

Appendix C - Synchro LOS Results

Existing AM Field Timing.syn

2: Parkside Ave & Amherst

3/16/2015

Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	136	159	39	196	202	49	45	618	54	60	308	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80	0		100		0	120		125		0	50
Storage Lanes	1	1		1		0	1		0		2	1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98			1.00		1.00			0.99		0.98
Frt		0.850			0.971			0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950	0.950	
Satd. Flow (prot)	1770	1583	0	1770	3423	0	1770	3497	0	1770	1770	1583
Flt Permitted	0.342			0.182			0.584			0.624		
Satd. Flow (perm)	637	1557	0	339	3423	0	1084	3497	0	1155	1863	1552
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		64			37			10				
Link Speed (mph)	30				30			30				30
Link Distance (ft)	2675				1099			2138			2100	
Travel Time (s)	60.8				25.0			48.6			47.7	
Confl. Peds. (#/hr)			3	5		5	3			5		5
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)	148	173	42	213	220	53	49	672	59	65	335	513
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	215	0	213	273	0	49	731	0	65	335	513
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12			12			24	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15	9	9	15		9	15		9	15	15	9
Turn Type	pm+pt	Perm		pm+pt	NA		Perm	NA		Perm	Perm	Perm
Protected Phases	3			5	2			6				
Permitted Phases	8	8		2			6			4	4	4
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	53.0		10.0	32.0		22.0	22.0		33.0	33.0	33.0
Total Split (%)	23.5%	62.4%		11.8%	37.6%		25.9%	25.9%		38.8%	38.8%	38.8%
Maximum Green (s)	16.0	49.0		6.0	28.0		18.0	18.0		29.0	29.0	29.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	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
Lead/Lag	Lead			Lead			Lag	Lag		Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes			Yes	Yes		Yes	Yes	Yes
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)	49.0	49.0		28.0	28.0		18.0	18.0		29.0	29.0	29.0
Actuated g/C Ratio	0.58	0.58		0.33	0.33		0.21	0.21		0.34	0.34	0.34

Existing AM Field Timing.syn
 2: Parkside Ave & Amherst

3/16/2015



Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
v/c Ratio	0.26	0.23		1.00	0.24		0.21	0.98		0.16	0.53	0.97
Control Delay	9.5	6.8		91.6	18.5		30.6	62.3		21.1	26.2	62.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	9.5	6.8		91.6	18.5		30.6	62.3		21.1	26.2	62.1
LOS	A	A		F	B		C	E		C	C	E
Approach Delay	7.9				50.5			60.3			46.0	
Approach LOS	A				D			E			D	

Intersection Summary










Area Type: Other
 Cycle Length: 85
 Actuated Cycle Length: 85
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 45.8 Intersection LOS: D
 Intersection Capacity Utilization 73.4% ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Parkside Ave & Amherst



Existing AM Field Timing.syn
5: Parkside Ave & Florence Ave

3/16/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	105	14	492	14	16	994
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.984		0.996			
Flt Protected	0.958					0.999
Satd. Flow (prot)	1756	0	3525	0	0	3536
Flt Permitted	0.958					0.942
Satd. Flow (perm)	1756	0	3525	0	0	3334
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	5		5			
Link Speed (mph)	30		30			30
Link Distance (ft)	1918		921			810
Travel Time (s)	43.6		20.9			18.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	114	15	535	15	17	1080
Shared Lane Traffic (%)						
Lane Group Flow (vph)	129	0	550	0	0	1097
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		custom	NA
Protected Phases						
Permitted Phases	6		8		4	4
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	36.0		100.0		100.0	100.0
Total Split (%)	26.5%		73.5%		73.5%	73.5%
Maximum Green (s)	32.0		96.0		96.0	96.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	4.0		4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
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)	32.0		96.0			96.0
Actuated g/C Ratio	0.24		0.71			0.71
v/c Ratio	0.31		0.22			0.47
Control Delay	43.6		7.2			9.5
Queue Delay	0.0		0.0			0.0
Total Delay	43.6		7.2			9.5
LOS	D		A			A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	43.6		7.2			9.5
Approach LOS	D		A			A

Intersection Summary

Area Type:	Other
Cycle Length:	136
Actuated Cycle Length:	136
Offset:	0 (0%), Referenced to phase 6:WBL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.47
Intersection Signal Delay:	11.3
Intersection Capacity Utilization	52.2%
Analysis Period (min)	15
	Intersection LOS: B
	ICU Level of Service A

Splits and Phases: 5: Parkside Ave & Florence Ave

06 (R) 36 s	04 100 s
	08 100 s

Existing AM Field Timing.syn
 6: Main St & Florence Ave

3/16/2015



















Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	3539	3539	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1918			926	455	
Travel Time (s)	43.6			21.0	10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	ICU Level of Service A

Existing AM Field Timing.syn
8: Parkside Ave & Jewett Pkwy

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	6	9	37	23	28	48	372	59	25	979	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.925			0.957			0.982			0.998	
Flt Protected		0.997			0.979			0.995			0.999	
Satd. Flow (prot)	0	1718	0	0	1745	0	0	3458	0	0	3529	0
Flt Permitted		0.992			0.883			0.776			0.934	
Satd. Flow (perm)	0	1709	0	0	1574	0	0	2697	0	0	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			21			41			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		951			3114			890			1388	
Travel Time (s)		21.6			70.8			20.2			31.5	
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)	1	7	10	40	25	30	52	404	64	27	1064	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	95	0	0	520	0	0	1108	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	23.0	23.0		23.0	23.0		8.0	75.0		67.0	67.0	
Total Split (%)	23.5%	23.5%		23.5%	23.5%		8.2%	76.5%		68.4%	68.4%	
Maximum Green (s)	19.0	19.0		19.0	19.0		4.0	71.0		63.0	63.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
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)		19.0			19.0			71.0			63.0	
Actuated g/C Ratio		0.19			0.19			0.72			0.64	
v/c Ratio		0.05			0.30			0.26			0.52	
Control Delay		21.9			29.2			4.4			10.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.9			29.2			4.4			10.5	
LOS		C			C			A			B	

Existing AM Field Timing.syn
 8: Parkside Ave & Jewett Pkwy

3/16/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		21.9			29.2			4.4			10.5	
Approach LOS		C			C			A			B	

Intersection Summary







Area Type:	Other
Cycle Length:	98
Actuated Cycle Length:	98
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Pretimed
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	9.8
Intersection Capacity Utilization	63.5%
Analysis Period (min)	15
	Intersection LOS: A
	ICU Level of Service B

Splits and Phases: 8: Parkside Ave & Jewett Pkwy

	75 s		23 s
	8 s		67 s
			23 s

Existing AM Field Timing.syn
 9: Parkside Ave & Russell St

3/16/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗			↗
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	2896		1388			1099
Travel Time (s)	65.8		31.5			25.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot					
Protected Phases	8		2			6
Permitted Phases						
Minimum Split (s)	20.0		20.0			20.0
Total Split (s)	20.0		20.0			20.0
Total Split (%)	50.0%		50.0%			50.0%
Maximum Green (s)	16.0		16.0			16.0
Yellow Time (s)	3.5		3.5			3.5
All-Red Time (s)	0.5		0.5			0.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	4.0		4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
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Approach Delay

