19.0	
Approach LOS		B			C			C			B	
Queue Length 50th (ft)	12	20	0	2	123			13		9	9	0
Queue Length 95th (ft)	m16	#271	m3	13	194			22		24	24	17
Internal Link Dist (ft)		1523			1755			267			361	
Turn Bay Length (ft)	100		100	125						50		50
Base Capacity (vph)	110	2027	616	110	1903			374		354	354	351
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	0.25	0.79	0.06	0.05	0.52			0.08		0.06	0.06	0.10

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 40 (50%), Referenced to phase 6:, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 61.2%

ICU Level of Service B

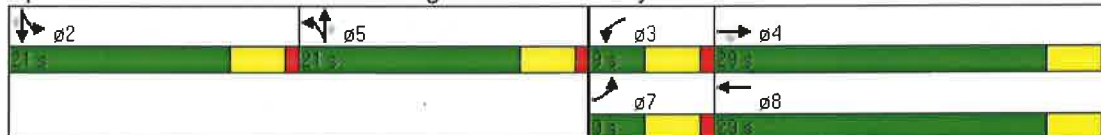
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 80: Fred Waring Drive & Palm Royale Drive



Existing 2009 PM Peak Hour  
83: SR-111 & La Quinta Center

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗↗↗	↖	↖	↗↗↗			↗↗			↗↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325		200	500		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor			0.97		1.00			0.99			0.99	
Frt			0.850		0.990			0.924			0.937	
Flt Protected	0.950			0.950				0.981			0.982	
Satd. Flow (prot)	1752	5036	1568	1752	4977	0	0	3134	0	0	3189	0
Flt Permitted	0.950			0.950				0.783			0.785	
Satd. Flow (perm)	1752	5036	1526	1752	4977	0	0	2501	0	0	2549	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80		20			130			62	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1018			1285			1032			476	
Travel Time (s)		23.1			29.2			23.5			10.8	
Volume (vph)	44	1190	56	100	908	64	67	19	88	36	22	42
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	63	1694	80	134	1214	86	99	28	130	53	32	62
Lane Group Flow (vph)	63	1694	80	134	1300	0	0	257	0	0	147	0
Turn Type	Prot		Perm	Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			2	
Permitted Phases			4				2			2		
Detector Phases	7	4	4	3	8		2	2		2	2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	12.0	40.0	40.0	17.0	45.0	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	15.0%	50.0%	50.0%	21.3%	56.3%	0.0%	28.8%	28.8%	0.0%	28.8%	28.8%	0.0%
Maximum Green (s)	7.0	35.0	35.0	12.0	40.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	7.7	37.6	37.6	11.4	43.4			19.0			19.0	
Actuated g/C Ratio	0.10	0.47	0.47	0.14	0.54			0.24			0.24	
v/c Ratio	0.38	0.72	0.11	0.53	0.48			0.37			0.23	
Control Delay	35.0	17.2	5.1	58.3	1.9			14.3			15.7	

Existing 2009 PM Peak Hour  
83: SR-111 & La Quinta Center

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Total Delay	35.0	17.2	5.1	58.3	1.9			14.3			15.7	
LOS	D	B	A	E	A			B			B	
Approach Delay		17.3			7.2			14.3			15.7	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	27	197	8	73	12			26			17	
Queue Length 95th (ft)	m46	203	m11	m117	23			57			41	
Internal Link Dist (ft)		938			1205			952			396	
Turn Bay Length (ft)	325		200	500								
Base Capacity (vph)	175	2364	759	285	2709			693			653	
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	0.36	0.72	0.11	0.47	0.48			0.37			0.23	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 3 (4%), Referenced to phase 2:NESW and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 13.1

Intersection LOS: B

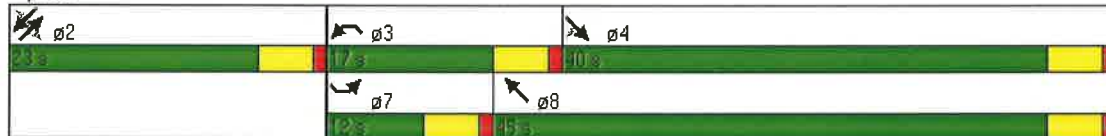
Intersection Capacity Utilization 77.4%

ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 83: SR-111 & La Quinta Center



Existing 2009 PM Peak Hour  
85: SR-111 & Simon Drive

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↔			↔	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		0	475		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99			1.00	
Frt		0.993			0.991			0.938			0.984	
Flt Protected	0.950			0.950				0.978			0.962	
Satd. Flow (prot)	1752	4996	0	1752	4985	0	0	3173	0	0	3307	0
Flt Permitted	0.950			0.950				0.758			0.858	
Satd. Flow (perm)	1752	4996	0	1752	4985	0	0	2459	0	0	2949	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			29			111			27	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1266			1018			562			414	
Travel Time (s)		28.8			23.1			12.8			9.4	
Volume (vph)	68	1075	51	59	887	54	73	22	68	155	21	21
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97	0.80	0.80	0.80	0.85	0.85	0.85
Growth Factor	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	95	1498	71	80	1198	73	120	36	111	239	32	32
Lane Group Flow (vph)	95	1569	0	80	1271	0	0	267	0	0	303	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			2	
Permitted Phases							2			2		
Detector Phases	7	4		3	8		2	2		2	2	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	9.0		9.0	21.0		9.0	9.0		9.0	9.0	
Total Split (s)	9.0	21.0	0.0	9.0	21.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Total Split (%)	22.5%	52.5%	0.0%	22.5%	52.5%	0.0%	25.0%	25.0%	0.0%	25.0%	25.0%	0.0%
Maximum Green (s)	4.0	16.0		4.0	16.0		5.0	5.0		5.0	5.0	
Yellow Time (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)					5.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	5.0	19.4		5.0	19.4			7.2			7.2	
Actuated g/C Ratio	0.12	0.48		0.12	0.48			0.18			0.18	
v/c Ratio	0.43	0.64		0.37	0.52			0.50			0.99dl	
Control Delay	25.0	7.4		26.1	7.2			13.5			20.0	

Existing 2009 PM Peak Hour  
85: SR-111 & Simon Drive

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	25.0	7.4		26.1	7.2			13.5			20.0	
LOS	C	A		C	A			B			C	
Approach Delay		8.4			8.3			13.5			20.0	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)	35	130		34	77			16			31	
Queue Length 95th (ft)	m42	m205		68	93			35			#60	
Internal Link Dist (ft)		1186			938			482			334	
Turn Bay Length (ft)	425			475								
Base Capacity (vph)	219	2439		219	2437			531			550	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.43	0.64		0.37	0.52			0.50			0.55	

Intersection Summary

Area Type: Other

Cycle Length: 40

Actuated Cycle Length: 40

Offset: 12 (30%), Referenced to phase 2:NESW and 6:, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 9.7

Intersection LOS: A

Intersection Capacity Utilization 60.9%

ICU Level of Service B

Analysis Period (min) 15

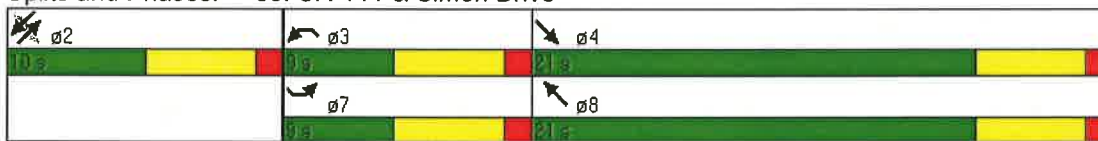
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 85: SR-111 & Simon Drive



Existing 2009 PM Peak Hour  
94: Channel Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor		0.98				0.97		1.00			1.00	
Frt		0.920				0.850		0.998			0.990	
Flt Protected		0.985			0.964		0.950			0.950		
Satd. Flow (prot)	0	1645	0	0	1778	1568	1752	5024	0	1752	4977	0
Flt Permitted		0.865			0.561		0.950			0.950		
Satd. Flow (perm)	0	1445	0	0	1035	1526	1752	5024	0	1752	4977	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		96				304		2			17	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		699			313			671			2114	
Travel Time (s)		15.9			7.1			15.3			48.0	
Volume (vph)	90	33	181	90	29	280	81	1131	12	210	1395	98
Confl. Peds. (#/hr)			10			10			10			10
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	98	36	197	98	32	304	88	1229	13	228	1516	107
Lane Group Flow (vph)	0	331	0	0	130	304	88	1242	0	228	1623	0
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4		4						
Detector Phases	4	4		4	4	4	5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	21.0	9.0	21.0		9.0	21.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	29.0	13.0	30.0	0.0	21.0	38.0	0.0
Total Split (%)	36.3%	36.3%	0.0%	36.3%	36.3%	36.3%	16.3%	37.5%	0.0%	26.3%	47.5%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	8.0	25.0		16.0	33.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		18.3			18.3	18.3	9.0	34.2		15.5	42.8	
Actuated g/C Ratio		0.23			0.23	0.23	0.11	0.43		0.19	0.54	
v/c Ratio		0.82			0.55	0.52	0.44	0.58		0.67	0.61	
Control Delay		30.1			34.4	6.3	33.2	16.3		53.3	5.7	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		30.1			34.4	6.3	33.2	16.3		53.3	5.7	

Existing 2009 PM Peak Hour  
 94: Channel Drive & Washington Street

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		C			C	A	C	B		D	A	
Approach Delay		30.1			14.7			17.4			11.6	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		59			54	0	24	194		126	39	
Queue Length 95th (ft)		108			101	53	m40	260		m191	87	
Internal Link Dist (ft)		619			233			591			2034	
Turn Bay Length (ft)												
Base Capacity (vph)		518			323	686	207	2151		377	2672	
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		0.64			0.40	0.44	0.43	0.58		0.60	0.61	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 50 (63%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 15.4

Intersection LOS: B

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 94: Channel Drive & Washington Street



No Build



No Build 2015 PM Peak Hour  
3: Avenue 48 & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	200		0	300		200	300		150
Storage Lanes	1		1	1		0	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.98		0.99				0.98			0.98
Frt			0.850		0.955				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3322	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3505	1529	1752	3322	0	3400	5036	1530	3400	5036	1529
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			344		100				142			76
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2632			1220			1091			2684	
Travel Time (s)		59.8			27.7			24.8			61.0	
Volume (vph)	41	633	499	123	593	252	342	788	122	284	774	63
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83
Adj. Flow (vph)	49	754	594	137	659	280	398	916	142	342	933	76
Lane Group Flow (vph)	49	754	594	137	939	0	398	916	142	342	933	76
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phases	7	4	4	3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	9.0	25.0	25.0	11.0	27.0	0.0	14.0	21.0	21.0	13.0	20.0	20.0
Total Split (%)	12.9%	35.7%	35.7%	15.7%	38.6%	0.0%	20.0%	30.0%	30.0%	18.6%	28.6%	28.6%
Maximum Green (s)	4.0	20.0	20.0	6.0	22.0		9.0	16.0	16.0	8.0	15.0	15.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	None	None	None	Max	Max
Walk Time (s)		5.0	5.0		5.0							
Flash Dont Walk (s)		11.0	11.0		11.0							
Pedestrian Calls (#/hr)		0	0		0							
Act Effct Green (s)	5.0	20.2	20.2	7.0	25.9		10.0	17.0	17.0	9.0	16.0	16.0
Actuated g/C Ratio	0.07	0.29	0.29	0.10	0.37		0.14	0.25	0.25	0.13	0.23	0.23
v/c Ratio	0.40	0.74	0.86	0.77	0.72		0.81	0.74	0.29	0.77	0.80	0.18
Control Delay	41.9	27.1	24.4	61.4	21.5		43.9	28.5	6.2	43.2	31.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
3: Avenue 48 & Jefferson Street

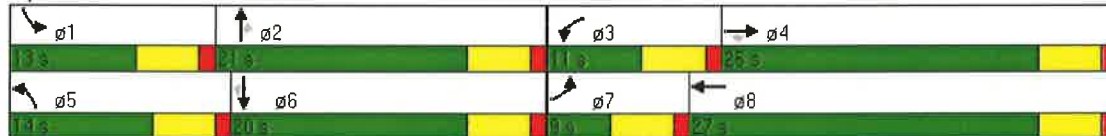
6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	41.9	27.1	24.4	61.4	21.5		43.9	28.5	6.2	43.2	31.7	7.4
LOS	D	C	C	E	C		D	C	A	D	C	A
Approach Delay		26.5			26.6			30.6			33.3	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	21	151	99	59	172		87	133	0	74	139	0
Queue Length 95th (ft)	49	192	#243	#147	#248		#142	167	35	#116	166	26
Internal Link Dist (ft)		2552			1140			1011			2604	
Turn Bay Length (ft)	200		200	200			300		200	300		150
Base Capacity (vph)	121	1052	700	177	1304		492	1237	483	442	1165	412
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.72	0.85	0.77	0.72		0.81	0.74	0.29	0.77	0.80	0.18

Intersection Summary

Area Type: Other  
 Cycle Length: 70  
 Actuated Cycle Length: 69.2  
 Natural Cycle: 70  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 29.4                      Intersection LOS: C  
 Intersection Capacity Utilization 66.1%                      ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Avenue 48 & Jefferson Street



No Build 2015 PM Peak Hour  
6: Fred Waring Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225		100	225		100	200		100	200		100
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.98			0.98			0.98			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1530	3400	5036	1530	3400	5036	1530	3400	5036	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			188			217			213			220
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1265			1319			2632			886	
Travel Time (s)		28.8			30.0			59.8			20.1	
Volume (vph)	157	1118	201	216	789	182	200	681	322	249	858	220
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.92	0.92	0.92	0.91	0.91	0.91
Adj. Flow (vph)	174	1242	223	257	939	217	217	740	350	274	943	242
Lane Group Flow (vph)	174	1242	223	257	939	217	217	740	350	274	943	242
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	11.0	22.0	22.0	10.0	21.0	21.0	10.0	23.0	23.0	10.0	23.0	23.0
Total Split (%)	16.9%	33.8%	33.8%	15.4%	32.3%	32.3%	15.4%	35.4%	35.4%	15.4%	35.4%	35.4%
Maximum Green (s)	6.0	17.0	17.0	5.0	16.0	16.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	7.0	18.0	18.0	6.0	17.0	17.0	6.0	19.0	19.0	6.0	19.0	19.0
Actuated g/c Ratio	0.11	0.28	0.28	0.09	0.26	0.26	0.09	0.29	0.29	0.09	0.29	0.29
v/c Ratio	0.48	0.89	0.40	0.82	0.71	0.39	0.69	0.50	0.59	0.87	0.64	0.40
Control Delay	32.0	32.5	7.3	52.1	25.4	5.6	41.9	20.5	12.4	59.1	22.4	6.1
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

No Build 2015 PM Peak Hour  
6: Fred Waring Drive & Jefferson Street

6/7/2010

	↖	→	↘	↙	←	↖	↘	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	32.0	32.5	7.3	52.1	25.4	5.6	41.9	20.5	12.4	59.1	22.4	6.1
LOS	C	C	A	D	C	A	D	C	B	E	C	A
Approach Delay		29.0			27.2			21.9			26.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	34	172	10	52	123	0	43	88	42	56	118	6
Queue Length 95th (ft)	61	#251	57	#97	150	37	#87	121	116	#119	158	53
Internal Link Dist (ft)		1185			1239			2552			806	
Turn Bay Length (ft)	225		100	225		100	200		100	200		100
Base Capacity (vph)	366	1395	560	314	1317	560	314	1472	598	314	1472	603
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.89	0.40	0.82	0.71	0.39	0.69	0.50	0.59	0.87	0.64	0.40

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 26.4

Intersection LOS: C

Intersection Capacity Utilization 63.4%

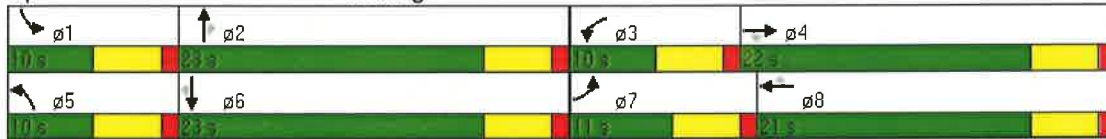
ICU Level of Service B

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 6: Fred Waring Drive & Jefferson Street