Approach LOS

Intersection Summary

Area Type: Other

Cycle Length: 40

Actuated Cycle Length: 40

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

Natural Cycle: 40

Control Type: Pretimed

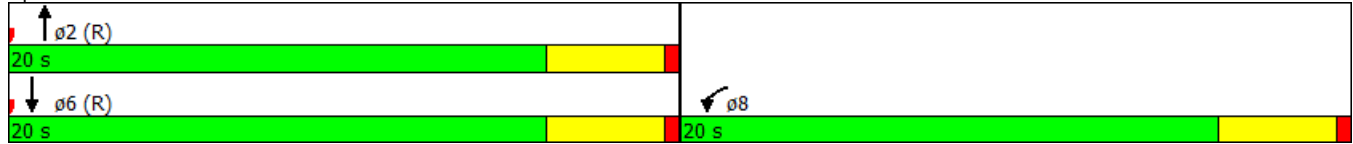
Maximum v/c Ratio: 0.00

Intersection Signal Delay: 0.0 Intersection LOS: A

Intersection Capacity Utilization 0.0% ICU Level of Service A

Analysis Period (min) 15




























Splits and Phases: 9: Parkside Ave & Russell St



Existing AM Field Timing.syn

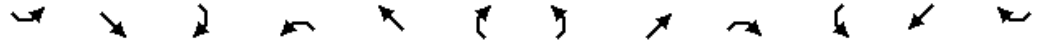
11: Parkside Ave

3/16/2015

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		  			  			  				
Volume (vph)	315	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt												
Frt Protected	0.950											
Satd. Flow (prot)	1770	5085	0	1863	5085	1863	0	3539	0	1863	1863	1863
Frt Permitted	0.757											
Satd. Flow (perm)	1410	5085	0	1863	5085	1863	0	3539	0	1863	1863	1863
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		569			782			557			991	
Travel Time (s)		12.9			17.8			12.7			22.5	
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)	342	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	342	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm		Perm				Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6			2		2	4			8		8
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	16.0	16.0		16.0	16.0	16.0	16.0	16.0		16.0	16.0	16.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	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
Lead/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
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)	16.0											
Actuated g/C Ratio	0.40											
v/c Ratio	0.61											
Control Delay	15.2											

Existing AM Field Timing.syn
 11: Parkside Ave

3/16/2015

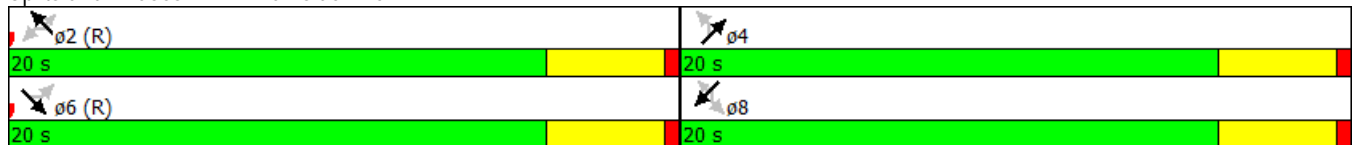


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay	0.0											
Total Delay	15.2											
LOS	B											
Approach Delay												
Approach LOS												

Intersection Summary

Area Type:	Other											
Cycle Length:	40											
Actuated Cycle Length:	40											
Offset:	0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green											
Natural Cycle:	40											
Control Type:	Pretimed											
Maximum v/c Ratio:	0.61											
Intersection Signal Delay:	15.2						Intersection LOS: B					
Intersection Capacity Utilization	20.8%						ICU Level of Service A					
Analysis Period (min)	15											

Splits and Phases: 11: Parkside Ave



Existing AM Field Timing.syn

14: Main St & Robie St

3/16/2015

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	26	48	199	19	4	12	10	736	10	57	1034	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	40		0	70		0	65		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.901			0.885			0.998			0.999	
Flt Protected		0.995		0.950			0.950			0.950		
Satd. Flow (prot)	0	1670	0	1770	1649	0	1770	3532	0	1770	3536	0
Flt Permitted		0.976		0.435			0.118			0.178		
Satd. Flow (perm)	0	1638	0	810	1649	0	220	3532	0	332	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		143			13			1			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1896			1037			1026			926	
Travel Time (s)		43.1			23.6			23.3			21.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	52	216	21	4	13	11	800	11	62	1124	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	296	0	21	17	0	11	811	0	62	1132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		7	4		3	8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	36.0	36.0		36.0	36.0		26.0	38.0		26.0	38.0	
Total Split (%)	36.0%	36.0%		36.0%	36.0%		26.0%	38.0%		26.0%	38.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		22.0	34.0		22.0	34.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
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)		32.0		32.0	32.0		56.0	34.0		56.0	34.0	
Actuated g/C Ratio		0.32		0.32	0.32		0.56	0.34		0.56	0.34	
v/c Ratio		0.48		0.08	0.03		0.02	0.68		0.12	0.94	
Control Delay		16.5		24.9	13.5		8.3	31.6		9.0	48.1	



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		16.5		24.9	13.5		8.3	31.6		9.0	48.1	
LOS		B		C	B		A	C		A	D	
Approach Delay		16.5			19.8			31.3			46.0	
Approach LOS		B			B			C			D	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 36.8 Intersection LOS: D
 Intersection Capacity Utilization 65.0% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 14: Main St & Robie St

φ2 (R) 36 s	φ3 26 s	φ4 38 s
φ6 (R) 36 s	φ7 26 s	φ8 38 s

Existing AM Field Timing.syn
 15: Parkside Ave & Robie St

3/16/2015



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	1896		991			921
Travel Time (s)	43.1		22.5			20.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 0.0% ICU Level of Service A
 Analysis Period (min) 15

Existing AM Field Timing.syn
 16: Parkside Ave & W Oakwood PI











3/16/2015



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	2300		810			890
Travel Time (s)	52.3		18.4			20.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	ICU Level of Service A

						
Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			60
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	3539	3539	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	0	3539	3539	1863
Link Speed (mph)	30			30	30	
Link Distance (ft)	2300			552	517	
Travel Time (s)	52.3			12.5	11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	





















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	ICU Level of Service A

Existing AM Field Timing.syn

18: Main St & Amherst

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	120	108	7	27	79	12	11	329	23	7	743	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	140		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t		0.990			0.980			0.990			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1844	0	1770	1825	0	1770	3504	0	1770	3507	0
Flt Permitted	0.693			0.664			0.277			0.518		
Satd. Flow (perm)	1291	1844	0	1237	1825	0	516	3504	0	965	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			9			14			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		438			789			544			647	
Travel Time (s)		10.0			17.9			12.4			14.7	
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)	130	117	8	29	86	13	12	358	25	8	808	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	130	125	0	29	99	0	12	383	0	8	860	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	33.0	33.0		33.0	33.0		57.0	57.0		57.0	57.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		63.3%	63.3%		63.3%	63.3%	
Maximum Green (s)	29.0	29.0		29.0	29.0		53.0	53.0		53.0	53.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
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)	29.0	29.0		29.0	29.0		53.0	53.0		53.0	53.0	
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.59	0.59		0.59	0.59	
v/c Ratio	0.31	0.21		0.07	0.17		0.04	0.19		0.01	0.42	
Control Delay	25.6	22.6		22.0	20.8		8.4	8.5		7.9	10.6	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.6	22.6		22.0	20.8		8.4	8.5		7.9	10.6	
LOS	C	C		C	C		A	A		A	B	
Approach Delay		24.1			21.0			8.5			10.6	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.42
 Intersection Signal Delay: 13.0 Intersection LOS: B
 Intersection Capacity Utilization 42.0% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 18: Main St & Amherst

<p>φ2 (R) 57 s</p>	<p>φ4 33 s</p>
<p>φ6 (R) 57 s</p>	<p>φ8 33 s</p>

Existing AM Field Timing.syn
 19: Main St & Jewett Pkwy

3/16/2015

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	125		0	100		185
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	1863	3539	0	1863	3539	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	1863	3539	0	1863	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3114			620			1297			1130	
Travel Time (s)		70.8			14.1			29.5			25.7	
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)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
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 Effect Green (s)												
Actuated g/C Ratio												
v/c Ratio												
Control Delay												

Existing AM Field Timing.syn
 19: Main St & Jewett Pkwy

3/16/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay												
Total Delay												
LOS												
Approach Delay												
Approach LOS												

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	Intersection LOS: A
	ICU Level of Service A

Splits and Phases: 19: Main St & Jewett Pkwy

 20 s	 20 s
 20 s	 20 s

Existing AM Field Timing.syn

20: Main St

3/16/2015

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	8	138	123	82	244	0	0	729	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Frt					0.938						0.994	
Flt Protected					0.998		0.950					
Satd. Flow (prot)	0	0	0	0	1744	0	1770	3539	0	0	5055	0
Flt Permitted					0.998		0.311					
Satd. Flow (perm)	0	0	0	0	1744	0	579	3539	0	0	5055	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					126						19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		905			619			853			1026	
Travel Time (s)		20.6			14.1			19.4			23.3	
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)	0	0	0	9	150	134	89	265	0	0	792	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	293	0	89	265	0	0	826	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			8	
Permitted Phases				2			4					
Minimum Split (s)				20.0	20.0		20.0	20.0			20.0	
Total Split (s)				20.0	20.0		20.0	20.0			20.0	
Total Split (%)				50.0%	50.0%		50.0%	50.0%			50.0%	
Maximum Green (s)				16.0	16.0		16.0	16.0			16.0	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	
All-Red Time (s)				0.5	0.5		0.5	0.5			0.5	
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	
Total Lost Time (s)					4.0		4.0	4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
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)					16.0		16.0	16.0			16.0	
Actuated g/C Ratio					0.40		0.40	0.40			0.40	
v/c Ratio					0.38		0.39	0.19			0.41	
Control Delay					6.6		14.6	8.2			9.1	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					6.6		14.6	8.2			9.1	
LOS					A		B	A			A	
Approach Delay					6.6			9.8			9.1	
Approach LOS					A			A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 8.8
 Intersection Capacity Utilization 44.5%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 20: Main St

ø2 (R) 20 s	ø4 20 s
	ø8 20 s

Existing AM Field Timing.syn

25: Amherst & Colvin

3/16/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	346	13	8	401	91	3	9	0	463	29	667
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98		1.00				0.97
Fr _t		0.995				0.850						0.850
Fl _t Protected	0.950				0.999			0.989			0.955	
Satd. Flow (prot)	1770	1853	0	0	1861	1583	0	1842	0	0	1779	1583
Fl _t Permitted	0.210				0.991			0.937			0.716	
Satd. Flow (perm)	391	1853	0	0	1846	1550	0	1744	0	0	1334	1538
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		2										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			2100			523			2529	
Travel Time (s)		24.4			47.7			11.9			57.5	
Confl. Peds. (#/hr)	5					5	3					3
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)	174	376	14	9	436	99	3	10	0	503	32	725
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	390	0	0	445	99	0	13	0	0	535	725
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8		8	2			6		6
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	20.0	20.0		8.0	20.0	20.0
Total Split (s)	8.0	44.0		36.0	36.0	36.0	44.0	44.0		8.0	52.0	52.0
Total Split (%)	8.3%	45.8%		37.5%	37.5%	37.5%	45.8%	45.8%		8.3%	54.2%	54.2%
Maximum Green (s)	4.0	40.0		32.0	32.0	32.0	40.0	40.0		4.0	48.0	48.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0			4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
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)	40.0	40.0		32.0	32.0	32.0		40.0			48.0	48.0
Actuated g/C Ratio	0.42	0.42		0.33	0.33	0.33		0.42			0.50	0.50

Existing AM Field Timing.syn
 25: Amherst & Colvin

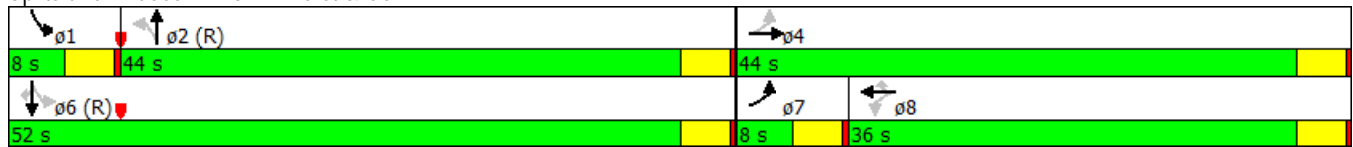
3/16/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.79	0.50			0.72	0.19		0.02			0.78	0.94
Control Delay	48.0	23.4			36.1	24.1		16.7			29.0	45.5
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	48.0	23.4			36.1	24.1		16.7			29.0	45.5
LOS	D	C			D	C		B			C	D
Approach Delay		31.0			33.9			16.7			38.5	
Approach LOS		C			C			B			D	

Intersection Summary

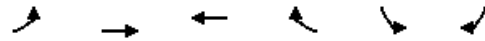
Area Type: Other
 Cycle Length: 96
 Actuated Cycle Length: 96
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 35.6 Intersection LOS: D
 Intersection Capacity Utilization 84.4% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 25: Amherst & Colvin

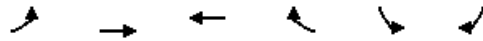


Existing AM Field Timing.syn
 26: Amherst & Starin Ave

3/16/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	94	275	225	19	137	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850		0.850
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Fl _t Permitted	0.585				0.950	
Satd. Flow (perm)	1090	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				21		334
Link Speed (mph)		30	30		30	
Link Distance (ft)		2675	2050		1998	
Travel Time (s)		60.8	46.6		45.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	299	245	21	149	334
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	299	245	21	149	334
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	24.0	24.0	24.0	24.0	26.0	26.0
Total Split (%)	48.0%	48.0%	48.0%	48.0%	52.0%	52.0%
Maximum Green (s)	20.0	20.0	20.0	20.0	22.0	22.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/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)	20.0	20.0	20.0	20.0	22.0	22.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.44	0.44
v/c Ratio	0.23	0.40	0.33	0.03	0.19	0.38
Control Delay	11.8	12.8	11.9	4.9	9.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	12.8	11.9	4.9	9.4	2.8
LOS	B	B	B	A	A	A