No Build 2015 PM Peak Hour  
9: Avenue 48 & Washington Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↖	↖	↕↔		↘	↘↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	225	0		0	200	
Storage Lanes	1	0		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	0.97	1.00	0.91	0.91	1.00	0.91
Ped Bike Factor			0.99			
Frt		0.850	0.974			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3400	1568	4879	0	1752	5036
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3400	1568	4879	0	1752	5036
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		243	59			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	2592		902			2717
Travel Time (s)	58.9		20.5			61.8
Volume (vph)	619	224	1712	358	440	1713
Confl. Peds. (#/hr)		10		10		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	673	243	1861	389	478	1862
Lane Group Flow (vph)	673	243	2250	0	478	1862
Turn Type		Prot			Prot	
Protected Phases	4	4	2		1	6
Permitted Phases						
Detector Phases	4	4	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.0	21.0	21.0		9.0	21.0
Total Split (s)	22.0	22.0	49.0	0.0	29.0	78.0
Total Split (%)	22.0%	22.0%	49.0%	0.0%	29.0%	78.0%
Maximum Green (s)	17.0	17.0	44.0		24.0	73.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Max		None	Max
Walk Time (s)	5.0	5.0	5.0			5.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	18.0	18.0	45.0		25.0	74.0
Actuated g/C Ratio	0.18	0.18	0.45		0.25	0.74
v/c Ratio	1.10	0.50	1.01		1.09	0.50
Control Delay	106.0	8.8	49.0		106.9	5.9
Queue Delay	0.0	0.0	0.0		0.0	0.0

No Build 2015 PM Peak Hour  
 9: Avenue 48 & Washington Street

6/7/2010

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	106.0	8.8	49.0		106.9	5.9
LOS	F	A	D		F	A
Approach Delay	80.2		49.0			26.5
Approach LOS	F		D			C
Queue Length 50th (ft)	~252	0	~516		~346	150
Queue Length 95th (ft)	#364	65	#644		#542	177
Internal Link Dist (ft)	2512		822			2637
Turn Bay Length (ft)	225				200	
Base Capacity (vph)	612	482	2228		438	3727
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	1.10	0.50	1.01		1.09	0.50

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 44.6

Intersection LOS: D

Intersection Capacity Utilization 93.3%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Avenue 48 & Washington Street



No Build 2015 PM Peak Hour  
10: Fred Waring Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑	↗	↔↔	↑↑↑	↗	↔↔	↑↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		1000	150		150	200		125	200		100
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.97			0.97			0.97			0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1517	3400	5036	1517	3400	5036	1517	3400	5036	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			305			273			106			90
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2635			1603			3324			2303	
Travel Time (s)		59.9			36.4			75.5			52.3	
Volume (vph)	354	1235	611	255	866	296	545	1376	181	557	1700	220
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	385	1342	664	277	941	322	592	1496	197	605	1848	239
Lane Group Flow (vph)	385	1342	664	277	941	322	592	1496	197	605	1848	239
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	17.0	32.0	32.0	13.0	28.0	28.0	22.0	41.0	41.0	24.0	43.0	43.0
Total Split (%)	15.5%	29.1%	29.1%	11.8%	25.5%	25.5%	20.0%	37.3%	37.3%	21.8%	39.1%	39.1%
Maximum Green (s)	12.0	27.0	27.0	8.0	23.0	23.0	17.0	36.0	36.0	19.0	38.0	38.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	13.0	28.0	28.0	9.0	24.0	24.0	18.0	37.0	37.0	20.0	39.0	39.0
Actuated g/C Ratio	0.12	0.25	0.25	0.08	0.22	0.22	0.16	0.34	0.34	0.18	0.35	0.35
v/c Ratio	0.96	1.05	1.08	1.00	0.86	0.59	1.06	0.88	0.34	0.98	1.04	0.40
Control Delay	84.4	78.6	82.7	90.0	39.2	17.5	80.8	35.1	15.2	78.4	49.6	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
 10: Fred Waring Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	84.4	78.6	82.7	90.0	39.2	17.5	80.8	35.1	15.2	78.4	49.6	7.1
LOS	F	E	F	F	D	B	F	D	B	E	D	A
Approach Delay		80.6			43.8			45.2			52.3	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)	141	~378	~354	89	245	124	~229	397	91	197	~523	37
Queue Length 95th (ft)	#237	#473	#581	#183	#309	217	m#301	m454	m95	#329	#598	m21
Internal Link Dist (ft)		2555			1523			3244			2223	
Turn Bay Length (ft)	400		1000	150		150	200		125	200		100
Base Capacity (vph)	402	1282	614	278	1099	544	556	1694	581	618	1785	596
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	1.05	1.08	1.00	0.86	0.59	1.06	0.88	0.34	0.98	1.04	0.40

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 94 (85%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 56.6

Intersection LOS: E

Intersection Capacity Utilization 92.9%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

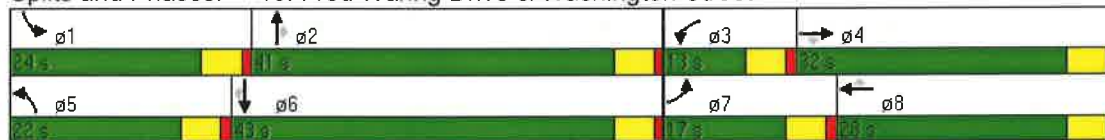
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 10: Fred Waring Drive & Washington Street





No Build 2015 PM Peak Hour  
13: SR-111 & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	200		0	300		250	175		200
Storage Lanes	2		1	2		0	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.95	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor			0.97		0.99				0.97			0.97
Frts			0.850		0.971				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3505	1568	3400	3382	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1517	3400	3382	0	3400	5036	1517	3400	5036	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			461		31				173			203
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		840			1276			2684			2668	
Travel Time (s)		19.1			29.0			61.0			60.6	
Volume (vph)	269	1111	456	107	1030	247	399	462	159	448	589	187
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	292	1208	496	116	1120	268	434	502	173	487	640	203
Lane Group Flow (vph)	292	1208	496	116	1388	0	434	502	173	487	640	203
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	21.0	47.0	47.0	21.0	47.0	0.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (%)	19.1%	42.7%	42.7%	19.1%	42.7%	0.0%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%
Maximum Green (s)	16.0	42.0	42.0	16.0	42.0		16.0	16.0	16.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effct Green (s)	17.0	43.0	43.0	17.0	43.0		17.0	17.0	17.0	17.0	17.0	17.0
Actuated g/C Ratio	0.15	0.39	0.39	0.15	0.39		0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.56	0.88	0.57	0.22	1.04		0.83	0.65	0.45	0.93	0.82	0.50
Control Delay	66.2	18.2	2.5	42.0	67.0		59.5	48.0	10.4	51.1	48.1	17.6
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	66.2	18.2	2.5	42.0	67.0		59.5	48.0	10.4	51.1	48.1	17.6
LOS	E	B	A	D	E		E	D	B	D	D	B
Approach Delay		21.3			65.1			46.6			44.6	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)	113	75	1	37	~549		155	123	0	128	178	71
Queue Length 95th (ft)	m159	#161	25	64	#688		#230	162	61	#267	#224	109

No Build 2015 PM Peak Hour  
13: SR-111 & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		760			1196			2604			2588	
Turn Bay Length (ft)	250			200			300		250	175		200
Base Capacity (vph)	525	1370	874	525	1341		525	778	381	525	778	406
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.88	0.57	0.22	1.04		0.83	0.65	0.45	0.93	0.82	0.50

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 56 (51%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 105

Control Type: Pretimed

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 42.3

Intersection LOS: D

Intersection Capacity Utilization 83.7%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

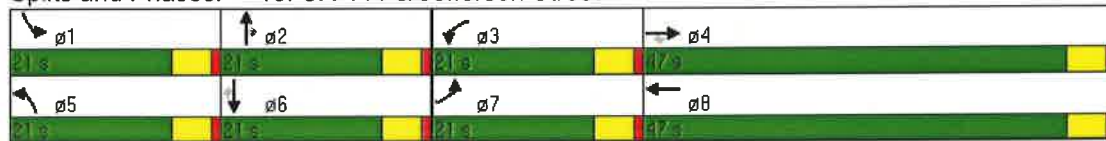
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 13: SR-111 & Jefferson Street



No Build 2015 PM Peak Hour  
14: SR-111 & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	350		225	550		0	450		175	225		0
Storage Lanes	2		1	2		0	2		1	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	0.91	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor			0.97		0.99				0.97		1.00	
Frt			0.850		0.941				0.850		0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3310	4903	1527	3310	4556	0	3310	4903	1527	3310	4796	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3310	4903	1478	3310	4556	0	3310	4903	1478	3310	4796	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			305		153				138		23	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			1266			2658			671	
Travel Time (s)		21.1			28.8			60.4			15.3	
Volume (vph)	309	1263	572	180	852	549	422	898	135	680	1318	180
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	336	1373	622	196	926	597	459	976	147	739	1433	196
Lane Group Flow (vph)	336	1373	622	196	1523	0	459	976	147	739	1629	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Detector Phases	7	4	4	3	8		5	2	2	1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0	21.0	21.0	21.0		9.0	21.0	21.0	9.0	21.0	
Total Split (s)	15.0	32.0	32.0	21.0	38.0	0.0	18.0	28.0	28.0	29.0	39.0	0.0
Total Split (%)	13.6%	29.1%	29.1%	19.1%	34.5%	0.0%	16.4%	25.5%	25.5%	26.4%	35.5%	0.0%
Maximum Green (s)	10.0	27.0	27.0	16.0	33.0		13.0	23.0	23.0	24.0	34.0	
Yellow Time (s)	4.0	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	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	Max		None	C-Max	C-Max	None	C-Max	
Walk Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0			0	0		0	
Act Effct Green (s)	11.0	32.1	32.1	12.9	34.0		14.0	24.0	24.0	25.0	35.0	
Actuated g/C Ratio	0.10	0.29	0.29	0.12	0.31		0.13	0.22	0.22	0.23	0.32	
v/c Ratio	1.02	0.96	0.96	0.51	1.06dr		1.09	0.91	0.34	0.98	1.06	
Control Delay	82.0	42.6	39.9	59.3	42.1		115.7	55.5	9.5	50.1	69.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	

No Build 2015 PM Peak Hour  
14: SR-111 & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	82.0	42.6	39.9	59.3	42.1		115.7	55.5	9.5	50.1	69.3	
LOS	F	D	D	E	D		F	E	A	D	E	
Approach Delay		47.6			44.0			68.7			63.3	
Approach LOS		D			D			E			E	
Queue Length 50th (ft)	~123	369	345	74	~153		~188	247	5	282	~469	
Queue Length 95th (ft)	m#154	m#466	m#388	m110	#472		#291	#328	58	m#381	m#565	
Internal Link Dist (ft)		850			1186			2578			591	
Turn Bay Length (ft)	350		225	550			450		175	225		
Base Capacity (vph)	331	1432	648	512	1514		421	1070	430	752	1542	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	1.02	0.96	0.96	0.38	1.01		1.09	0.91	0.34	0.98	1.06	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 103 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 55.6

Intersection LOS: E

Intersection Capacity Utilization 95.1%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

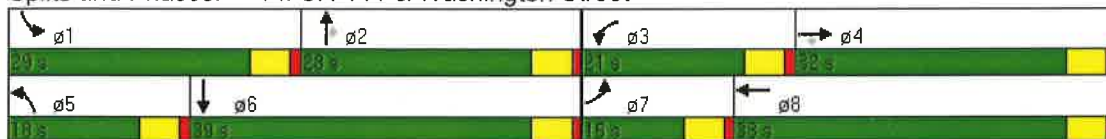
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: SR-111 & Washington Street



No Build 2015 PM Peak Hour  
17: Avenue 48 & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		150	0		0	125		0
Storage Lanes	1		0	1		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00				0.98		0.99				0.98
Frt		0.995				0.850		0.966				0.850
Flt Protected	0.950			0.950				0.993		0.950	0.963	
Satd. Flow (prot)	1752	3483	0	1752	3505	1568	0	1753	0	1665	1688	1568
Flt Permitted	0.950			0.950				0.993		0.950	0.963	
Satd. Flow (perm)	1752	3483	0	1752	3505	1530	0	1753	0	1665	1688	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				342		21				258
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2592			2628			875			3025	
Travel Time (s)		58.9			59.7			19.9			68.8	
Volume (vph)	148	466	16	9	428	315	19	85	35	455	60	240
Conf. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.84	0.84	0.84	0.93	0.93	0.93
Adj. Flow (vph)	154	485	17	10	465	342	23	101	42	489	65	258
Lane Group Flow (vph)	154	502	0	10	465	342	0	166	0	270	284	258
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		1	1	
Permitted Phases						8						1
Detector Phases	7	4		3	8	8	2	2		1	1	1
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	9.0		21.0	21.0	21.0
Total Split (s)	11.0	23.0	0.0	9.0	21.0	21.0	12.0	12.0	0.0	21.0	21.0	21.0
Total Split (%)	16.9%	35.4%	0.0%	13.8%	32.3%	32.3%	18.5%	18.5%	0.0%	32.3%	32.3%	32.3%
Maximum Green (s)	6.0	18.0		4.0	16.0	16.0	7.0	7.0		16.0	16.0	16.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None		Max	Max	Max
Walk Time (s)		5.0			5.0	5.0				5.0	5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0				11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0	0				0	0	0
Act Effct Green (s)	7.0	23.9		5.0	14.6	14.6		7.9		17.0	17.0	17.0
Actuated g/C Ratio	0.11	0.38		0.07	0.23	0.23		0.13		0.27	0.27	0.27
v/c Ratio	0.78	0.38		0.08	0.57	0.55		0.69		0.60	0.62	0.43
Control Delay	58.0	15.5		31.3	24.1	6.5		41.2		26.9	27.5	5.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0

No Build 2015 PM Peak Hour  
17: Avenue 48 & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	58.0	15.5		31.3	24.1	6.5		41.2		26.9	27.5	5.5
LOS	E	B		C	C	A		D		C	C	A
Approach Delay		25.5			16.8			41.2			20.3	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)	59	65		4	82	0		54		94	101	0
Queue Length 95th (ft)	#153	126		17	123	55		#124		174	183	49
Internal Link Dist (ft)		2512			2548			795			2945	
Turn Bay Length (ft)	200			150		150				125		
Base Capacity (vph)	197	1333		126	919	654		242		453	459	604
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	0.78	0.38		0.08	0.51	0.52		0.69		0.60	0.62	0.43

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 62.6

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 22.0

Intersection LOS: C

Intersection Capacity Utilization 51.3%

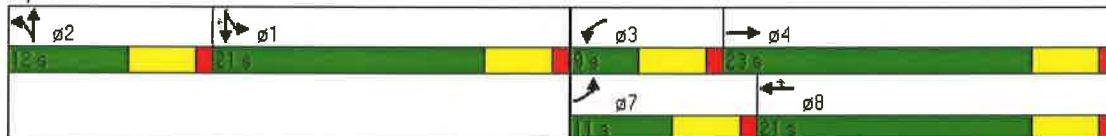
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 17: Avenue 48 & Adams Street



No Build 2015 PM Peak Hour  
18: Fred Waring Drive & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		0	100		100
Storage Lanes	1		1	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97		1.00				0.97			0.97
Frt			0.850		0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3455	0	1752	1845	1568	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3505	1526	1752	3455	0	1752	1845	1526	1752	1845	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			56		10				127			37
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1822			2648			2644			683	
Travel Time (s)		41.4			60.2			60.1			15.5	
Volume (vph)	23	665	65	130	789	60	353	117	117	142	137	34
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	25	723	71	141	858	65	384	127	127	154	149	37
Lane Group Flow (vph)	25	723	71	141	923	0	384	127	127	154	149	37
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phases	7	4	4	3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	9.0	24.0	24.0	11.0	26.0	0.0	23.0	28.0	28.0	17.0	22.0	22.0
Total Split (%)	11.3%	30.0%	30.0%	13.8%	32.5%	0.0%	28.8%	35.0%	35.0%	21.3%	27.5%	27.5%
Maximum Green (s)	4.0	19.0	19.0	6.0	21.0		18.0	23.0	23.0	12.0	17.0	17.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max		None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	5.0	20.4	20.4	7.1	28.3		18.3	19.0	19.0	11.2	12.0	12.0
Actuated g/C Ratio	0.07	0.29	0.29	0.10	0.40		0.26	0.27	0.27	0.15	0.16	0.16
v/c Ratio	0.22	0.72	0.15	0.80	0.67		0.85	0.26	0.25	0.57	0.50	0.13
Control Delay	39.9	29.7	10.0	68.9	24.6		47.1	23.5	6.0	38.5	33.8	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
 18: Fred Waring Drive & Adams Street