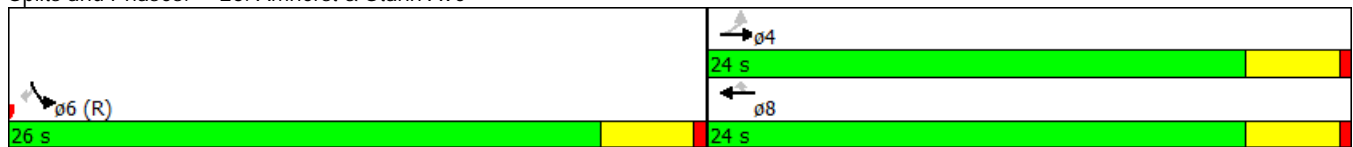


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		12.5	11.4		4.8	
Approach LOS		B	B		A	

Intersection Summary

















Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	50
Offset:	0 (0%), Referenced to phase 2: and 6:SBL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	9.0
Intersection Capacity Utilization	37.5%
Analysis Period (min)	15
	Intersection LOS: A
	ICU Level of Service A

Splits and Phases: 26: Amherst & Starin Ave



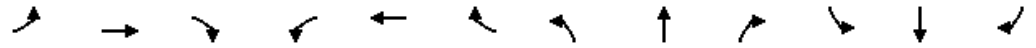
Existing AM Field Timing.syn
 28: Parker/Parker Ave & Amherst

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2050			438			444			1986	
Travel Time (s)		46.6			10.0			10.1			45.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
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 Effect Green (s)												
Actuated g/C Ratio												
v/c Ratio												
Control Delay												
Queue Delay												
Total Delay												
LOS												

Existing AM Field Timing.syn
 28: Parker/Parker Ave & Amherst

3/16/2015



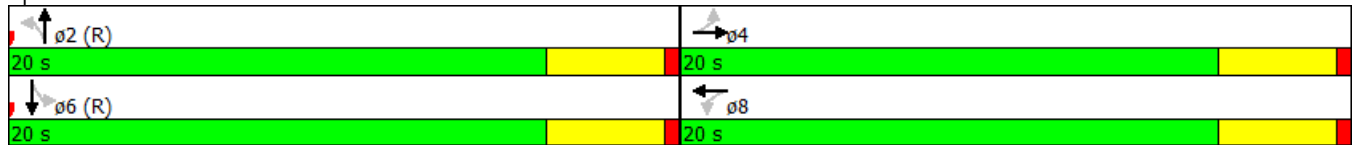
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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Approach Delay
 Approach LOS

Intersection Summary











Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.00
 Intersection Signal Delay: 0.0 Intersection LOS: A
 Intersection Capacity Utilization 0.0% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 28: Parker/Parker Ave & Amherst



Existing AM Field Timing.syn
30: Main St & Parker

3/16/2015

						
Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	5	373	27	653	959	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	55	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Flt	0.854	0.850				
Flt Protected	0.999			0.998		
Satd. Flow (prot)	1589	1504	0	3532	3539	0
Flt Permitted	0.999			0.890		
Satd. Flow (perm)	1589	1504	0	3150	3539	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	32	32				
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			289	544	
Travel Time (s)	10.1			6.6	12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	405	29	710	1042	0
Shared Lane Traffic (%)		49%				
Lane Group Flow (vph)	203	207	0	739	1042	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Detector Phase	6	6	4	4	8	

Existing AM Field Timing.syn
 30: Main St & Parker

3/16/2015

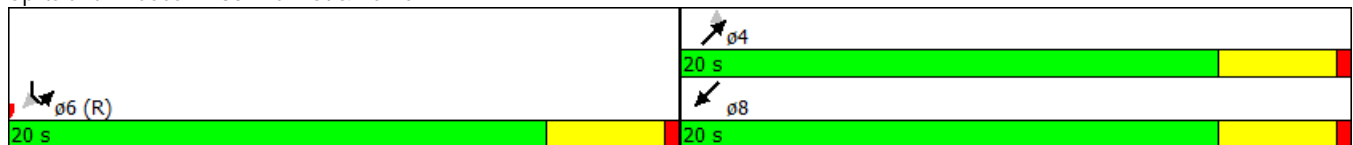


Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	
Lead/Lag						
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	None	None	None
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)	16.4	16.4		15.6	15.6	
Actuated g/C Ratio	0.41	0.41		0.39	0.39	
v/c Ratio	0.30	0.33		0.60	0.76	
Control Delay	8.4	8.8		12.1	14.8	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	8.4	8.8		12.1	14.8	
LOS	A	A		B	B	
Approach Delay	8.6			12.1	14.8	
Approach LOS	A			B	B	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 12.7
 Intersection Capacity Utilization 52.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 30: Main St & Parker



Existing AM Field Timing.syn
 31: Main St & Filmore & Vernon PI

3/16/2015

Lane Group	EBL	EBR	NBL2	NBL	NBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Volume (vph)	0	0	14	12	139	3	532	12	331	979	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		90	0	60		0	200		0
Storage Lanes	0	0		1	1	1		0	1		1
Taper Length (ft)	25			25		25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Flt					0.850		0.997				0.850
Flt Protected				0.950		0.950			0.950		
Satd. Flow (prot)	0	0	0	1770	1583	1770	3529	0	1770	3539	1583
Flt Permitted				0.950		0.000			0.000		
Satd. Flow (perm)	0	0	0	1770	1583	0	3529	0	0	3539	1583
Right Turn on Red					Yes			Yes			Yes
Satd. Flow (RTOR)					151		2				55
Link Speed (mph)	30			30			30			30	
Link Distance (ft)	1166			1133			1854			289	
Travel Time (s)	26.5			25.8			42.1			6.6	
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
Adj. Flow (vph)	0	0	15	13	151	3	578	13	360	1064	8
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	0	0	28	151	3	591	0	360	1064	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0			12			12			12	
Link Offset(ft)	0			0			0			0	
Crosswalk Width(ft)	16			16			16			16	
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15		9	15		9
Number of Detectors			1	1	1	1	2		1	2	1
Detector Template			Left	Left	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)			20	20	20	20	100		20	100	20
Trailing Detector (ft)			0	0	0	0	0		0	0	0
Detector 1 Position(ft)			0	0	0	0	0		0	0	0
Detector 1 Size(ft)			20	20	20	20	6		20	6	20
Detector 1 Type			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel											
Detector 1 Extend (s)			0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)			0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)			0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)							94			94	
Detector 2 Size(ft)							6			6	
Detector 2 Type							Cl+Ex			Cl+Ex	
Detector 2 Channel											
Detector 2 Extend (s)							0.0			0.0	
Turn Type			Prot	Prot	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases			2!	2!		6!	1		3	8	
Permitted Phases					2	1			8		8
Detector Phase			2	2	2	6	1		3	8	8

Existing AM Field Timing.syn
 31: Main St & Filmore & Vernon PI

3/16/2015

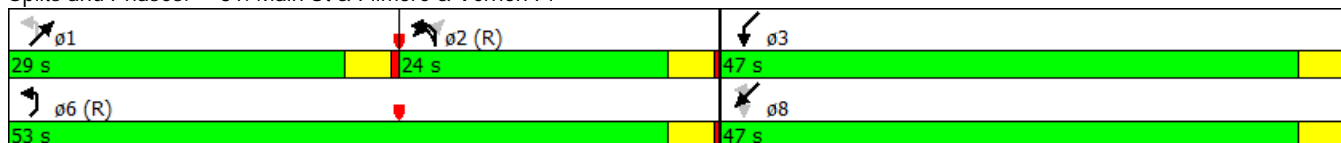
Lane Group	EBL	EBR	NBL2	NBL	NBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase											
Minimum Initial (s)			4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)			20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)			24.0	24.0	24.0	53.0	29.0		47.0	47.0	47.0
Total Split (%)			24.0%	24.0%	24.0%	53.0%	29.0%		47.0%	47.0%	47.0%
Maximum Green (s)			20.0	20.0	20.0	49.0	25.0		43.0	43.0	43.0
Yellow Time (s)			3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)			0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)				0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)				4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lag		Lead				
Lead-Lag Optimize?			Yes	Yes	Yes		Yes				
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode			C-Max	C-Max	C-Max	C-Max	None		None	None	None
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)				27.7	27.7	53.7	22.0		38.3	38.3	38.3
Actuated g/C Ratio				0.28	0.28	0.54	0.22		0.38	0.38	0.38
v/c Ratio				0.06	0.28	0.00	0.76		0.53	0.79	0.01
Control Delay				31.5	7.3	12.7	42.9		26.4	31.6	0.0
Queue Delay				0.0	0.0	0.0	0.0		4.8	49.7	0.0
Total Delay				31.5	7.3	12.7	42.9		31.3	81.3	0.0
LOS				C	A	B	D		C	F	A
Approach Delay				11.1			42.8			68.3	
Approach LOS				B			D			E	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBL and 6:NEL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 56.8
 Intersection Capacity Utilization 46.8%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service A











! Phase conflict between lane groups.

Splits and Phases: 31: Main St & Filmore & Vernon PI



Existing AM Field Timing.syn
 34: Main St & Rodney Ave

3/16/2015

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	1863	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	1863	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	354		1130			1854
Travel Time (s)	8.0		25.7			42.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot			Perm		
Protected Phases	2		4			8
Permitted Phases				4	8	
Minimum Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (%)	50.0%		50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	16.0		16.0	16.0	16.0	16.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.0		4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						

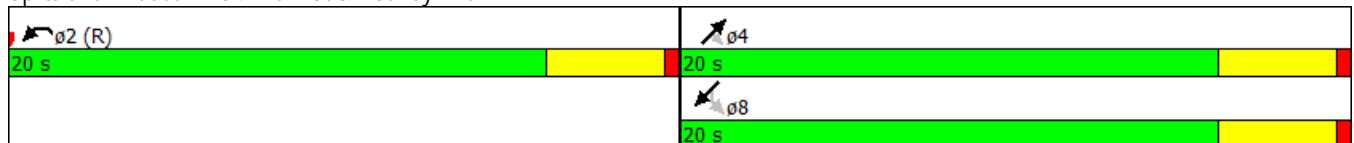


Lane Group	NWL	NWR	NET	NER	SWL	SWT
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2:NWL and 6:, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

Splits and Phases: 34: Main St & Rodney Ave



Existing AM Field Timing.syn
 36: Main St & Leroy Ave

3/16/2015



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations	↑↓		↑↑	↑		↑↑
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		30	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	1863	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	1863	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	1183		517			1297
Travel Time (s)	26.9		11.8			29.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot			Perm		
Protected Phases	8!		4!			6
Permitted Phases				4		
Minimum Split (s)	20.0		20.0	20.0		20.0
Total Split (s)	20.0		20.0	20.0		20.0
Total Split (%)	50.0%		50.0%	50.0%		50.0%
Maximum Green (s)	16.0		16.0	16.0		16.0
Yellow Time (s)	3.5		3.5	3.5		3.5
All-Red Time (s)	0.5		0.5	0.5		0.5
Lost Time Adjust (s)	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.0		4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						

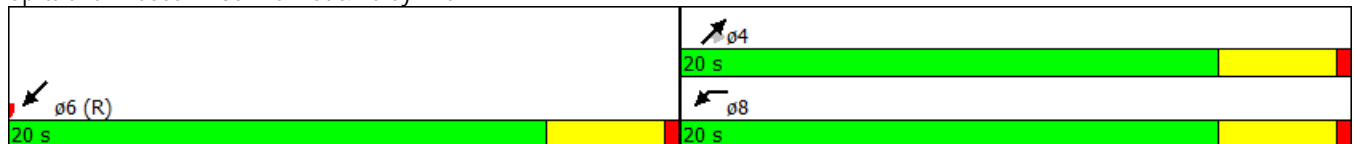


Lane Group	WBL	WBR	NET	NER	SWL	SWT
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2: and 6:SWT, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
! Phase conflict between lane groups.	

Splits and Phases: 36: Main St & Leroy Ave



Existing AM Field Timing.syn
 38: Main St & Dewey Ave

3/16/2015



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	1863	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	1863	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	1756		455			552
Travel Time (s)	39.9		10.3			12.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot				Perm	
Protected Phases	8!		4!			6
Permitted Phases					6	
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	20.0		20.0		20.0	20.0
Total Split (%)	50.0%		50.0%		50.0%	50.0%
Maximum Green (s)	16.0		16.0		16.0	16.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						

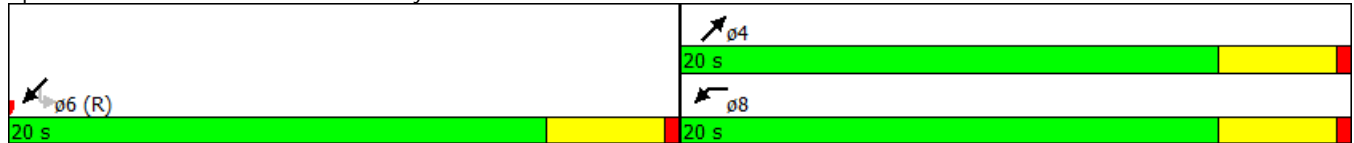


Lane Group	WBL	WBR	NET	NER	SWL	SWT
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						

Intersection Summary





















Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2: and 6:SWTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
! Phase conflict between lane groups.	

Splits and Phases: 38: Main St & Dewey Ave



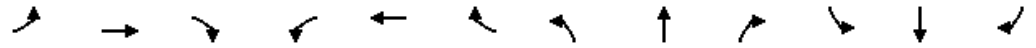
Existing AM Field Timing.syn
40: Parkside Ave & Linden

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	110	145	136	98	9	39	194	77	62	498	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.993			0.972			0.992			0.995	
Satd. Flow (prot)	0	1850	1583	0	1811	1583	0	3511	1583	0	3522	1583
Flt Permitted		0.943			0.754			0.814			0.883	
Satd. Flow (perm)	0	1757	1583	0	1405	1583	0	2881	1583	0	3125	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			158			12			84			34
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1441			1288			2138			680	
Travel Time (s)		32.8			29.3			48.6			15.5	
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)	21	120	158	148	107	10	42	211	84	67	541	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	141	158	0	255	10	0	253	84	0	608	34
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lead/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	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)		41.0	41.0		41.0	41.0		41.0	41.0		41.0	41.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.46	0.46		0.46	0.46
v/c Ratio		0.18	0.20		0.40	0.01		0.19	0.11		0.43	0.05
Control Delay		15.3	3.1		18.7	6.6		15.1	3.7		17.7	5.1
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		15.3	3.1		18.7	6.6		15.1	3.7		17.7	5.1
LOS		B	A		B	A		B	A		B	A