6/7/2010

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	39.9	29.7	10.0	68.9	24.6		47.1	23.5	6.0	38.5	33.8	10.5
LOS	D	C	A	E	C		D	C	A	D	C	B
Approach Delay		28.3			30.5			34.2			33.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	11	160	5	65	169		168	47	0	65	63	0
Queue Length 95th (ft)	36	#261	37	#176	#356		#345	90	37	129	116	23
Internal Link Dist (ft)		1742			2568			2564			603	
Turn Bay Length (ft)	100		100	100			100			100		100
Base Capacity (vph)	116	1004	477	176	1380		468	587	572	304	420	376
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.72	0.15	0.80	0.67		0.82	0.22	0.22	0.51	0.35	0.10

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 71.1

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 31.0

Intersection LOS: C

Intersection Capacity Utilization 69.0%

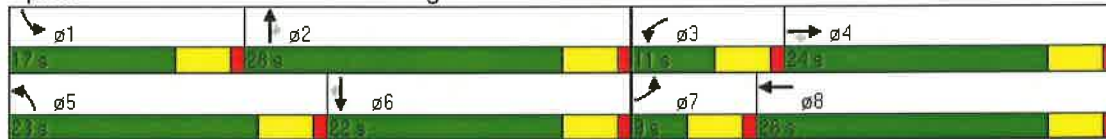
ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 18: Fred Waring Drive & Adams Street





No Build 2015 PM Peak Hour  
19: SR-111 & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔↔↔	↔	↔↔	↔↔↔	↔	↔↔	↔↔	↔	↔↔	↔↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	575		200	400		150	150		150	150		150
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.98			0.97			0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1517	3400	5036	1536	3400	3505	1521	3400	3505	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			224			129			67			187
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1285			1329			3025			2276	
Travel Time (s)		29.2			30.2			68.8			51.7	
Volume (vph)	235	1394	233	137	1190	158	217	325	62	304	380	172
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	255	1515	253	149	1293	172	236	353	67	330	413	187
Lane Group Flow (vph)	255	1515	253	149	1293	172	236	353	67	330	413	187
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	21.0	21.0
Total Split (s)	21.0	48.0	48.0	16.0	43.0	43.0	20.0	22.0	22.0	24.0	26.0	26.0
Total Split (%)	19.1%	43.6%	43.6%	14.5%	39.1%	39.1%	18.2%	20.0%	20.0%	21.8%	23.6%	23.6%
Maximum Green (s)	16.0	43.0	43.0	11.0	38.0	38.0	15.0	17.0	17.0	19.0	21.0	21.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0	5.0								5.0	5.0
Flash Dont Walk (s)		11.0	11.0								11.0	11.0
Pedestrian Calls (#/hr)		0	0								0	0
Act Effct Green (s)	14.2	45.5	45.5	10.5	41.8	41.8	13.5	21.6	21.6	16.4	24.5	24.5
Actuated g/C Ratio	0.13	0.41	0.41	0.10	0.38	0.38	0.12	0.20	0.20	0.15	0.22	0.22
v/c Ratio	0.58	0.73	0.33	0.46	0.68	0.26	0.57	0.51	0.19	0.65	0.53	0.39
Control Delay	40.3	21.4	7.8	39.2	27.0	12.7	50.7	43.4	11.2	44.9	39.8	8.4
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

No Build 2015 PM Peak Hour  
 19: SR-111 & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	40.3	21.4	7.8	39.2	27.0	12.7	50.7	43.4	11.2	44.9	39.8	8.4
LOS	D	C	A	D	C	B	D	D	B	D	D	A
Approach Delay	22.1			26.6			42.7			35.3		
Approach LOS	C			C			D			D		
Queue Length 50th (ft)	70	333	74	41	312	72	81	118	0	117	141	8
Queue Length 95th (ft)	106	410	115	m56	376	m95	120	173	39	160	197	67
Internal Link Dist (ft)	1205			1249			2945			2196		
Turn Bay Length (ft)	575		200	400		150	150		150	150		150
Base Capacity (vph)	525	2084	759	371	1913	663	495	687	352	618	781	483
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.73	0.33	0.40	0.68	0.26	0.48	0.51	0.19	0.53	0.53	0.39

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 19 (17%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 28.4

Intersection LOS: C

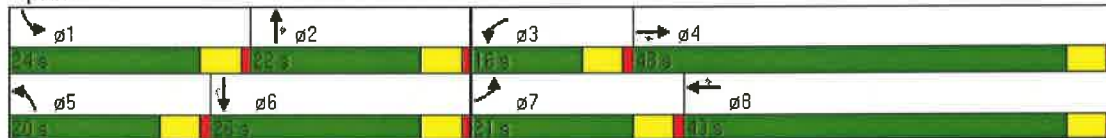
Intersection Capacity Utilization 66.2%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 19: SR-111 & Adams Street



No Build 2015 PM Peak Hour  
22: Avenue 48 & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	150		0	0		0	150		0
Storage Lanes	2		0	1		0	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50		50
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor					0.99							0.97
Frt					0.956							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3400	3505	0	1845	3331	0	0	1845	0	3400	0	1568
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	3400	3505	0	1845	3331	0	0	1845	0	3400	0	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					119							131
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2628			2632			570			2692	
Travel Time (s)		59.7			59.8			13.0			61.2	
Volume (vph)	80	803	0	0	721	299	0	0	0	456	0	124
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	84	845	0	0	784	325	0	0	0	480	0	131
Lane Group Flow (vph)	84	845	0	0	1109	0	0	0	0	480	0	131
Turn Type	Prot			Prot			Split			Prot		custom
Protected Phases	7	4		3	8		2	2		1		
Permitted Phases												1
Detector Phases	7	4		3	8		2	2		1		1
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Minimum Split (s)	9.0	21.0		9.0	9.0		9.0	9.0		9.0		9.0
Total Split (s)	9.0	26.0	0.0	9.0	26.0	0.0	10.0	10.0	0.0	15.0	0.0	15.0
Total Split (%)	15.0%	43.3%	0.0%	15.0%	43.3%	0.0%	16.7%	16.7%	0.0%	25.0%	0.0%	25.0%
Maximum Green (s)	4.0	21.0		4.0	21.0		5.0	5.0		10.0		10.0
Yellow Time (s)	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
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		None	None		None		None
Walk Time (s)		5.0										
Flash Dont Walk (s)		11.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	5.1	23.8			19.2					10.7		10.7
Actuated g/C Ratio	0.11	0.55			0.45					0.25		0.25
v/c Ratio	0.23	0.43			0.71					0.57		0.27
Control Delay	22.2	6.0			12.3					19.0		5.9
Queue Delay	0.0	0.0			0.0					0.0		0.0

No Build 2015 PM Peak Hour  
 22: Avenue 48 & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	22.2	6.0			12.3					19.0		5.9
LOS	C	A			B					B		A
Approach Delay		7.4			12.3							
Approach LOS		A			B							
Queue Length 50th (ft)	11	53			115					65		0
Queue Length 95th (ft)	28	78			177					105		33
Internal Link Dist (ft)		2548			2552			490			2612	
Turn Bay Length (ft)	275									150		
Base Capacity (vph)	370	2087			1684					892		496
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	0.23	0.40			0.66					0.54		0.26

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 42.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 11.5

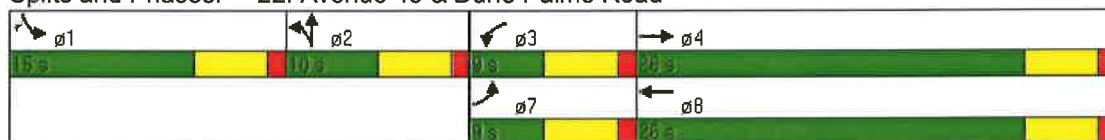
Intersection LOS: B

Intersection Capacity Utilization 60.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 22: Avenue 48 & Dune Palms Road



No Build 2015 PM Peak Hour  
23: Fred Waring Drive & Dune Palms Road

6/7/2010

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50	50	50	50
Trailing Detector (ft)	0		0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor	1.00					0.97
Frt	0.983					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3434	0	1752	3505	1752	1568
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3434	0	1752	3505	1752	1523
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	24					221
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	2648			1375	2640	
Travel Time (s)	60.2			31.3	60.0	
Volume (vph)	1298	168	151	1098	166	186
Conf. Peds. (#/hr)		10				10
Peak Hour Factor	0.84	0.84	0.80	0.80	0.78	0.78
Adj. Flow (vph)	1545	200	189	1372	213	238
Lane Group Flow (vph)	1745	0	189	1372	213	238
Turn Type			Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Detector Phases	4		3	8	2	2
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	53.0	0.0	16.0	69.0	21.0	21.0
Total Split (%)	58.9%	0.0%	17.8%	76.7%	23.3%	23.3%
Maximum Green (s)	48.0		11.0	64.0	16.0	16.0
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		None	Max	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	49.3		11.8	65.1	15.1	15.1
Actuated g/C Ratio	0.56		0.13	0.74	0.17	0.17
v/c Ratio	0.90		0.81	0.53	0.71	0.53
Control Delay	26.0		64.2	6.1	48.0	10.8
Queue Delay	0.0		0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
 23: Fred Waring Drive & Dune Palms Road

6/7/2010



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	26.0		64.2	6.1	48.0	10.8
LOS	C		E	A	D	B
Approach Delay	26.0			13.2	28.4	
Approach LOS	C			B	C	
Queue Length 50th (ft)	446		106	156	113	8
Queue Length 95th (ft)	494		#178	163	158	45
Internal Link Dist (ft)	2568			1295	2560	
Turn Bay Length (ft)			150			
Base Capacity (vph)	1929		238	2585	331	467
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	0.90		0.79	0.53	0.64	0.51

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 88.2

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 21.0

Intersection LOS: C

Intersection Capacity Utilization 70.1%

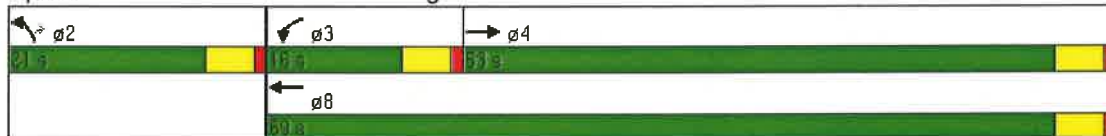
ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 23: Fred Waring Drive & Dune Palms Road



No Build 2015 PM Peak Hour  
24: SR-111 & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	550		150	150		175	200		150
Storage Lanes	2		1	2		1	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.97			0.97			0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5036	1517	3400	5036	1517	3400	3505	1517	3400	3505	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84			119			154			136
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1333			1760			2692			3853	
Travel Time (s)		30.3			40.0			61.2			87.6	
Volume (vph)	166	1620	123	137	1258	153	91	155	142	164	202	125
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	180	1761	134	149	1367	166	99	168	154	178	220	136
Lane Group Flow (vph)	180	1761	134	149	1367	166	99	168	154	178	220	136
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	22.0	52.0	52.0	14.0	44.0	44.0	12.0	22.0	22.0	22.0	32.0	32.0
Total Split (%)	20.0%	47.3%	47.3%	12.7%	40.0%	40.0%	10.9%	20.0%	20.0%	20.0%	29.1%	29.1%
Maximum Green (s)	17.0	47.0	47.0	9.0	39.0	39.0	7.0	17.0	17.0	17.0	27.0	27.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0		0	0	0	0	0
Act Effct Green (s)	11.2	47.3	47.3	9.7	45.8	45.8	8.0	25.1	25.1	11.9	29.0	29.0
Actuated g/C Ratio	0.10	0.43	0.43	0.09	0.42	0.42	0.07	0.23	0.23	0.11	0.26	0.26
v/c Ratio	0.52	0.81	0.19	0.50	0.65	0.24	0.40	0.21	0.33	0.48	0.24	0.27
Control Delay	56.0	19.2	3.5	41.6	27.5	11.3	53.8	36.4	8.2	50.2	33.0	7.1
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

No Build 2015 PM Peak Hour  
24: SR-111 & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	56.0	19.2	3.5	41.6	27.5	11.3	53.8	36.4	8.2	50.2	33.0	7.1
LOS	E	B	A	D	C	B	D	D	A	D	C	A
Approach Delay	21.3			27.2			30.2			32.2		
Approach LOS	C			C			C			C		
Queue Length 50th (ft)	51	441	23	45	320	54	35	51	0	61	65	0
Queue Length 95th (ft)	m58	501	m25	m73	394	m98	62	85	55	95	98	48
Internal Link Dist (ft)	1253			1680			2612			3773		
Turn Bay Length (ft)	150		150	550		150	150		175	200		150
Base Capacity (vph)	556	2198	709	309	2098	701	251	800	465	556	925	501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.80	0.19	0.48	0.65	0.24	0.39	0.21	0.33	0.32	0.24	0.27

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 25.4

Intersection LOS: C

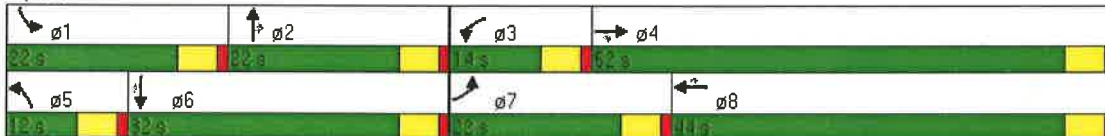
Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 24: SR-111 & Dune Palms Road





No Build 2015 PM Peak Hour  
27: Miles Avenue & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		150
Storage Lanes	1		0	1		0	2		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor		0.97			0.99				0.97			0.97
Frt		0.873			0.940				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	2976	0	1752	3252	0	3400	5036	1568	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	2976	0	1752	3252	0	3400	5036	1517	3400	5036	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		200			32				18			80
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2656			1279			1256			2632	
Travel Time (s)		60.4			29.1			28.5			59.8	
Volume (vph)	193	35	191	14	24	16	107	1019	16	9	1163	99
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.73	0.73	0.73	0.50	0.50	0.50	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	264	48	262	28	48	32	120	1145	18	10	1307	111
Lane Group Flow (vph)	264	310	0	28	80	0	120	1145	18	10	1307	111
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	32.0	43.0	0.0	12.0	23.0	0.0	14.0	44.0	44.0	11.0	41.0	41.0
Total Split (%)	29.1%	39.1%	0.0%	10.9%	20.9%	0.0%	12.7%	40.0%	40.0%	10.0%	37.3%	37.3%
Maximum Green (s)	27.0	38.0		7.0	18.0		9.0	39.0	39.0	6.0	36.0	36.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	21.8	43.8		7.5	25.2		9.4	48.8	48.8	6.7	37.6	37.6
Actuated g/C Ratio	0.20	0.40		0.07	0.23		0.09	0.44	0.44	0.06	0.34	0.34
v/c Ratio	0.76	0.24		0.24	0.10		0.41	0.51	0.03	0.05	0.76	0.19
Control Delay	55.4	9.1		53.3	23.8		53.5	29.3	15.4	49.1	35.8	10.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
 27: Miles Avenue & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	55.4	9.1		53.3	23.8		53.5	29.3	15.4	49.1	35.8	10.1
LOS	E	A		D	C		D	C	B	D	D	B
Approach Delay		30.4			31.4			31.4			33.9	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	176	27		19	14		47	215	2	3	300	15
Queue Length 95th (ft)	194	36		27	15		77	344	m14	12	352	54
Internal Link Dist (ft)		2576			1199			1176			2552	
Turn Bay Length (ft)	150			150			150			150		150
Base Capacity (vph)	446	1305		127	769		309	2234	683	216	1722	571
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.24		0.22	0.10		0.39	0.51	0.03	0.05	0.76	0.19

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 18 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 32.3

Intersection LOS: C

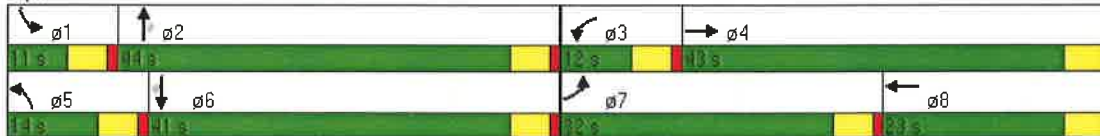
Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 27: Miles Avenue & Jefferson Street