Existing AM Field Timing.syn
 40: Parkside Ave & Linden

3/16/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.8			18.2			12.3			17.1	
Approach LOS		A			B			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	14.6
Intersection Capacity Utilization	51.4%
Analysis Period (min)	15
	Intersection LOS: B
	ICU Level of Service A

Splits and Phases: 40: Parkside Ave & Linden

<p>φ2 (R)</p> <p>45 s</p>	<p>φ4</p> <p>45 s</p>
<p>φ6 (R)</p> <p>45 s</p>	<p>φ8</p> <p>45 s</p>

Existing PM Field Timing.syn
 2: Parkside Ave & Amherst

3/16/2015

Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	73	211	46	292	607	58	18	167	29	130	277	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80	0		100		0	120		125		0	50
Storage Lanes	1	1		1		0	1		0		2	1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.97								0.99		0.98
Frt		0.850			0.987			0.978				0.850
Flt Protected	0.950			0.950			0.950			0.950	0.950	
Satd. Flow (prot)	1770	1583	0	1770	3493	0	1770	3461	0	1770	1770	1583
Flt Permitted	0.296			0.476			0.377			0.588		
Satd. Flow (perm)	550	1542	0	887	3493	0	702	3461	0	1085	1863	1557
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		64			14			21				
Link Speed (mph)	30				30			30				30
Link Distance (ft)	2675				1099			2138			2100	
Travel Time (s)	60.8				25.0			48.6			47.7	
Confl. Peds. (#/hr)	3		9							9		3
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)	79	229	50	317	660	63	20	182	32	141	301	192
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	279	0	317	723	0	20	214	0	141	301	192
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12			12			24	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15	9	9	15		9	15		9	15	15	9
Turn Type	pm+pt	Perm		pm+pt	NA		Perm	NA		Perm	Perm	Perm
Protected Phases	3			5	2			6				
Permitted Phases	8	8		2			6			4	4	4
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	46.0		19.0	39.0		20.0	20.0		26.0	26.0	26.0
Total Split (%)	23.5%	54.1%		22.4%	45.9%		23.5%	23.5%		30.6%	30.6%	30.6%
Maximum Green (s)	16.0	42.0		15.0	35.0		16.0	16.0		22.0	22.0	22.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	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
Lead/Lag	Lead			Lead			Lag	Lag		Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes			Yes	Yes		Yes	Yes	Yes
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)	42.0	42.0		35.0	35.0		16.0	16.0		22.0	22.0	22.0
Actuated g/C Ratio	0.49	0.49		0.41	0.41		0.19	0.19		0.26	0.26	0.26

Existing PM Field Timing.syn
 2: Parkside Ave & Amherst

3/16/2015



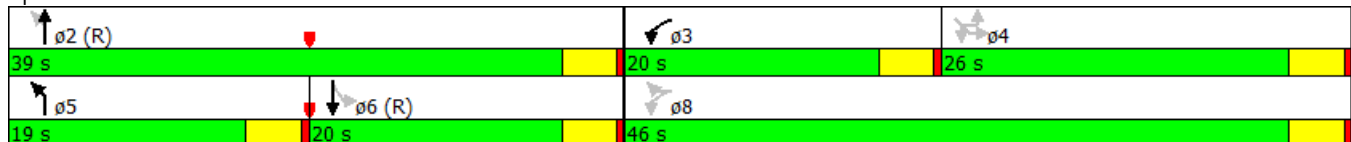
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
v/c Ratio	0.16	0.35		0.61	0.50		0.15	0.32		0.50	0.62	0.48
Control Delay	12.3	11.4		23.7	19.6		32.2	28.3		34.2	34.5	31.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	12.3	11.4		23.7	19.6		32.2	28.3		34.2	34.5	31.4
LOS	B	B		C	B		C	C		C	C	C
Approach Delay	11.6				20.9			28.6			33.5	
Approach LOS	B				C			C			C	
Queue Length 50th (ft)	21	64		118	143		9	46		64	142	87
Queue Length 95th (ft)	44	118		188	194		29	79		123	227	151
Internal Link Dist (ft)	2595				1019			2058			2020	
Turn Bay Length (ft)	80			100			120					50
Base Capacity (vph)	501	794		521	1446		132	668		280	482	402
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	0.16	0.35		0.61	0.50		0.15	0.32		0.50	0.62	0.48

Intersection Summary

Area Type: Other
 Cycle Length: 85
 Actuated Cycle Length: 85
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 23.7
 Intersection Capacity Utilization 64.0%
 Analysis Period (min) 15












Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 2: Parkside Ave & Amherst



Existing PM Field Timing.syn
5: Parkside Ave & Florence Ave

3/16/2015

						
Lane Group	SBL	SBR	NWL	NWR	NEL	NER
Lane Configurations						
Volume (vph)	11	563	82	25	1291	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	0.95
Frt	0.856	0.850	0.969		0.994	
Flt Protected	0.998		0.963		0.954	
Satd. Flow (prot)	1591	1504	1738	0	3427	0
Flt Permitted	0.930		0.175		0.955	
Satd. Flow (perm)	1483	1504	316	0	3430	0
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)	269	343	9		11	
Link Speed (mph)	30		30		30	
Link Distance (ft)	810		1900		903	
Travel Time (s)	18.4		43.2		20.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	612	89	27	1403	59
Shared Lane Traffic (%)		44%				
Lane Group Flow (vph)	281	343	116	0	1462	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)	12		12		24	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Number of Detectors	1	1	1		1	
Detector Template	Left	Right	Left		Left	
Leading Detector (ft)	20	20	20		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	20	20		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Turn Type	Perm	Perm	Perm		Perm	
Protected Phases						
Permitted Phases	4	4	6		8	
Detector Phase	4	4	6		8	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	
Minimum Split (s)	20.0	20.0	20.0		20.0	
Total Split (s)	112.0	112.0	24.0		112.0	
Total Split (%)	82.4%	82.4%	17.6%		82.4%	
Maximum Green (s)	108.0	108.0	20.0		108.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	0.5		0.5	

Existing PM Field Timing.syn
 5: Parkside Ave & Florence Ave

3/16/2015



Lane Group	SBL	SBR	NWL	NWR	NEL	NER
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0	4.0		4.0	
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		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)	31.7	31.7	20.2		31.7	
Actuated g/C Ratio	0.53	0.53	0.34		0.53	
v/c Ratio	0.31	0.36	1.04		0.80	
Control Delay	2.1	2.0	125.4		15.3	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.1	2.0	125.4		15.3	
LOS	A	A	F		B	
Approach Delay	2.1		125.4		15.3	
Approach LOS	A		F		B	
Queue Length 50th (ft)	2	0	~42		198	
Queue Length 95th (ft)	28	29	#154		271	
Internal Link Dist (ft)	730		1820		823	
Turn Bay Length (ft)						
Base Capacity (vph)	1483	1504	112		3430	
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	0.19	0.23	1.04		0.43	

Intersection Summary

Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 59.9
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 17.4
 Intersection Capacity Utilization 66.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

~ 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: 5: Parkside Ave & Florence Ave



















Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	3539	3539	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1900			926	455	
Travel Time (s)	43.2			21.0	10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	ICU Level of Service A

Existing PM Field Timing.syn
8: Parkside Ave & Jewett Pkwy

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	9	38	41	13	34	69	1107	77	18	569	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			0.99			1.00			1.00	
Fr _t		0.923			0.948			0.991			0.996	
Fl _t Protected		0.986			0.977			0.997			0.998	
Satd. Flow (prot)	0	1680	0	0	1712	0	0	3487	0	0	3511	0
Fl _t Permitted		0.909			0.857			0.867			0.890	
Satd. Flow (perm)	0	1546	0	0	1500	0	0	3030	0	0	3131	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			28			19			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		951			3114			890			1388	
Travel Time (s)		21.6			70.8			20.2			31.5	
Confl. Peds. (#/hr)	4		2	2		4	20		8	8		20
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)	21	10	41	45	14	37	75	1203	84	20	618	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	96	0	0	1362	0	0	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	21.0	21.0		21.0	21.0		8.0	77.0		69.0	69.0	
Total Split (%)	21.4%	21.4%		21.4%	21.4%		8.2%	78.6%		70.4%	70.4%	
Maximum Green (s)	17.0	17.0		17.0	17.0		4.0	73.0		65.0	65.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
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)		17.0			17.0			73.0			65.0	
Actuated g/C Ratio		0.17			0.17			0.74			0.66	
v/c Ratio		0.24			0.34			0.60			0.31	
Control Delay		20.4			29.4			6.8			7.4	
Queue Delay		0.0			0.0			0.0			0.0	

Existing PM Field Timing.syn
 8: Parkside Ave & Jewett Pkwy

3/16/2015

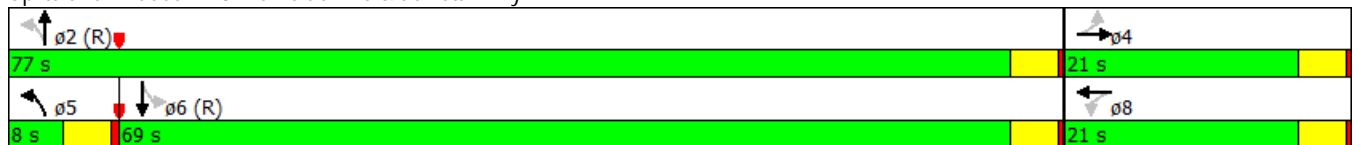
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		20.4			29.4			6.8			7.4	
LOS		C			C			A			A	
Approach Delay		20.4			29.4			6.8			7.4	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		17			37			152			81	
Queue Length 95th (ft)		56			85			192			108	
Internal Link Dist (ft)		871			3034			810			1308	
Turn Bay Length (ft)												
Base Capacity (vph)		302			283			2280			2078	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.24			0.34			0.60			0.31	

Intersection Summary

Area Type: Other
 Cycle Length: 98
 Actuated Cycle Length: 98
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 8.4
 Intersection Capacity Utilization 75.2%
 Analysis Period (min) 15










Intersection LOS: A
 ICU Level of Service D

Splits and Phases: 8: Parkside Ave & Jewett Pkwy



Existing PM Field Timing.syn
 9: Parkside Ave & Russell St

3/16/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	2896		1388			1099
Travel Time (s)	65.8		31.5			25.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot					
Protected Phases	8		2			6
Permitted Phases						
Minimum Split (s)	20.0		20.0			20.0
Total Split (s)	20.0		20.0			20.0
Total Split (%)	50.0%		50.0%			50.0%
Maximum Green (s)	16.0		16.0			16.0
Yellow Time (s)	3.5		3.5			3.5
All-Red Time (s)	0.5		0.5			0.5
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	4.0		4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						

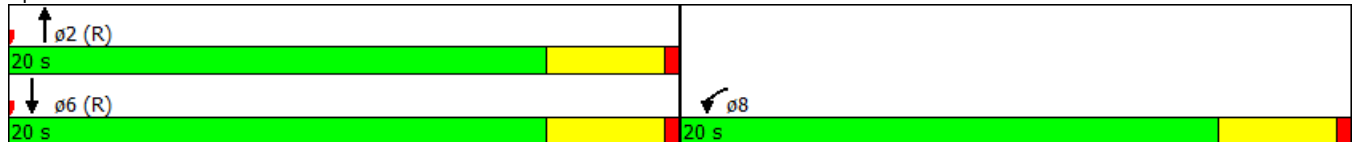


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)	2816		1308			1019
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	Intersection LOS: A
	ICU Level of Service A

Splits and Phases: 9: Parkside Ave & Russell St



Existing PM Field Timing.syn

11: Parkside Ave

3/16/2015

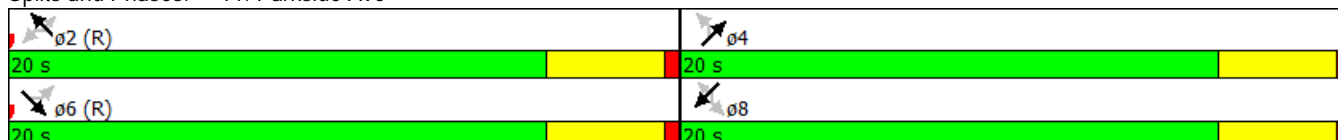
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	315	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt												
Frt Protected	0.950											
Satd. Flow (prot)	1770	5085	0	1863	5085	1863	0	3539	0	1863	1863	1863
Frt Permitted	0.757											
Satd. Flow (perm)	1410	5085	0	1863	5085	1863	0	3539	0	1863	1863	1863
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		569			782			557			991	
Travel Time (s)		12.9			17.8			12.7			22.5	
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)	342	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	342	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm		Perm				Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6			2		2	4			8		8
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0		20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	16.0	16.0		16.0	16.0	16.0	16.0	16.0		16.0	16.0	16.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	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
Lead/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
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)	16.0											
Actuated g/C Ratio	0.40											
v/c Ratio	0.61											
Control Delay	15.2											

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay	0.0											
Total Delay	15.2											
LOS	B											
Approach Delay												
Approach LOS												
Queue Length 50th (ft)	56											
Queue Length 95th (ft)	#121											
Internal Link Dist (ft)		489			702			477			911	
Turn Bay Length (ft)												
Base Capacity (vph)	564											
Starvation Cap Reductn	0											
Spillback Cap Reductn	0											
Storage Cap Reductn	0											
Reduced v/c Ratio	0.61											

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 15.2
 Intersection Capacity Utilization 20.8%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 11: Parkside Ave



Existing PM Field Timing.syn

14: Main St & Robie St

3/16/2015

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	14	31	31	9	57	34	922	26	18	749	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	40		0	70		0	65		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Flt		0.922			0.871			0.996			0.998	
Flt Protected		0.992		0.950			0.950			0.950		
Satd. Flow (prot)	0	1704	0	1770	1622	0	1770	3525	0	1770	3532	0
Flt Permitted		0.966		0.760			0.171			0.118		
Satd. Flow (perm)	0	1659	0	1416	1622	0	319	3525	0	220	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			62			3			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1896			1037			1026			926	
Travel Time (s)		43.1			23.6			23.3			21.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	15	34	34	10	62	37	1002	28	20	814	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	0	34	72	0	37	1030	0	20	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		6			2		7	4		3	8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	36.0	36.0		36.0	36.0		26.0	38.0		26.0	38.0	
Total Split (%)	36.0%	36.0%		36.0%	36.0%		26.0%	38.0%		26.0%	38.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		22.0	34.0		22.0	34.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
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)		32.0		32.0	32.0		56.0	34.0		56.0	34.0	
Actuated g/C Ratio		0.32		0.32	0.32		0.56	0.34		0.56	0.34	
v/c Ratio		0.11		0.08	0.13		0.07	0.86		0.04	0.69	
Control Delay		13.4		24.4	8.6		8.7	39.3		8.4	32.0	