No Build 2015 PM Peak Hour  
28: Miles Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	150		200	200		275
Storage Lanes	1		0	2		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor		0.99			0.98				0.97			0.97
Frt		0.960			0.906				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3336	0	3400	3112	0	1752	5036	1568	1752	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3336	0	3400	3112	0	1752	5036	1517	1752	5036	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42			197				153			92
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4499			3481			3324			2114	
Travel Time (s)		102.3			79.1			75.5			48.0	
Volume (vph)	145	303	110	107	127	211	130	1490	183	350	2000	87
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	158	329	120	116	138	229	141	1620	199	380	2174	95
Lane Group Flow (vph)	158	449	0	116	367	0	141	1620	199	380	2174	95
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	15.0	26.0	0.0	10.0	21.0	0.0	16.0	43.0	43.0	31.0	58.0	58.0
Total Split (%)	13.6%	23.6%	0.0%	9.1%	19.1%	0.0%	14.5%	39.1%	39.1%	28.2%	52.7%	52.7%
Maximum Green (s)	10.0	21.0		5.0	16.0		11.0	38.0	38.0	26.0	53.0	53.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max		None	Max		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	11.0	22.0		6.0	17.0		11.6	40.2	40.2	25.8	54.4	54.4
Actuated g/C Ratio	0.10	0.20		0.05	0.15		0.11	0.37	0.37	0.23	0.49	0.49
v/c Ratio	0.90	0.64		0.63	0.57		0.76	0.88	0.31	0.92	0.87	0.12
Control Delay	96.5	41.2		66.4	23.3		48.4	33.8	13.2	76.1	15.4	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
 28: Miles Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Total Delay	96.5	41.2		66.4	23.3		48.4	33.8	13.2	76.1	15.4	0.3
LOS	F	D		E	C		D	C	B	E	B	A
Approach Delay		55.6			33.6			32.8			23.6	
Approach LOS		E			C			C			C	
Queue Length 50th (ft)	112	140		42	57		87	424	66	246	112	0
Queue Length 95th (ft)	#236	195		#77	106		m82	m403	m61	m#363	230	m0
Internal Link Dist (ft)		4419			3401			3244			2034	
Turn Bay Length (ft)	200			200			150		200	200		275
Base Capacity (vph)	175	701		185	648		191	1840	652	430	2489	797
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.64		0.63	0.57		0.74	0.88	0.31	0.88	0.87	0.12

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 102 (93%), Referenced to phase 2:SET and 6:NWT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 31.0

Intersection LOS: C

Intersection Capacity Utilization 82.9%

ICU Level of Service E

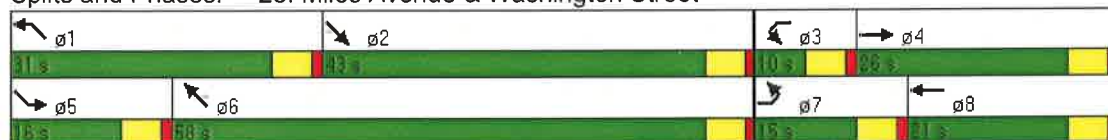
Analysis Period (min) 15

# 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.

Splits and Phases: 28: Miles Avenue & Washington Street



No Build 2015 PM Peak Hour  
29: Miles Avenue & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	100		0
Storage Lanes	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99			1.00			1.00	
Frt		0.959			0.962			0.979			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3340	0	1752	3352	0	1752	3420	0	1752	3461	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3340	0	1752	3352	0	1752	3420	0	1752	3461	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			65			30			13	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3481			2620			2613			2644	
Travel Time (s)		79.1			59.5			59.4			60.1	
Volume (vph)	44	383	142	55	168	58	96	573	92	49	530	41
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91
Adj. Flow (vph)	47	407	151	62	189	65	104	623	100	54	582	45
Lane Group Flow (vph)	47	558	0	62	254	0	104	723	0	54	627	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0
Total Split (%)	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%
Maximum Green (s)	4.0	16.0		4.0	16.0		4.0	16.0		4.0	16.0	
Yellow Time (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	5.0	17.3		5.0	17.3		5.0	19.3		5.0	17.3	
Actuated g/C Ratio	0.09	0.32		0.09	0.32		0.09	0.35		0.09	0.32	
v/c Ratio	0.31	0.50		0.41	0.23		0.67	0.59		0.36	0.57	
Control Delay	31.7	15.8		34.8	12.4		50.5	18.3		33.1	19.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
 29: Miles Avenue & Adams Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	31.7	15.8		34.8	12.4		50.5	18.3		33.1	19.1	
LOS	C	B		C	B		D	B		C	B	
Approach Delay		17.1			16.8			22.3			20.2	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	16	74		22	27		38	117		19	101	
Queue Length 95th (ft)	44	117		54	51		#107	173		49	150	
Internal Link Dist (ft)		3401			2540			2533			2564	
Turn Bay Length (ft)	100			100			100			100		
Base Capacity (vph)	151	1121		151	1109		156	1227		151	1108	
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	0.31	0.50		0.41	0.23		0.67	0.59		0.36	0.57	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 54.6

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 19.7

Intersection LOS: B

Intersection Capacity Utilization 54.3%

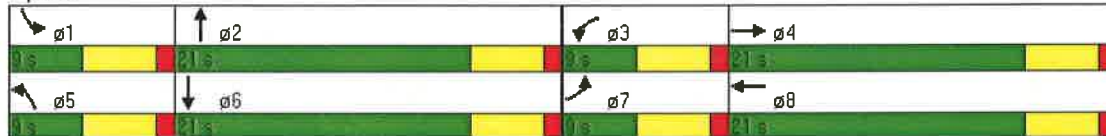
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 29: Miles Avenue & Adams Street



No Build 2015 PM Peak Hour  
30: Miles Avenue & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	150		0	125		0
Storage Lanes	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			1.00			1.00	
Fr't		0.971			0.984			0.972			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3388	0	1752	3440	0	1752	3392	0	1752	3424	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3388	0	1752	3440	0	1752	3392	0	1752	3424	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			21			47			29	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2620			2656			1383			2640	
Travel Time (s)		59.5			60.4			31.4			60.0	
Volume (vph)	58	392	96	63	193	23	73	308	72	5	228	36
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.72	0.72	0.72	0.88	0.88	0.88	0.87	0.87	0.87	0.94	0.94	0.94
Adj. Flow (vph)	81	544	133	72	219	26	84	354	83	5	243	38
Lane Group Flow (vph)	81	677	0	72	245	0	84	437	0	5	281	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0	9.0	21.0	0.0
Total Split (%)	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%
Maximum Green (s)	4.0	16.0		4.0	16.0		4.0	16.0		4.0	16.0	
Yellow Time (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max		None	Max		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	5.0	19.0		5.0	17.3		5.0	22.4		5.1	17.3	
Actuated g/C Ratio	0.09	0.34		0.08	0.31		0.09	0.40		0.08	0.31	
v/c Ratio	0.54	0.58		0.49	0.23		0.56	0.32		0.04	0.26	
Control Delay	41.8	18.1		39.4	15.5		43.1	12.3		27.8	15.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
 30: Miles Avenue & Dune Palms Road

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	41.8	18.1		39.4	15.5		43.1	12.3		27.8	15.4	
LOS	D	B		D	B		D	B		C	B	
Approach Delay		20.6			21.0			17.3			15.6	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	29	104		26	32		30	45		2	36	
Queue Length 95th (ft)	52	115		#66	56		#79	92		10	64	
Internal Link Dist (ft)		2540			2576			1303			2560	
Turn Bay Length (ft)	200			200			150			125		
Base Capacity (vph)	151	1177		147	1073		151	1377		140	1073	
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	0.58		0.49	0.23		0.56	0.32		0.04	0.26	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 56.4

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 19.0

Intersection LOS: B

Intersection Capacity Utilization 48.3%

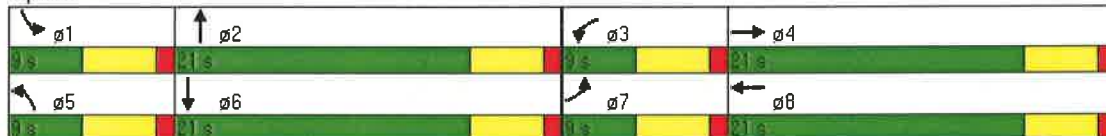
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 30: Miles Avenue & Dune Palms Road





No Build 2015 PM Peak Hour  
32: SR-111 & Miles Avenue

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		200	400		0	75		75	125		0
Storage Lanes	1		1	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.96		1.00				0.95			0.95
Frt			0.850		0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3501	0	1752	1845	1568	1752	1845	1568
Flt Permitted	0.950			0.950			0.800			0.800		
Satd. Flow (perm)	1752	3505	1508	1752	3501	0	1476	1845	1494	1476	1845	1494
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			57		2				91			151
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1414			4473			454			2121	
Travel Time (s)		32.1			101.7			10.3			48.2	
Volume (vph)	188	1939	56	69	1334	10	45	39	70	4	20	138
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.77	0.77	0.77	0.88	0.88	0.88
Adj. Flow (vph)	192	1979	57	73	1404	11	58	51	91	5	23	157
Lane Group Flow (vph)	192	1979	57	73	1415	0	58	51	91	5	23	157
Turn Type	Prot		Perm	Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2				2
Permitted Phases			4				2		2	2		2
Detector Phases	7	4	4	3	8		2	2	2	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	9.0	9.0	9.0	9.0	9.0
Total Split (s)	13.0	42.0	42.0	9.0	38.0	0.0	9.0	9.0	9.0	9.0	9.0	9.0
Total Split (%)	21.7%	70.0%	70.0%	15.0%	63.3%	0.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Maximum Green (s)	8.0	37.0	37.0	4.0	33.0		4.0	4.0	4.0	4.0	4.0	4.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max		None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0							
Flash Dont Walk (s)		11.0	11.0		11.0							
Pedestrian Calls (#/hr)		0	0		0							
Act Effct Green (s)	9.0	44.9	44.9	5.0	36.7		5.0	5.0	5.0	5.0	5.0	5.0
Actuated g/C Ratio	0.15	0.74	0.74	0.08	0.60		0.08	0.08	0.08	0.08	0.08	0.08
v/c Ratio	0.74	0.77	0.05	0.53	0.67		0.49	0.34	0.45	0.04	0.16	0.61
Control Delay	44.5	10.6	1.6	42.6	10.8		41.9	32.7	14.6	26.2	28.1	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
32: SR-111 & Miles Avenue

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	44.5	10.6	1.6	42.6	10.8		41.9	32.7	14.6	26.2	28.1	17.5
LOS	D	B	A	D	B		D	C	B	C	C	B
Approach Delay		13.3			12.3			27.2			19.0	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	67	265	0	26	173		21	18	0	2	8	2
Queue Length 95th (ft)	#156	#425	10	#71	243		44	39	26	10	26	#58
Internal Link Dist (ft)		1334			4393			374			2041	
Turn Bay Length (ft)	400		200	400			75		75	125		
Base Capacity (vph)	259	2582	1126	137	2108		118	148	204	118	148	259
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.77	0.05	0.53	0.67		0.49	0.34	0.45	0.04	0.16	0.61

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 61

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 13.9

Intersection LOS: B

Intersection Capacity Utilization 77.8%

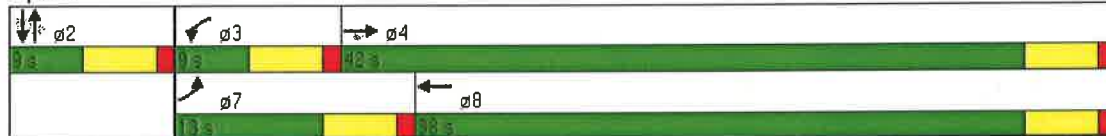
ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 32: SR-111 & Miles Avenue



No Build 2015 PM Peak Hour  
33: SR-111 & La Quinta Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	400		150	400		0	100		0	100		0	
Storage Lanes	2		1	2		0	1		1	1		1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor			0.97		1.00				0.97			0.97	
Frnt			0.850		0.978				0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	3400	5036	1568	3400	4902	0	1752	1845	1568	1752	1845	1568	
Flt Permitted	0.950			0.950			0.950			0.950			
Satd. Flow (perm)	3400	5036	1517	3400	4902	0	1752	1845	1517	1752	1845	1517	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			145		39				140			71	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		1329			1333			571			343		
Travel Time (s)		30.2			30.3			13.0			7.8		
Volume (vph)	92	1652	229	234	1335	232	224	36	184	190	53	65	
Confl. Peds. (#/hr)			10			10			10			10	
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.84	0.84	0.84	0.92	0.92	0.92	
Adj. Flow (vph)	101	1815	252	249	1420	247	267	43	219	207	58	71	
Lane Group Flow (vph)	101	1815	252	249	1667	0	267	43	219	207	58	71	
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases			4						2			6	
Detector Phases	7	4	4	3	8		5	2	2	1	6	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0	
Total Split (s)	11.0	48.0	48.0	14.0	51.0	0.0	26.0	27.0	27.0	21.0	22.0	22.0	
Total Split (%)	10.0%	43.6%	43.6%	12.7%	46.4%	0.0%	23.6%	24.5%	24.5%	19.1%	20.0%	20.0%	
Maximum Green (s)	6.0	43.0	43.0	9.0	46.0		21.0	22.0	22.0	16.0	17.0	17.0	
Yellow Time (s)	4.0	4.0	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	1.0	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max	Max	None	Max		None	C-Max	C-Max	None	C-Max	C-Max	
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0	
Act Effect Green (s)	7.0	44.0	44.0	10.0	47.0		20.4	23.8	23.8	16.2	19.6	19.6	
Actuated g/C Ratio	0.06	0.40	0.40	0.09	0.43		0.19	0.22	0.22	0.15	0.18	0.18	
v/c Ratio	0.47	0.90	0.36	0.81	0.79		0.82	0.11	0.50	0.80	0.18	0.22	
Control Delay	64.4	25.2	6.4	54.4	27.9		63.9	36.2	18.9	68.2	41.2	11.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	

No Build 2015 PM Peak Hour  
33: SR-111 & La Quinta Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	64.4	25.2	6.4	54.4	27.9		63.9	36.2	18.9	68.2	41.2	11.3
LOS	E	C	A	D	C		E	D	B	E	D	B
Approach Delay		24.8			31.4			43.0			51.5	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	30	419	69	73	442		179	25	47	142	36	0
Queue Length 95th (ft)	m47	481	m90	#147	484		#256	52	106	#254	75	40
Internal Link Dist (ft)		1249			1253			491			263	
Turn Bay Length (ft)	400		150	400			100			100		
Base Capacity (vph)	216	2014	694	309	2117		350	399	438	271	329	329
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.90	0.36	0.81	0.79		0.76	0.11	0.50	0.76	0.18	0.22

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 70 (64%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 31.1

Intersection LOS: C

Intersection Capacity Utilization 67.7%

ICU Level of Service C

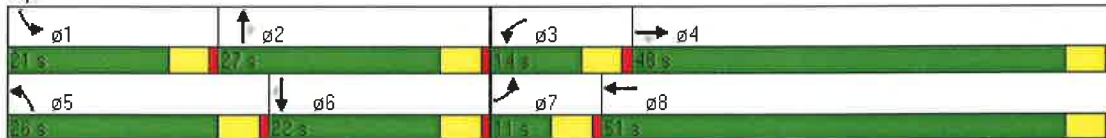
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 33: SR-111 & La Quinta Drive



No Build 2015 PM Peak Hour  
35: Avenue 47 & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↗	↗	↗		↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	200		0	250		0
Storage Lanes	0		0	0		1	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.91
Ped Bike Factor		0.99				0.97		1.00				1.00
Frt		0.965				0.850		0.994				
Flt Protected		0.987			0.959		0.950			0.950		
Satd. Flow (prot)	0	1742	0	0	1769	1568	1752	4995	0	1752	5035	0
Flt Permitted		0.987			0.959		0.950			0.950		
Satd. Flow (perm)	0	1742	0	0	1769	1517	1752	4995	0	1752	5035	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				87		8				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			677			2717			2658	
Travel Time (s)		6.8			15.4			61.8			60.4	
Volume (vph)	6	12	6	59	10	74	14	1520	65	36	2098	5
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.57	0.57	0.57	0.85	0.85	0.85	0.92	0.92	0.92	0.82	0.82	0.82
Adj. Flow (vph)	11	21	11	69	12	87	15	1652	71	44	2559	6
Lane Group Flow (vph)	0	43	0	0	81	87	15	1723	0	44	2565	0
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	4	4		7	7		5	2		1	6	
Permitted Phases						7						
Detector Phases	4	4		7	7	7	5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	21.0	9.0	21.0		9.0	21.0	
Total Split (s)	21.0	21.0	0.0	21.0	21.0	21.0	9.0	57.0	0.0	11.0	59.0	0.0
Total Split (%)	19.1%	19.1%	0.0%	19.1%	19.1%	19.1%	8.2%	51.8%	0.0%	10.0%	53.6%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0	16.0	4.0	52.0		6.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		8.6			10.9	10.9	5.1	64.6		7.0	67.6	
Actuated g/C Ratio		0.08			0.11	0.11	0.05	0.66		0.07	0.69	
v/c Ratio		0.28			0.41	0.36	0.17	0.53		0.37	0.74	
Control Delay		37.3			44.4	12.9	50.6	12.2		52.1	14.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
 35: Avenue 47 & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		37.3			44.4	12.9	50.6	12.2		52.1	14.8	
LOS		D			D	B	D	B		D	B	
Approach Delay		37.3			28.1			12.6			15.5	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)		18			46	0	9	239		26	331	
Queue Length 95th (ft)		30			88	38	31	338		58	521	
Internal Link Dist (ft)		220			597			2637			2578	
Turn Bay Length (ft)						100	200			250		
Base Capacity (vph)		280			292	323	86	3279		122	3460	
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		0.15			0.28	0.27	0.17	0.53		0.36	0.74	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 98.4

Natural Cycle: 110

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 15.0

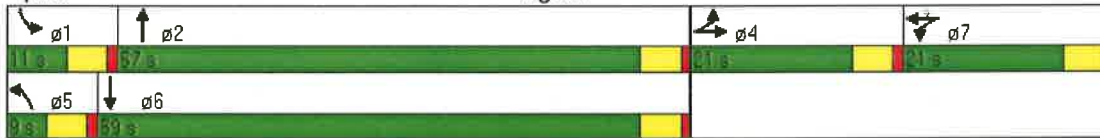
Intersection LOS: B

Intersection Capacity Utilization 58.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 35: Avenue 47 & Washington Street



No Build 2015 PM Peak Hour  
38: Westward Ho Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	100		0
Storage Lanes	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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor		0.97			0.99			1.00			1.00	
Frt		0.875			0.956			0.999			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1571	0	1752	1747	0	1752	5029	0	1752	4985	0
Flt Permitted	0.740			0.685			0.950			0.950		
Satd. Flow (perm)	1365	1571	0	1264	1747	0	1752	5029	0	1752	4985	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		93			8			4			22	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5249			1348			2668			1328	
Travel Time (s)		119.3			30.6			60.6			30.2	
Volume (vph)	64	16	80	8	15	6	93	1113	10	4	1226	73
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.86	0.86	0.86	0.79	0.79	0.79	0.86	0.86	0.86	0.80	0.80	0.80
Adj. Flow (vph)	74	19	93	10	19	8	108	1294	12	5	1532	91
Lane Group Flow (vph)	74	112	0	10	27	0	108	1306	0	5	1623	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Detector Phases	4	4		4	4		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		9.0	21.0		9.0	21.0	
Total Split (s)	12.0	12.0	0.0	12.0	12.0	0.0	13.0	34.0	0.0	9.0	30.0	0.0
Total Split (%)	21.8%	21.8%	0.0%	21.8%	21.8%	0.0%	23.6%	61.8%	0.0%	16.4%	54.5%	0.0%
Maximum Green (s)	7.0	7.0		7.0	7.0		8.0	29.0		4.0	25.0	
Yellow Time (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)	7.7	7.7		7.7	7.7		8.3	40.4		5.3	34.4	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.15	0.73		0.10	0.63	
v/c Ratio	0.39	0.37		0.06	0.11		0.41	0.35		0.03	0.52	
Control Delay	23.7	10.2		21.2	17.9		23.0	3.4		28.0	3.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
 38: Westward Ho Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	23.7	10.2		21.2	17.9		23.0	3.4		28.0	3.2	
LOS	C	B		C	B		C	A		C	A	
Approach Delay		15.6			18.8			4.9			3.2	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	19	5		3	6		31	26		3	99	
Queue Length 95th (ft)	m68	54		12	20		m57	m165		m5	8	
Internal Link Dist (ft)		5169			1268			2588			1248	
Turn Bay Length (ft)	100			100			100			100		
Base Capacity (vph)	199	308		184	261		287	3695		169	3126	
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	0.37	0.36		0.05	0.10		0.38	0.35		0.03	0.52	

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 21 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 4.8

Intersection LOS: A

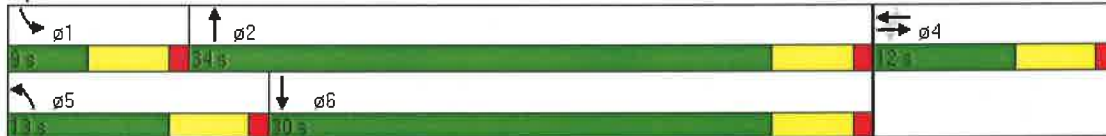
Intersection Capacity Utilization 51.6%

ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 38: Westward Ho Drive & Jefferson Street





No Build 2015 PM Peak Hour  
41: Westward Ho Drive & Adams Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↗		↘	↙↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	100	
Storage Lanes	1	1		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor		0.97	0.99			
Frt		0.850	0.975			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	1568	3387	0	1752	3505
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1752	1517	3387	0	1752	3505
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		89	28			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	5249		2276			2613
Travel Time (s)	119.3		51.7			59.4
Volume (vph)	104	58	774	155	104	731
Confl. Peds. (#/hr)		10		10		
Peak Hour Factor	0.65	0.65	0.89	0.89	0.82	0.82
Adj. Flow (vph)	160	89	870	174	127	891
Lane Group Flow (vph)	160	89	1044	0	127	891
Turn Type		Perm			Prot	
Protected Phases	4		2		1	6
Permitted Phases		4				
Detector Phases	4	4	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.0	21.0	21.0		9.0	21.0
Total Split (s)	29.0	29.0	55.0	0.0	26.0	81.0
Total Split (%)	26.4%	26.4%	50.0%	0.0%	23.6%	73.6%
Maximum Green (s)	24.0	24.0	50.0		21.0	76.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	5.0	5.0	5.0			5.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	15.5	15.5	68.6		13.9	86.5
Actuated g/C Ratio	0.14	0.14	0.62		0.13	0.79
v/c Ratio	0.65	0.31	0.49		0.57	0.32
Control Delay	50.0	12.6	4.6		54.8	4.1
Queue Delay	0.0	0.0	0.0		0.0	0.0

No Build 2015 PM Peak Hour  
 41: Westward Ho Drive & Adams Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	50.0	12.6	4.6		54.8	4.1
LOS	D	B	A		D	A
Approach Delay	36.6		4.6			10.4
Approach LOS	D		A			B
Queue Length 50th (ft)	108	9	45		86	75
Queue Length 95th (ft)	120	15	66		127	113
Internal Link Dist (ft)	5169		2196			2533
Turn Bay Length (ft)	150				100	
Base Capacity (vph)	398	414	2123		350	2757
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	0.40	0.21	0.49		0.36	0.32

Intersection Summary

Area Type: Other  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 75 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 10.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 41: Westward Ho Drive & Adams Street



No Build 2015 PM Peak Hour  
42: SR-111 & Depot Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350		150	250		150	100		0	50		0
Storage Lanes	2		1	2		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98			0.97			0.97		0.97	
Frnt			0.850			0.850			0.850		0.871	
Flt Protected	0.950			0.950			0.950	0.965		0.950		
Satd. Flow (prot)	3400	5036	1568	3400	5036	1568	1665	1691	1568	1752	1558	0
Flt Permitted	0.950			0.950			0.950	0.965		0.950		
Satd. Flow (perm)	3400	5036	1538	3400	5036	1517	1665	1691	1522	1752	1558	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250			46			196		136	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1760			840			1007			753	
Travel Time (s)		40.0			19.1			22.9			17.1	
Volume (vph)	239	1582	362	252	1364	58	263	44	180	101	20	125
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	260	1720	393	274	1483	63	286	48	196	110	22	136
Lane Group Flow (vph)	260	1720	393	274	1483	63	163	171	196	110	158	0
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		1	1	
Permitted Phases			4			8			2			
Detector Phases	7	4	4	3	8	8	2	2	2	1	1	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	9.0	9.0	9.0	21.0	21.0	9.0	9.0	9.0	9.0	9.0	
Total Split (s)	18.0	51.0	51.0	18.0	51.0	51.0	23.0	23.0	23.0	18.0	18.0	0.0
Total Split (%)	16.4%	46.4%	46.4%	16.4%	46.4%	46.4%	20.9%	20.9%	20.9%	16.4%	16.4%	0.0%
Maximum Green (s)	13.0	46.0	46.0	13.0	46.0	46.0	18.0	18.0	18.0	13.0	13.0	
Yellow Time (s)	4.0	4.0	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	1.0	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None	None	None	None	None
Walk Time (s)					5.0	5.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effect Green (s)	13.4	52.2	52.2	13.5	52.3	52.3	16.1	16.1	16.1	12.1	12.1	
Actuated g/C Ratio	0.12	0.47	0.47	0.12	0.48	0.48	0.15	0.15	0.15	0.11	0.11	
v/c Ratio	0.62	0.72	0.46	0.66	0.62	0.08	0.67	0.69	0.50	0.57	0.54	
Control Delay	70.8	10.5	1.9	36.5	33.6	16.8	57.5	58.8	10.5	57.9	18.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

No Build 2015 PM Peak Hour  
42: SR-111 & Depot Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	70.8	10.5	1.9	36.5	33.6	16.8	57.5	58.8	10.5	57.9	18.1	
LOS	E	B	A	D	C	B	E	E	B	E	B	
Approach Delay		15.6			33.5			40.6			34.4	
Approach LOS		B			C			D			C	
Queue Length 50th (ft)	100	86	0	99	310	11	114	121	0	74	14	
Queue Length 95th (ft)	m129	172	m6	m111	m323	m17	187	195	63	132	77	
Internal Link Dist (ft)		1680			760			927			673	
Turn Bay Length (ft)	350		150	250		150	100			50		
Base Capacity (vph)	439	2391	861	441	2395	746	288	292	425	223	317	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.59	0.72	0.46	0.62	0.62	0.08	0.57	0.59	0.46	0.49	0.50	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 85 (77%), Referenced to phase 4:EBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 25.8

Intersection LOS: C

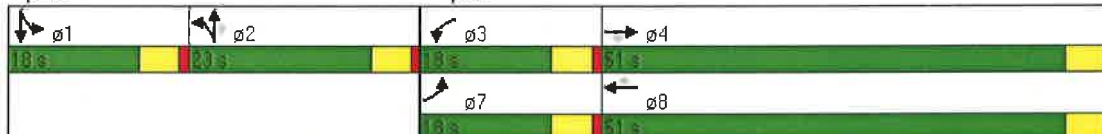
Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 42: SR-111 & Depot Drive



No Build 2015 PM Peak Hour  
45: Pebble Beach Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor		0.98			0.99			1.00			1.00	
Frt		0.850			0.920			0.995			0.996	
Flt Protected	0.950				0.981		0.950			0.950		
Satd. Flow (prot)	1752	1533	0	0	1643	0	1752	5005	0	1752	5011	0
Flt Permitted	0.706				0.903		0.950			0.950		
Satd. Flow (perm)	1302	1533	0	0	1512	0	1752	5005	0	1752	5011	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		193			46			10			8	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		407			583			1328			1256	
Travel Time (s)		9.3			13.3			30.2			28.5	
Volume (vph)	3	0	19	26	1	38	23	1156	38	50	1229	34
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.70	0.70	0.70	0.83	0.83	0.83	0.96	0.96	0.96	0.82	0.82	0.82
Adj. Flow (vph)	4	0	27	31	1	46	24	1204	40	61	1499	41
Lane Group Flow (vph)	4	27	0	0	78	0	24	1244	0	61	1540	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Detector Phases	4	4		4	4		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	21.0	21.0	0.0	21.0	21.0	0.0	9.0	24.0	0.0	10.0	25.0	0.0
Total Split (%)	38.2%	38.2%	0.0%	38.2%	38.2%	0.0%	16.4%	43.6%	0.0%	18.2%	45.5%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		4.0	19.0		5.0	20.0	
Yellow Time (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	8.0	8.0			8.0		7.4	36.7		8.5	42.3	
Actuated g/C Ratio	0.15	0.15			0.15		0.13	0.67		0.15	0.77	
v/c Ratio	0.02	0.07			0.30		0.10	0.37		0.23	0.40	
Control Delay	19.0	0.4			14.2		30.6	3.9		27.7	4.3	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
45: Pebble Beach Drive & Jefferson Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	19.0	0.4			14.2		30.6	3.9		27.7	4.3	
LOS	B	A			B		C	A		C	A	
Approach Delay		2.8			14.2			4.4			5.2	
Approach LOS		A			B			A			A	
Queue Length 50th (ft)	1	0			9		12	86		40	55	
Queue Length 95th (ft)	6	0			34		m32	20		m56	148	
Internal Link Dist (ft)		327			503			1248			1176	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	402	607			499		235	3345		270	3854	
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	0.04			0.16		0.10	0.37		0.23	0.40	

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 51 (93%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 5.1

Intersection LOS: A

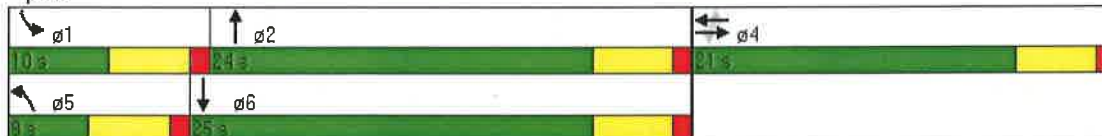
Intersection Capacity Utilization 49.6%

ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 45: Pebble Beach Drive & Jefferson Street



No Build 2015 PM Peak Hour  
48: SR-111 & Mountain Cove Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	575		250	550		475	0		0	0		0
Storage Lanes	1		1	1		1	0		1	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.95			0.95			0.97			0.97
Frnt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1752	1568	0	1752	1568
Flt Permitted	0.950			0.950				0.748			0.739	
Satd. Flow (perm)	1752	3505	1484	1752	3505	1484	0	1380	1517	0	1363	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			29			9			39			10
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4473			1886			727			469	
Travel Time (s)		101.7			42.9			16.5			10.7	
Volume (vph)	6	1970	35	38	1377	9	20	0	28	9	0	6
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97	0.71	0.71	0.71	0.63	0.63	0.63
Adj. Flow (vph)	6	2096	37	39	1420	9	28	0	39	14	0	10
Lane Group Flow (vph)	6	2096	37	39	1420	9	0	28	39	0	14	10
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2				2
Permitted Phases			4			8	2		2	2		2
Detector Phases	7	4	4	3	8	8	2	2	2	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	21.0	68.0	68.0	21.0	68.0	68.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (%)	19.1%	61.8%	61.8%	19.1%	61.8%	61.8%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%
Maximum Green (s)	16.0	63.0	63.0	16.0	63.0	63.0	16.0	16.0	16.0	16.0	16.0	16.0
Yellow Time (s)	4.0	4.0	4.0	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	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	6.9	76.8	76.8	8.6	82.6	82.6		17.0	17.0		17.0	17.0
Actuated g/C Ratio	0.06	0.70	0.70	0.08	0.75	0.75		0.15	0.15		0.15	0.15
v/c Ratio	0.05	0.86	0.04	0.28	0.54	0.01		0.13	0.15		0.07	0.04
Control Delay	49.2	18.8	3.3	57.0	9.5	1.7		42.0	14.1		40.8	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0

No Build 2015 PM Peak Hour  
48: SR-111 & Mountain Cove Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	49.2	18.8	3.3	57.0	9.5	1.7		42.0	14.1		40.8	20.5
LOS	D	B	A	E	A	A		D	B		D	C
Approach Delay		18.6			10.7			25.8			32.3	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	4	604	2	22	289	1		17	0		9	0
Queue Length 95th (ft)	18	#845	14	m39	537	m2		35	19		19	9
Internal Link Dist (ft)		4393			1806			647			389	
Turn Bay Length (ft)	575		250	550		475						
Base Capacity (vph)	271	2448	1045	271	2632	1117		213	267		211	243
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.02	0.86	0.04	0.14	0.54	0.01		0.13	0.15		0.07	0.04

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:, Start of Green, Master Intersection

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 91.1%

ICU Level of Service F

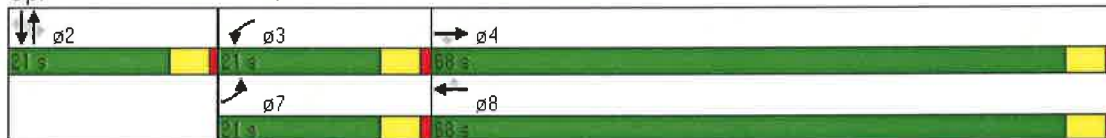
Analysis Period (min) 15

# 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.

Splits and Phases: 48: SR-111 & Mountain Cove Drive





No Build 2015 PM Peak Hour  
51: SR-111 & Channel Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	150		0	0		0	0		0
Storage Lanes	1		1	1		1	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	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.95			0.95		0.97			0.97	
Frt			0.850			0.850		0.866			0.875	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	1752	1551	0	1752	1571	0
Flt Permitted	0.950			0.950			0.616			0.627		
Satd. Flow (perm)	1752	3505	1484	1752	3505	1484	1136	1551	0	1157	1571	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			37		70			90	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1886			930			408			309	
Travel Time (s)		42.9			21.1			9.3			7.0	
Volume (vph)	80	1900	92	53	1241	34	89	8	65	70	16	80
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.84	0.84	0.84	0.93	0.93	0.93	0.70	0.70	0.70	0.89	0.89	0.89
Adj. Flow (vph)	95	2262	110	57	1334	37	127	11	93	79	18	90
Lane Group Flow (vph)	95	2262	110	57	1334	37	127	104	0	79	108	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			2	
Permitted Phases			4			8	2			2		
Detector Phases	7	4	4	3	8	8	2	2		2	2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0	21.0	21.0	21.0		21.0	21.0	
Total Split (s)	16.0	79.0	79.0	9.0	72.0	72.0	22.0	22.0	0.0	22.0	22.0	0.0
Total Split (%)	14.5%	71.8%	71.8%	8.2%	65.5%	65.5%	20.0%	20.0%	0.0%	20.0%	20.0%	0.0%
Maximum Green (s)	11.0	74.0	74.0	4.0	67.0	67.0	17.0	17.0		17.0	17.0	
Yellow Time (s)	4.0	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	1.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max	Max	C-Max	C-Max		C-Max	C-Max	
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	10.8	76.8	76.8	5.0	71.5	71.5	18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.10	0.70	0.70	0.05	0.65	0.65	0.16	0.16		0.16	0.16	
v/c Ratio	0.55	0.92	0.10	0.71	0.59	0.04	0.68	0.33		0.42	0.33	
Control Delay	70.4	9.7	0.2	67.3	12.2	2.8	63.1	19.4		40.4	9.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
51: SR-111 & Channel Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	70.4	9.7	0.2	67.3	12.2	2.8	63.1	19.4		40.4	9.1	
LOS	E	A	A	E	B	A	E	B		D	A	
Approach Delay		11.7			14.1			43.4			22.3	
Approach LOS		B			B			D			C	
Queue Length 50th (ft)	71	44	0	38	458	4	85	21		34	6	
Queue Length 95th (ft)	m88	50	m0	m36	m443	m3	114	44		m58	m15	
Internal Link Dist (ft)		1806			850			328			229	
Turn Bay Length (ft)	100			150								
Base Capacity (vph)	191	2447	1068	80	2280	978	186	312		189	332	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.50	0.92	0.10	0.71	0.59	0.04	0.68	0.33		0.42	0.33	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 43 (39%), Referenced to phase 2:NBSB and 6:, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 14.6

Intersection LOS: B

Intersection Capacity Utilization 79.2%

ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 51: SR-111 & Channel Drive



No Build 2015 PM Peak Hour  
53: Fred Waring Drive & Warner Trail

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	225		125	200		0	100		50
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00				0.95		0.99				0.97
Frt		0.995				0.850		0.929				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5003	0	1752	5036	1568	1752	1690	0	1752	1845	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	5003	0	1752	5036	1493	1752	1690	0	1752	1845	1523
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				88		45				36
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2966			2635			2373			721	
Travel Time (s)		67.4			59.9			53.9			16.4	
Volume (vph)	93	1988	67	55	1253	98	63	68	62	98	109	28
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.87	0.87	0.87	0.88	0.88	0.88	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	107	2285	77	62	1424	111	81	87	79	126	140	36
Lane Group Flow (vph)	107	2362	0	62	1424	111	81	166	0	126	140	36
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	16.0	48.0	0.0	10.0	42.0	42.0	10.0	21.0	0.0	11.0	22.0	22.0
Total Split (%)	17.8%	53.3%	0.0%	11.1%	46.7%	46.7%	11.1%	23.3%	0.0%	12.2%	24.4%	24.4%
Maximum Green (s)	11.0	43.0		5.0	37.0	37.0	5.0	16.0		6.0	17.0	17.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	12.0	44.0		6.0	38.0	38.0	6.0	17.0		7.0	18.0	18.0
Actuated g/C Ratio	0.13	0.49		0.07	0.42	0.42	0.07	0.19		0.08	0.20	0.20
v/c Ratio	0.46	0.96		0.53	0.67	0.16	0.69	0.47		0.93	0.38	0.11
Control Delay	43.0	34.5		57.9	22.9	5.9	71.8	28.3		103.8	34.7	11.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	43.0	34.5		57.9	22.9	5.9	71.8	28.3		103.8	34.7	11.2
LOS	D	C		E	C	A	E	C		F	C	B
Approach Delay		34.9			23.1			42.6			60.8	
Approach LOS		C			C			D			E	
Queue Length 50th (ft)	57	454		35	232	8	46	61		73	69	0
Queue Length 95th (ft)	105	#525		#82	274	36	#94	100		#146	106	19

No Build 2015 PM Peak Hour  
 53: Fred Waring Drive & Warner Trail

6/7/2010



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)	2886			2555				2293			641	
Turn Bay Length (ft)	150			225		125	200			100		50
Base Capacity (vph)	234	2450		117	2126	681	117	356		136	369	333
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.46	0.96		0.53	0.67	0.16	0.69	0.47		0.93	0.38	0.11

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 3:WBL and 8:WBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 32.9

Intersection LOS: C

Intersection Capacity Utilization 75.4%

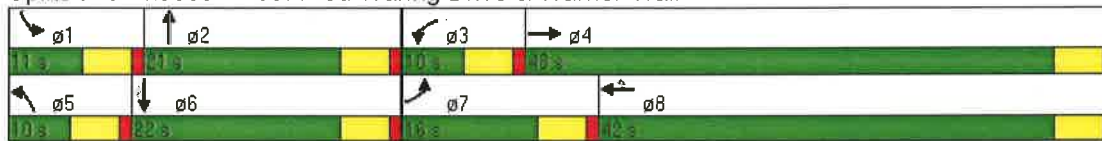
ICU Level of Service D

Analysis Period (min) 15

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

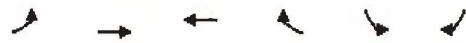
Queue shown is maximum after two cycles.

Splits and Phases: 53: Fred Waring Drive & Warner Trail



No Build 2015 PM Peak Hour  
54: Miles Avenue & Warner Trail

6/7/2010



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷		↶	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	
Trailing Detector (ft)	0	0	0		0	
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.98		0.99	
Frt			0.916		0.949	
Flt Protected	0.950				0.970	
Satd. Flow (prot)	1752	3505	3144	0	1684	0
Flt Permitted	0.950				0.970	
Satd. Flow (perm)	1752	3505	3144	0	1684	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			130		60	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30	30		30	
Link Distance (ft)		2121	4499		2373	
Travel Time (s)		48.2	102.3		53.9	
Volume (vph)	33	204	93	118	120	74
Confl. Peds. (#/hr)				10		10
Peak Hour Factor	0.84	0.84	0.91	0.91	0.84	0.84
Adj. Flow (vph)	39	243	102	130	143	88
Lane Group Flow (vph)	39	243	232	0	231	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Detector Phases	7	4	8		6	
Minimum Initial (s)	4.0	4.0	4.0		4.0	
Minimum Split (s)	9.0	21.0	21.0		21.0	
Total Split (s)	10.0	33.0	23.0	0.0	22.0	0.0
Total Split (%)	18.2%	60.0%	41.8%	0.0%	40.0%	0.0%
Maximum Green (s)	5.0	28.0	18.0		17.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	Max		None	
Walk Time (s)		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)	6.1	28.0	24.4		11.2	
Actuated g/C Ratio	0.11	0.59	0.51		0.24	
v/c Ratio	0.20	0.12	0.14		0.52	
Control Delay	23.0	5.1	5.0		14.9	
Queue Delay	0.0	0.0	0.0		0.0	

No Build 2015 PM Peak Hour  
 54: Miles Avenue & Warner Trail

6/7/2010

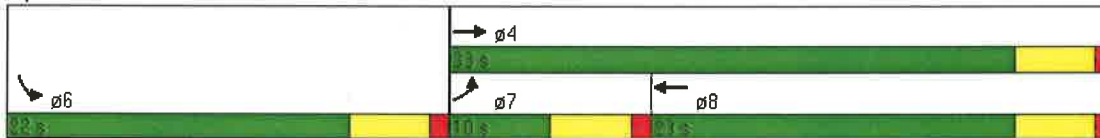


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Delay	23.0	5.1	5.0		14.9	
LOS	C	A	A		B	
Approach Delay		7.6	5.0		14.9	
Approach LOS		A	A		B	
Queue Length 50th (ft)	7	11	4		28	
Queue Length 95th (ft)	32	29	30		81	
Internal Link Dist (ft)		2041	4419		2293	
Turn Bay Length (ft)	150					
Base Capacity (vph)	199	2179	1678		607	
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	0.20	0.11	0.14		0.38	

Intersection Summary

Area Type: Other  
 Cycle Length: 55  
 Actuated Cycle Length: 47.5  
 Natural Cycle: 55  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.52  
 Intersection Signal Delay: 9.0  
 Intersection LOS: A  
 Intersection Capacity Utilization 38.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 54: Miles Avenue & Warner Trail



No Build 2015 PM Peak Hour  
55: Mountain View & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		0	150		0
Storage Lanes	1		0	1		1	1		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor		0.97				0.97		1.00			1.00	
Fr't		0.850				0.850		0.997			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1517	0	1752	1845	1568	1752	5017	0	3400	5028	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1517	0	1752	1845	1517	1752	5017	0	3400	5028	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		90				88		4			2	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		724			745			2303			1902	
Travel Time (s)		16.5			16.9			52.3			43.2	
Volume (vph)	20	0	15	30	1	325	9	2001	43	183	2263	21
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.64	0.64	0.64	0.84	0.84	0.84	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	31	0	23	36	1	387	9	2063	44	197	2433	23
Lane Group Flow (vph)	31	23	0	36	1	387	9	2107	0	197	2456	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Detector Phases	7	4		3	8	8	5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	21.0		9.0	21.0	
Total Split (s)	9.0	30.0	0.0	10.0	31.0	31.0	9.0	58.0	0.0	12.0	61.0	0.0
Total Split (%)	8.2%	27.3%	0.0%	9.1%	28.2%	28.2%	8.2%	52.7%	0.0%	10.9%	55.5%	0.0%
Maximum Green (s)	4.0	25.0		5.0	26.0	26.0	4.0	53.0		7.0	56.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	5.0	21.2		12.0	25.7	25.7	5.6	57.8		9.2	69.1	
Actuated g/C Ratio	0.05	0.19		0.11	0.23	0.23	0.05	0.53		0.08	0.63	
v/c Ratio	0.39	0.06		0.19	0.00	0.92	0.10	0.80		0.69	0.78	
Control Delay	65.2	0.3		48.3	31.0	59.6	70.0	8.2		59.9	12.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
55: Mountain View & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	65.2	0.3		48.3	31.0	59.6	70.0	8.2		59.9	12.7	
LOS	E	A		D	C	E	E	A		E	B	
Approach Delay		37.6			58.6			8.5			16.2	
Approach LOS		D			E			A			B	
Queue Length 50th (ft)	22	0		17	1	210	7	69		67	624	
Queue Length 95th (ft)	38	0		55	4	#334	m8	m85		m74	m696	
Internal Link Dist (ft)		644			665			2223			1822	
Turn Bay Length (ft)	150			150		150	150			150		
Base Capacity (vph)	80	430		191	453	439	90	2636		284	3161	
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	0.39	0.05		0.19	0.00	0.88	0.10	0.80		0.69	0.78	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 35 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 16.7

Intersection LOS: B

Intersection Capacity Utilization 74.1%

ICU Level of Service D

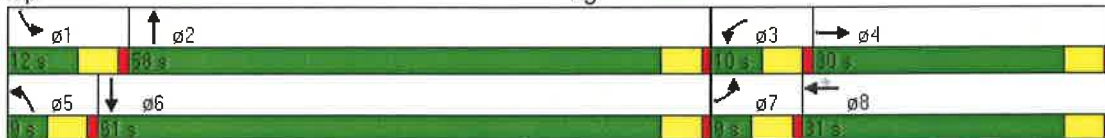
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 55: Mountain View & Washington Street





No Build 2015 PM Peak Hour  
57: Ave of the States & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		175	0		0	300		0	275		0
Storage Lanes	1		1	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	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor			0.97		0.99			1.00			1.00	
Frnt			0.850		0.938			0.991			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1752	1707	0	1752	4975	0	1752	5008	0
Flt Permitted	0.565			0.732			0.950			0.950		
Satd. Flow (perm)	1042	1845	1517	1350	1707	0	1752	4975	0	1752	5008	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			231		28			14			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1273			347			1902			1097	
Travel Time (s)		28.9			7.9			43.2			24.9	
Volume (vph)	104	29	173	166	58	41	252	2033	128	74	2150	65
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	139	39	231	224	78	55	262	2118	133	87	2529	76
Lane Group Flow (vph)	139	39	231	224	133	0	262	2251	0	87	2605	0
Turn Type	Perm		Perm	Perm			Prot			Prot		
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4								
Detector Phases	4	4	4	4	4		1	6		5	2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	24.0	24.0	24.0	24.0	24.0	0.0	22.0	65.0	0.0	21.0	64.0	0.0
Total Split (%)	21.8%	21.8%	21.8%	21.8%	21.8%	0.0%	20.0%	59.1%	0.0%	19.1%	58.2%	0.0%
Maximum Green (s)	19.0	19.0	19.0	19.0	19.0		17.0	60.0		16.0	59.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		Max	Max	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)	19.8	19.8	19.8	19.8	19.8		18.1	61.0		17.2	60.1	
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18		0.16	0.55		0.16	0.55	
v/c Ratio	0.74	0.12	0.50	0.92	0.40		0.91	0.81		0.32	0.95	
Control Delay	66.9	38.8	9.2	85.9	35.3		80.5	6.8		49.1	23.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
57: Ave of the States & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	66.9	38.8	9.2	85.9	35.3		80.5	6.8		49.1	23.2	
LOS	E	D	A	F	D		F	A		D	C	
Approach Delay		31.6			67.0			14.5			24.0	
Approach LOS		C			E			B			C	
Queue Length 50th (ft)	94	23	0	157	65		199	97		47	674	
Queue Length 95th (ft)	134	45	30	#217	97		m#273	106		m46	m608	
Internal Link Dist (ft)		1193			267			1822			1017	
Turn Bay Length (ft)	175		175				300			275		
Base Capacity (vph)	189	335	465	245	333		288	2765		274	2738	
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	0.74	0.12	0.50	0.91	0.40		0.91	0.81		0.32	0.95	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 71 (65%), Referenced to phase 6:NBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 23.1

Intersection LOS: C

Intersection Capacity Utilization 82.8%

ICU Level of Service E

Analysis Period (min) 15

# 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.

Splits and Phases: 57: Ave of the States & Washington Street



No Build 2015 PM Peak Hour  
59: 42nd Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	300		125	300		100
Storage Lanes	2		0	2		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Ped Bike Factor		0.99			0.99				0.97			0.97
Fr't		0.935			0.957				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3231	0	3400	3323	0	1752	5036	1568	1752	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3231	0	3400	3323	0	1752	5036	1517	1752	5036	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		163			50				143			90
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1523			1701			1097			2644	
Travel Time (s)		34.6			38.7			24.9			60.1	
Volume (vph)	357	457	348	438	280	114	285	1686	290	181	1596	225
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	430	551	419	466	298	121	310	1833	315	189	1662	234
Lane Group Flow (vph)	430	970	0	466	419	0	310	1833	315	189	1662	234
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	25.0	30.0	0.0	21.0	26.0	0.0	22.0	43.0	43.0	16.0	37.0	37.0
Total Split (%)	22.7%	27.3%	0.0%	19.1%	23.6%	0.0%	20.0%	39.1%	39.1%	14.5%	33.6%	33.6%
Maximum Green (s)	20.0	25.0		16.0	21.0		17.0	38.0	38.0	11.0	32.0	32.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	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
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)	18.9	26.0		17.0	24.1		18.0	39.0	39.0	12.0	33.0	33.0
Actuated g/C Ratio	0.17	0.24		0.15	0.22		0.16	0.35	0.35	0.11	0.30	0.30
v/c Ratio	0.74	1.09		0.89	0.55		1.08	1.03	0.50	0.99	1.10	0.45
Control Delay	51.1	92.2		65.7	37.0		102.7	52.3	13.7	109.0	71.5	5.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

No Build 2015 PM Peak Hour  
59: 42nd Avenue & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	51.1	92.2		65.7	37.0		102.7	52.3	13.7	109.0	71.5	5.6
LOS	D	F		E	D		F	D	B	F	E	A
Approach Delay		79.6			52.1			53.7			67.5	
Approach LOS		E			D			D			E	
Queue Length 50th (ft)	148	~358		168	123		~238	~516	134	123	~473	6
Queue Length 95th (ft)	181	#420		#257	178		m#356	#616	m167	m#192	#573	m30
Internal Link Dist (ft)		1443			1621			1017			2564	
Turn Bay Length (ft)	250			175			300		125	300		100
Base Capacity (vph)	649	888		525	767		287	1785	630	191	1511	518
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.66	1.09		0.89	0.55		1.08	1.03	0.50	0.99	1.10	0.45

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 27 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 63.0

Intersection LOS: E

Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

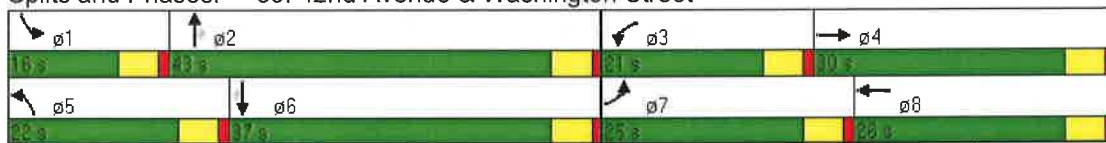
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 59: 42nd Avenue & Washington Street



No Build 2015 PM Peak Hour  
62: 41st Avenue & Washington Street

6/7/2010

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↑↑		↘	↑↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	0		0	1	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Ped Bike Factor						
Fr <sub>t</sub>	0.888		0.995			
Fl <sub>t</sub> Protected	0.991				0.950	
Satd. Flow (prot)	1623	0	5011	0	1752	5036
Fl <sub>t</sub> Permitted	0.991				0.950	
Satd. Flow (perm)	1623	0	5011	0	1752	5036
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	1565		2644			1877
Travel Time (s)	35.6		60.1			42.7
Volume (vph)	16	78	1893	63	49	2067
Confl. Peds. (#/hr)	10	10		10	10	
Peak Hour Factor	0.74	0.74	0.90	0.90	0.89	0.89
Adj. Flow (vph)	22	105	2103	70	55	2322
Lane Group Flow (vph)	127	0	2173	0	55	2322
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.9%
Analysis Period (min)	15
	ICU Level of Service B

No Build 2015 PM Peak Hour  
64: Harris Lane & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	150		0	150		0
Storage Lanes	1		0	0		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	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor		0.97			0.99			1.00			1.00	
Frt		0.854			0.962			0.998			0.997	
Flt Protected	0.950				0.970		0.950			0.950		
Satd. Flow (prot)	1752	1526	0	0	1706	0	1752	5022	0	1752	5016	0
Flt Permitted	0.756				0.499		0.950			0.950		
Satd. Flow (perm)	1395	1526	0	0	878	0	1752	5022	0	1752	5016	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		271			14			2			3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		671			359			1877			715	
Travel Time (s)		15.3			8.2			42.7			16.3	
Volume (vph)	43	9	362	26	4	12	126	1756	26	34	1727	33
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	49	10	411	31	5	14	133	1848	27	37	1857	35
Lane Group Flow (vph)	49	421	0	0	50	0	133	1875	0	37	1892	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4				2			6	
Detector Phases	4	4		4	4		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	21.0	54.0	0.0	21.0	54.0	0.0
Total Split (%)	31.8%	31.8%	0.0%	31.8%	31.8%	0.0%	19.1%	49.1%	0.0%	19.1%	49.1%	0.0%
Maximum Green (s)	30.0	30.0		30.0	30.0		16.0	49.0		16.0	49.0	
Yellow Time (s)	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	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	C-Max		Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	18.9	18.9			18.9		29.1	50.0		29.1	50.0	
Actuated g/C Ratio	0.17	0.17			0.17		0.26	0.45		0.26	0.45	
v/c Ratio	0.21	0.87			0.31		0.29	0.82		0.08	0.83	
Control Delay	36.8	32.6			32.1		60.7	10.7		44.9	10.9	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	

No Build 2015 PM Peak Hour  
64: Harris Lane & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	36.8	32.6			32.1		60.7	10.7		44.9	10.9	
LOS	D	C			C		E	B		D	B	
Approach Delay		33.0			32.1			14.0			11.6	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	30	107			22		100	155		25	96	
Queue Length 95th (ft)	55	194			47		m112	m247		m30	m127	
Internal Link Dist (ft)		591			279			1797			635	
Turn Bay Length (ft)	100						150			150		
Base Capacity (vph)	393	625			257		464	2284		464	2282	
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	0.12	0.67			0.19		0.29	0.82		0.08	0.83	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 17 (15%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 15.1

Intersection LOS: B

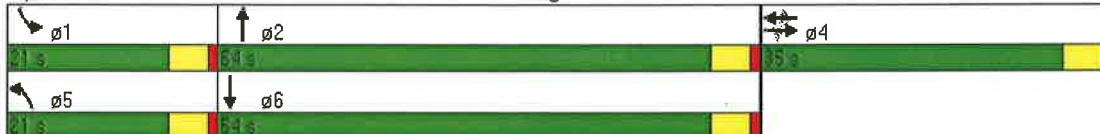
Intersection Capacity Utilization 76.4%

ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 64: Harris Lane & Washington Street



No Build 2015 PM Peak Hour  
66: Country Club Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	125		225	150		0	200		200
Storage Lanes	2		0	1		1	2		0	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Ped Bike Factor		0.99				0.97		1.00				0.97
Frt		0.959				0.850		0.996				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3332	0	1752	3505	1568	3400	5012	0	3400	5036	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3332	0	1752	3505	1517	3400	5012	0	3400	5036	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46				163		4				507
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		328			351			715			811	
Travel Time (s)		7.5			8.0			16.3			18.4	
Volume (vph)	741	529	196	89	290	260	305	1387	34	255	1558	765
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.91	0.91	0.91	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	814	581	215	101	330	295	324	1476	36	277	1693	832
Lane Group Flow (vph)	814	796	0	101	330	295	324	1512	0	277	1693	832
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	31.0	31.0	0.0	21.0	21.0	21.0	15.0	43.0	0.0	15.0	43.0	43.0
Total Split (%)	28.2%	28.2%	0.0%	19.1%	19.1%	19.1%	13.6%	39.1%	0.0%	13.6%	39.1%	39.1%
Maximum Green (s)	26.0	26.0		16.0	16.0	16.0	10.0	38.0		10.0	38.0	38.0
Yellow Time (s)	4.0	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	1.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0		0		0	0	0
Act Effct Green (s)	27.0	30.3		12.5	15.8	15.8	12.1	39.8		11.5	39.2	39.2
Actuated g/C Ratio	0.25	0.28		0.11	0.14	0.14	0.11	0.36		0.10	0.36	0.36
v/c Ratio	0.97	0.84		0.51	0.66	0.83	0.87	0.83		0.78	0.94	0.96
Control Delay	67.4	44.8		54.1	51.0	39.9	72.7	36.2		67.0	41.1	31.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0



No Build 2015 PM Peak Hour  
66: Country Club Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	67.4	44.8		54.1	51.0	39.9	72.7	36.2		67.0	41.1	31.3
LOS	E	D		D	D	D	E	D		E	D	C
Approach Delay		56.2			46.9			42.7			40.7	
Approach LOS		E			D			D			D	
Queue Length 50th (ft)	294	260		68	115	91	127	215		103	377	100
Queue Length 95th (ft)	#422	#398		115	160	#214	m#177	274		m#143	m#433	m#438
Internal Link Dist (ft)		248			271			635			731	
Turn Bay Length (ft)	175			125		225	150			200		200
Base Capacity (vph)	835	951		271	542	372	373	1815		354	1792	866
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.97	0.84		0.37	0.61	0.79	0.87	0.83		0.78	0.94	0.96

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 15 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 45.5

Intersection LOS: D

Intersection Capacity Utilization 82.8%

ICU Level of Service E

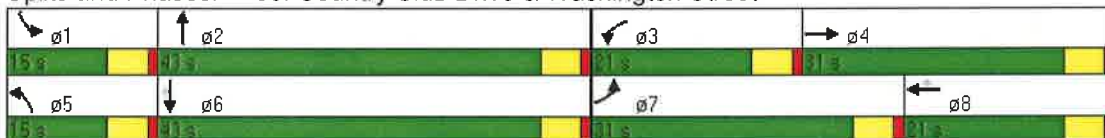
Analysis Period (min) 15

# 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.

Splits and Phases: 66: Country Club Drive & Washington Street



No Build 2015 PM Peak Hour  
69: I-10 EB Off-Ramp & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		175	0		0	0		0	150		0
Storage Lanes	1		2	0		0	0		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50					50		50	50	
Trailing Detector (ft)	0	0	0					0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.88	1.00	1.00	1.00	1.00	0.91	0.91	0.97	0.91	1.00
Ped Bike Factor			0.98					0.99				
Frt			0.850					0.967				
Flt Protected	0.950	0.950								0.950		
Satd. Flow (prot)	1665	1665	2760	0	0	0	0	4835	0	3400	5036	0
Flt Permitted	0.950	0.950								0.950		
Satd. Flow (perm)	1665	1665	2698	0	0	0	0	4835	0	3400	5036	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			71					88				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		503			681			811			556	
Travel Time (s)		11.4			15.5			18.4			12.6	
Volume (vph)	421	0	749	0	0	0	0	1709	485	405	1438	0
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.85	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	453	0	805	0	0	0	0	1762	500	440	1563	0
Lane Group Flow (vph)	227	226	805	0	0	0	0	2262	0	440	1563	0
Turn Type	Split		Perm							Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Detector Phases	4	4	4					2		1	6	
Minimum Initial (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Minimum Split (s)	9.0	9.0	9.0					21.0		9.0	21.0	
Total Split (s)	35.0	35.0	35.0	0.0	0.0	0.0	0.0	56.0	0.0	19.0	75.0	0.0
Total Split (%)	31.8%	31.8%	31.8%	0.0%	0.0%	0.0%	0.0%	50.9%	0.0%	17.3%	68.2%	0.0%
Maximum Green (s)	30.0	30.0	30.0					51.0		14.0	70.0	
Yellow Time (s)	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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Recall Mode	None	None	None					None		None	C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)	31.0	31.0	31.0					52.0		15.0	71.0	
Actuated g/C Ratio	0.28	0.28	0.28					0.47		0.14	0.65	
v/c Ratio	0.48	0.48	0.99					0.97		0.95	0.48	
Control Delay	37.0	37.0	66.4					23.9		57.6	3.9	
Queue Delay	0.9	0.9	0.0					0.3		0.0	0.4	

No Build 2015 PM Peak Hour  
 69: I-10 EB Off-Ramp & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	37.9	37.9	66.4					24.2		57.6	4.4	
LOS	D	D	E					C		E	A	
Approach Delay		56.2						24.2			16.1	
Approach LOS		E						C			B	
Queue Length 50th (ft)	140	140	299					479		151	48	
Queue Length 95th (ft)	221	220	#448					m#645		m124	m41	
Internal Link Dist (ft)		423			601			731			476	
Turn Bay Length (ft)	175		175							150		
Base Capacity (vph)	469	469	811					2332		464	3251	
Starvation Cap Reductn	0	0	0					0		0	1020	
Spillback Cap Reductn	83	83	0					6		0	0	
Storage Cap Reductn	0	0	0					0		0	0	
Reduced v/c Ratio	0.59	0.59	0.99					0.97		0.95	0.70	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 23 (21%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 28.5

Intersection LOS: C

Intersection Capacity Utilization 84.0%

ICU Level of Service E

Analysis Period (min) 15

# 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.

Splits and Phases: 69: I-10 EB Off-Ramp & Washington Street



No Build 2015 PM Peak Hour  
72: Varner Road & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	275		275	200		0	125		0
Storage Lanes	1		0	2		1	2		1	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.97	0.91	0.91	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor		0.97			1.00	0.97			0.97		0.99	
Frt		0.882			0.985	0.850			0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3013	0	3400	3296	1427	3400	5036	1568	3400	4866	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3013	0	3400	3296	1381	3400	5036	1517	3400	4866	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		344			12	193			487		41	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		441			793			556			2019	
Travel Time (s)		10.0			18.0			12.6			45.9	
Volume (vph)	42	188	684	735	356	237	851	884	906	215	727	165
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.67	0.67	0.67	0.86	0.86	0.86	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	63	281	1021	855	414	276	877	911	934	234	790	179
Lane Group Flow (vph)	63	1302	0	855	459	231	877	911	934	234	969	0
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phases	7	4		3	8	8	5	2	2	1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0	9.0	21.0	
Total Split (s)	13.0	34.0	0.0	25.0	46.0	46.0	26.0	41.0	41.0	10.0	25.0	0.0
Total Split (%)	11.8%	30.9%	0.0%	22.7%	41.8%	41.8%	23.6%	37.3%	37.3%	9.1%	22.7%	0.0%
Maximum Green (s)	8.0	29.0		20.0	41.0	41.0	21.0	36.0	36.0	5.0	20.0	
Yellow Time (s)	4.0	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	1.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		5.0			5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	8.5	30.0		21.0	44.6	44.6	22.0	37.0	37.0	6.0	21.0	
Actuated g/C Ratio	0.08	0.27		0.19	0.41	0.41	0.20	0.34	0.34	0.05	0.19	
v/c Ratio	0.47	1.54dr		1.32	0.34	0.34	1.29	0.54	1.12	1.26	1.01	
Control Delay	60.0	132.4		184.3	26.0	8.0	169.1	27.4	89.3	197.6	73.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	24.9	0.0	0.0	

No Build 2015 PM Peak Hour  
72: Varner Road & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	60.0	132.4		184.3	26.0	8.0	169.1	27.4	114.3	197.6	73.7	
LOS	E	F		F	C	A	F	C	F	F	E	
Approach Delay		129.1			110.9			102.8			97.8	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	43	~496		~403	133	20	~404	207	~534	~107	~246	
Queue Length 95th (ft)	64	#336		m#480	m151	m43	m#468	m226	m#651	#187	#345	
Internal Link Dist (ft)		361			713			476			1939	
Turn Bay Length (ft)	200			275		275	200			125		
Base Capacity (vph)	143	1072		649	1345	675	680	1694	833	185	962	
Starvation Cap Reductn	0	0		0	0	0	0	0	41	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.44	1.21		1.32	0.34	0.34	1.29	0.54	1.18	1.26	1.01	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.32

Intersection Signal Delay: 109.0

Intersection LOS: F

Intersection Capacity Utilization 104.6%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

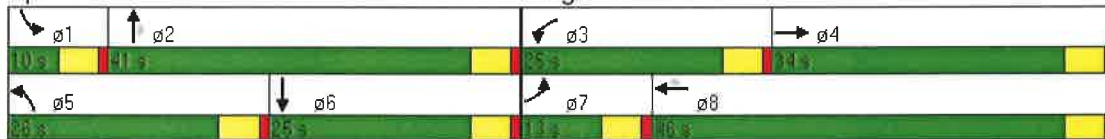
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 72: Varner Road & Washington Street



No Build 2015 PM Peak Hour  
75: Varner Road & I-10 WB Off-Ramp

6/7/2010

	→	↘	↗	←	←	↖	↗	↖	↗
Lane Group	EBT	EBR	EBR2	WBL	WBT	NBL	NBR	NEL	NER
Lane Configurations	↑↑↑		↑	↖↖	↑↑	↖↖	↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		200		0	150	0	0
Storage Lanes		1		2		2	1	0	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50	50	50	50	50		
Trailing Detector (ft)	0		0	0	0	0	0		
Turning Speed (mph)		9	9	15		15	9	15	9
Lane Util. Factor	0.91	1.00	1.00	0.97	0.95	0.97	1.00	1.00	1.00
Ped Bike Factor			0.97				0.97		
Frt			0.850				0.850		
Flt Protected				0.950		0.950			
Satd. Flow (prot)	5036	0	1568	3400	3505	3400	1568	0	0
Flt Permitted				0.950		0.950			
Satd. Flow (perm)	5036	0	1517	3400	3505	3400	1517	0	0
Right Turn on Red			Yes				Yes		
Satd. Flow (RTOR)			379				93		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30				30	30		30	
Link Distance (ft)	793				871	1130		947	
Travel Time (s)	18.0				19.8	25.7		21.5	
Volume (vph)	959	0	368	94	827	1504	129	0	0
Confl. Peds. (#/hr)			10				10		
Peak Hour Factor	0.97	0.97	0.97	0.91	0.91	0.86	0.86	0.92	0.92
Adj. Flow (vph)	989	0	379	103	909	1749	150	0	0
Lane Group Flow (vph)	989	0	379	103	909	1749	150	0	0
Turn Type			Perm	Prot			Perm		
Protected Phases	4			3	8	2			
Permitted Phases			4				2		
Detector Phases	4		4	3	8	2	2		
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0	4.0		
Minimum Split (s)	21.0		21.0	9.0	21.0	21.0	21.0		
Total Split (s)	31.0	0.0	31.0	10.0	41.0	69.0	69.0	0.0	0.0
Total Split (%)	28.2%	0.0%	28.2%	9.1%	37.3%	62.7%	62.7%	0.0%	0.0%
Maximum Green (s)	26.0		26.0	5.0	36.0	64.0	64.0		
Yellow Time (s)	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		
Lead/Lag	Lag		Lag	Lead					
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0		
Recall Mode	C-Max		C-Max	None	C-Max	None	None		
Walk Time (s)	5.0		5.0		5.0	5.0	5.0		
Flash Dont Walk (s)	11.0		11.0		11.0	11.0	11.0		
Pedestrian Calls (#/hr)	0		0		0	0	0		
Act Effct Green (s)	28.8		28.8	6.8	39.5	62.5	62.5		
Actuated g/C Ratio	0.26		0.26	0.06	0.36	0.57	0.57		
v/c Ratio	0.75		0.56	0.49	0.72	0.91	0.17		
Control Delay	28.2		3.6	58.8	35.2	28.9	4.6		
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0		

No Build 2015 PM Peak Hour  
75: Varner Road & I-10 WB Off-Ramp

6/7/2010

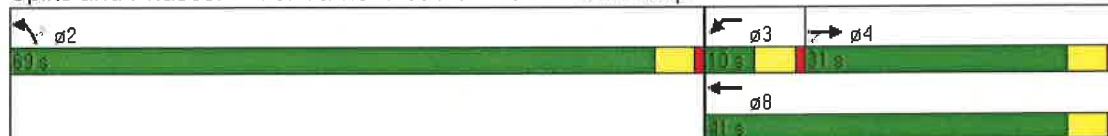


Lane Group	EBT	EBR	EBR2	WBL	WBT	NBL	NBR	NEL	NER
Total Delay	28.2		3.6	58.8	35.2	28.9	4.6		
LOS	C		A	E	D	C	A		
Approach Delay	21.4				37.6	26.9			
Approach LOS	C				D	C			
Queue Length 50th (ft)	230		24	37	300	503	16		
Queue Length 95th (ft)	m189		m14	66	379	561	40		
Internal Link Dist (ft)	713				791	1050		867	
Turn Bay Length (ft)				200			150		
Base Capacity (vph)	1317		676	209	1259	2009	934		
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	0.75		0.56	0.49	0.72	0.87	0.16		

Intersection Summary

Area Type: Other  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 21 (19%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 27.7                      Intersection LOS: C  
 Intersection Capacity Utilization 74.8%                      ICU Level of Service D  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 75: Varner Road & I-10 WB Off-Ramp



No Build 2015 PM Peak Hour  
80: Fred Waring Drive & Palm Royale Drive

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	125		0	0		0	50		50
Storage Lanes	1		1	1		0	0		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor			0.95		1.00							0.97
Frt			0.850		0.992							0.850
Flt Protected	0.950			0.950				0.955		0.950	0.950	
Satd. Flow (prot)	1752	5036	1568	1752	4981	0	0	1762	1845	1665	1665	1568
Flt Permitted	0.950			0.950				0.955		0.950	0.950	
Satd. Flow (perm)	1752	5036	1484	1752	4981	0	0	1762	1845	1665	1665	1517
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			20		10							40
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1603			1835			347			441	
Travel Time (s)		36.4			41.7			7.9			10.0	
Volume (vph)	31	1474	35	6	1183	67	20	1	0	216	0	36
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.79	0.79	0.79	0.99	0.99	0.99	0.58	0.58	0.58	0.77	0.77	0.77
Adj. Flow (vph)	39	1866	44	6	1195	68	34	2	0	281	0	47
Lane Group Flow (vph)	39	1866	44	6	1263	0	0	36	0	141	140	47
Turn Type	Prot		Perm	Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		5	5		2	2	
Permitted Phases			4						5			2
Detector Phases	7	4	4	3	8		5	5	5	2	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	11.0	55.0	55.0	10.0	54.0	0.0	22.0	22.0	22.0	23.0	23.0	23.0
Total Split (%)	10.0%	50.0%	50.0%	9.1%	49.1%	0.0%	20.0%	20.0%	20.0%	20.9%	20.9%	20.9%
Maximum Green (s)	6.0	50.0	50.0	5.0	49.0		17.0	17.0	17.0	18.0	18.0	18.0
Yellow Time (s)	4.0	4.0	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	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0	5.0		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0		0	0	0	0	0	0
Act Effct Green (s)	6.9	57.8	57.8	6.0	53.2		18.0			20.2	20.2	20.2
Actuated g/C Ratio	0.06	0.53	0.53	0.05	0.48		0.16			0.18	0.18	0.18
v/c Ratio	0.35	0.71	0.06	0.06	0.52		0.12			0.46	0.46	0.15
Control Delay	72.0	5.5	0.7	50.8	20.9		40.7			46.3	46.2	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0





No Build 2015 PM Peak Hour  
83: SR-111 & La Quinta Center

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↗↗↗	↗	↘	↗↗↗			↗↗			↗↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325		200	500		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor			0.97		1.00			0.98				0.99
Fr t			0.850		0.990			0.924				0.937
Flt Protected	0.950			0.950				0.981				0.982
Satd. Flow (prot)	1752	5036	1568	1752	4975	0	0	3125	0	0	3181	0
Flt Permitted	0.950			0.950				0.761				0.687
Satd. Flow (perm)	1752	5036	1517	1752	4975	0	0	2424	0	0	2226	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			77		17			149				72
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		1018			1285			1032				476
Travel Time (s)		23.1			29.2			23.5				10.8
Volume (vph)	67	1808	85	152	1379	97	99	29	133	55	34	64
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	73	1965	92	155	1407	99	111	33	149	62	38	72
Lane Group Flow (vph)	73	1965	92	155	1506	0	0	293	0	0	172	0
Turn Type	Prot		Perm	Prot			Perm			Perm		
Protected Phases	7	4		3	8			2				2
Permitted Phases			4				2			2		
Detector Phases	7	4	4	3	8		2	2		2		2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0		4.0
Minimum Split (s)	9.0	21.0	21.0	9.0	21.0		21.0	21.0		21.0		21.0
Total Split (s)	18.0	60.0	60.0	26.0	68.0	0.0	24.0	24.0	0.0	24.0	24.0	0.0
Total Split (%)	16.4%	54.5%	54.5%	23.6%	61.8%	0.0%	21.8%	21.8%	0.0%	21.8%	21.8%	0.0%
Maximum Green (s)	13.0	55.0	55.0	21.0	63.0		19.0	19.0		19.0		19.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0		4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0		1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	Max	Max	None	Max		C-Max	C-Max		C-Max		C-Max
Walk Time (s)		5.0	5.0		5.0		5.0	5.0		5.0		5.0
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0	0		0		0	0		0		0
Act Effct Green (s)	10.6	62.9	62.9	15.1	69.6			20.0				20.0
Actuated g/C Ratio	0.10	0.57	0.57	0.14	0.63			0.18				0.18
v/c Ratio	0.43	0.68	0.10	0.65	0.48			0.52				0.37
Control Delay	60.8	13.5	2.3	58.3	9.4			23.2				25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0				0.0

No Build 2015 PM Peak Hour  
 83: SR-111 & La Quinta Center

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay	60.8	13.5	2.3	58.3	9.4			23.2			25.2	
LOS	E	B	A	E	A			C			C	
Approach Delay		14.6			13.9			23.2			25.2	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	52	356	7	70	334			46			32	
Queue Length 95th (ft)	m67	394	m15	m109	373			90			64	
Internal Link Dist (ft)		938			1205			952			396	
Turn Bay Length (ft)	325		200	500								
Base Capacity (vph)	223	2880	900	350	3152			563			464	
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	0.33	0.68	0.10	0.44	0.48			0.52			0.37	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 63 (57%), Referenced to phase 2:NESW and 6:, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 15.4

Intersection LOS: B

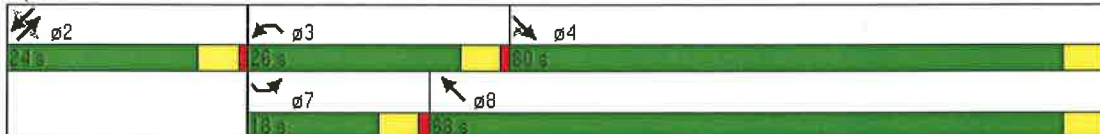
Intersection Capacity Utilization 83.4%

ICU Level of Service E

Analysis Period (min) 15

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

Splits and Phases: 83: SR-111 & La Quinta Center



No Build 2015 PM Peak Hour  
85: SR-111 & Simon Drive

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↔			↔	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	425		0	475		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99			1.00	
Frt		0.993			0.991			0.938			0.983	
Flt Protected	0.950			0.950				0.978			0.962	
Satd. Flow (prot)	1752	4996	0	1752	4984	0	0	3184	0	0	3306	0
Flt Permitted	0.950			0.950				0.685			0.650	
Satd. Flow (perm)	1752	4996	0	1752	4984	0	0	2230	0	0	2234	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			20			129			23	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1266			1018			562			414	
Travel Time (s)		28.8			23.1			12.8			9.4	
Volume (vph)	103	1633	78	89	1348	82	111	34	103	235	33	33
Confl. Peds. (#/hr)			10			10			10			10
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	110	1737	83	92	1390	85	139	42	129	276	39	39
Lane Group Flow (vph)	110	1820	0	92	1475	0	0	310	0	0	354	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			2	
Permitted Phases							2			2		
Detector Phases	7	4		3	8		2	2		2	2	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	9.0		9.0	21.0		9.0	9.0		9.0	9.0	
Total Split (s)	11.0	28.0	0.0	9.0	26.0	0.0	18.0	18.0	0.0	18.0	18.0	0.0
Total Split (%)	20.0%	50.9%	0.0%	16.4%	47.3%	0.0%	32.7%	32.7%	0.0%	32.7%	32.7%	0.0%
Maximum Green (s)	6.0	23.0		4.0	21.0		13.0	13.0		13.0	13.0	
Yellow Time (s)	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	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)					5.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	6.9	25.3		5.0	23.7			14.5			14.5	
Actuated g/C Ratio	0.13	0.46		0.09	0.43			0.26			0.26	
v/c Ratio	0.50	0.79		0.58	0.68			0.45			0.95dl	
Control Delay	36.6	11.0		52.9	11.1			12.4			21.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	

No Build 2015 PM Peak Hour  
85: SR-111 & Simon Drive

6/7/2010

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay	36.6	11.0		52.9	11.1			12.4			21.2	
LOS	D	B		D	B			B			C	
Approach Delay		12.4			13.6			12.4			21.2	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	64	201		62	101			25			50	
Queue Length 95th (ft)	m74	m234		#109	185			45			80	
Internal Link Dist (ft)		1186			938			482			334	
Turn Bay Length (ft)	425			475								
Base Capacity (vph)	223	2304		159	2156			685			608	
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	0.49	0.79		0.58	0.68			0.45			0.58	

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 44 (80%), Referenced to phase 2:NESW and 6:, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 13.6

Intersection LOS: B

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

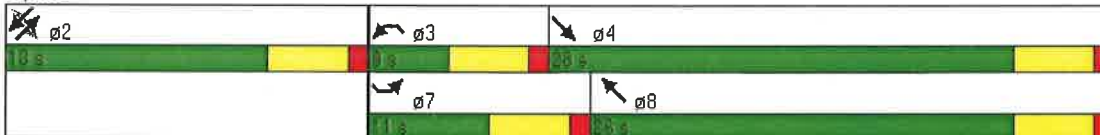
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 85: SR-111 & Simon Drive



No Build 2015 PM Peak Hour  
94: Channel Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor		0.98				0.97		1.00			1.00	
Frt		0.920				0.850		0.999			0.991	
Flt Protected		0.985			0.964		0.950			0.950		
Satd. Flow (prot)	0	1640	0	0	1778	1568	1752	5029	0	1752	4981	0
Flt Permitted		0.802			0.482		0.950			0.950		
Satd. Flow (perm)	0	1335	0	0	889	1517	1752	5029	0	1752	4981	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69				288		1			12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		699			313			671			2114	
Travel Time (s)		15.9			7.1			15.3			48.0	
Volume (vph)	105	39	210	105	34	325	94	1648	14	243	1865	114
Confl. Peds. (#/hr)			10			10			10			10
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
Adj. Flow (vph)	114	42	228	114	37	353	102	1791	15	264	2027	124
Lane Group Flow (vph)	0	384	0	0	151	353	102	1806	0	264	2151	0
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4		4						
Detector Phases	4	4		4	4	4	5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0	21.0	9.0	21.0		9.0	21.0	
Total Split (s)	38.0	38.0	0.0	38.0	38.0	38.0	13.0	47.0	0.0	25.0	59.0	0.0
Total Split (%)	34.5%	34.5%	0.0%	34.5%	34.5%	34.5%	11.8%	42.7%	0.0%	22.7%	53.6%	0.0%
Maximum Green (s)	33.0	33.0		33.0	33.0	33.0	8.0	42.0		20.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)		30.7			30.7	30.7	9.4	47.3		20.0	57.9	
Actuated g/C Ratio		0.28			0.28	0.28	0.09	0.43		0.18	0.53	
v/c Ratio		0.91			0.61	0.56	0.68	0.83		0.83	0.82	
Control Delay		50.7			44.8	10.3	55.6	24.4		82.8	9.1	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		50.7			44.8	10.3	55.6	24.4		82.8	9.1	
LOS		D			D	B	E	C		F	A	

No Build 2015 PM Peak Hour  
 94: Channel Drive & Washington Street

6/7/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay	50.7		20.7			26.1			17.2			
Approach LOS	D		C			C			B			
Queue Length 50th (ft)	222		89			33	59	447		197	104	
Queue Length 95th (ft)	#382		160			117	m65	m478		m244	125	
Internal Link Dist (ft)	619		233			591			2034			
Turn Bay Length (ft)												
Base Capacity (vph)	460		275			668	151	2165		334	2628	
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	0.83		0.55			0.53	0.68	0.83		0.79	0.82	

Intersection Summary

Area Type: Other  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 43 (39%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 23.2                      Intersection LOS: C  
 Intersection Capacity Utilization 84.7%                      ICU Level of Service E  
 Analysis Period (min) 15  
 # 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.

Splits and Phases: 94: Channel Drive & Washington Street