Existing PM Field Timing.syn
 14: Main St & Robie St

3/16/2015

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		13.4		24.4	8.6		8.7	39.3		8.4	32.0	
LOS		B		C	A		A	D		A	C	
Approach Delay		13.4			13.7			38.2			31.4	
Approach LOS		B			B			D			C	
Queue Length 50th (ft)		11		15	4		9	318		5	235	
Queue Length 95th (ft)		40		38	35		22	#411		14	304	
Internal Link Dist (ft)		1816			957			946			846	
Turn Bay Length (ft)				40			70			65		
Base Capacity (vph)		554		453	561		497	1200		464	1201	
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		0.08	0.13		0.07	0.86		0.04	0.69	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 33.5
 Intersection Capacity Utilization 44.7%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 14: Main St & Robie St

φ2 (R) 36 s	φ3 26 s	φ4 38 s
φ6 (R) 36 s	φ7 26 s	φ8 38 s

Existing PM Field Timing.syn
 15: Parkside Ave & Robie St

3/16/2015



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	1896		991			903
Travel Time (s)	43.1		22.5			20.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	ICU Level of Service A

Existing PM Field Timing.syn
 16: Parkside Ave & W Oakwood Pl

3/16/2015



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	2300		810			890
Travel Time (s)	52.3		18.4			20.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 0.0% ICU Level of Service A
 Analysis Period (min) 15

Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			60
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	3539	3539	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	0	3539	3539	1863
Link Speed (mph)	30			30	30	
Link Distance (ft)	2300			552	517	
Travel Time (s)	52.3			12.5	11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	






















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	ICU Level of Service A

Existing PM Field Timing.syn

18: Main St & Amherst

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	71	119	12	21	120	9	44	528	25	27	456	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	140		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.98	1.00		1.00	1.00			1.00		1.00		
Frt		0.986			0.989			0.993				0.975
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1834	0	1770	1837	0	1770	3511	0	1770	3451	0
Flt Permitted	0.668			0.666			0.398			0.395		
Satd. Flow (perm)	1217	1834	0	1239	1837	0	741	3511	0	735	3451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			10			14			70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		438			789			544			647	
Travel Time (s)		10.0			17.9			12.4			14.7	
Confl. Peds. (#/hr)	36		2	2		36			3	3		
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)	77	129	13	23	130	10	48	574	27	29	496	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	142	0	23	140	0	48	601	0	29	596	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
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)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40	

Existing PM Field Timing.syn
 18: Main St & Amherst

3/16/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio	0.16	0.19		0.05	0.19		0.16	0.43		0.10	0.42	
Control Delay	8.8	8.1		7.7	8.2		3.4	4.6		8.6	8.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.8	8.1		7.7	8.2		3.4	4.6		8.6	8.7	
LOS	A	A		A	A		A	A		A	A	
Approach Delay		8.3			8.1			4.5			8.7	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	10	17		3	18		2	20		4	41	
Queue Length 95th (ft)	29	42		12	42		m2	m19		15	69	
Internal Link Dist (ft)		358			709			464			567	
Turn Bay Length (ft)				65			140			100		
Base Capacity (vph)	486	741		495	740		296	1412		294	1422	
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	0.16	0.19		0.05	0.19		0.16	0.43		0.10	0.42	

Intersection Summary

Area Type: Other

Cycle Length: 40

Actuated Cycle Length: 40

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

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 6.9

Intersection LOS: A

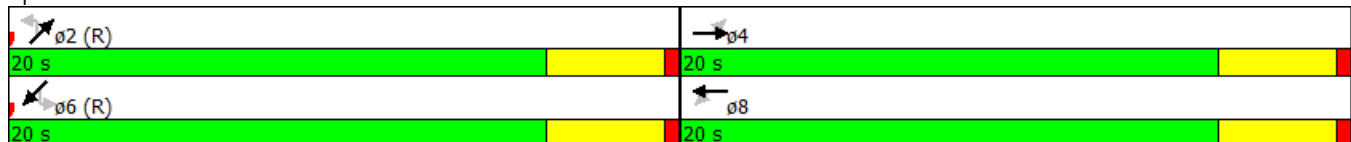
Intersection Capacity Utilization 49.5%

ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 18: Main St & Amherst



Existing PM Field Timing.syn
 19: Main St & Jewett Pkwy

3/16/2015

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↕	↕↔		↕	↕↔	
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	125		0	100		185
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	1863	3539	0	1863	3539	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	1863	3539	0	1863	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3114			620			1297			1130	
Travel Time (s)		70.8			14.1			29.5			25.7	
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)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
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 Effect Green (s)												
Actuated g/C Ratio												
v/c Ratio												
Control Delay												

Existing PM Field Timing.syn
 19: Main St & Jewett Pkwy

3/16/2015



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay												
Total Delay												
LOS												
Approach Delay												
Approach LOS												
Queue Length 50th (ft)												
Queue Length 95th (ft)												
Internal Link Dist (ft)		3034			540			1217			1050	
Turn Bay Length (ft)												
Base Capacity (vph)												
Starvation Cap Reductn												
Spillback Cap Reductn												
Storage Cap Reductn												
Reduced v/c Ratio												

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization:	0.0%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 19: Main St & Jewett Pkwy

φ2 (R) 20 s	φ4 20 s
φ6 (R) 20 s	φ8 20 s

Existing PM Field Timing.syn

20: Main St

3/16/2015

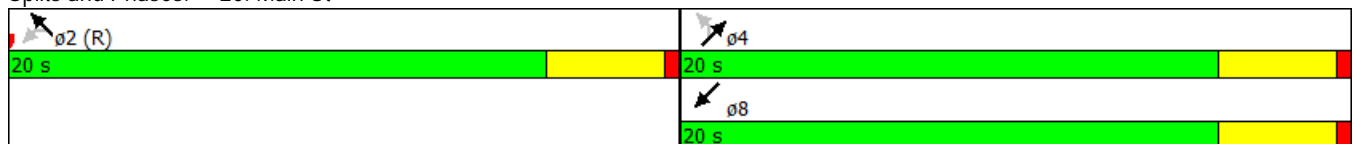
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	4	263	155	178	455	0	0	495	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor							0.98				0.99	
Frt					0.950						0.987	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	0	0	1770	0	1770	3539	0	0	4993	0
Flt Permitted							0.418					
Satd. Flow (perm)	0	0	0	0	1770	0	765	3539	0	0	4993	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					87						49	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		905			619			853			1026	
Travel Time (s)		20.6			14.1			19.4			23.3	
Confl. Peds. (#/hr)							32					32
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)	0	0	0	4	286	168	193	495	0	0	538	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	458	0	193	495	0	0	591	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			8	
Permitted Phases				2			4					
Minimum Split (s)				20.0	20.0		20.0	20.0			20.0	
Total Split (s)				20.0	20.0		20.0	20.0			20.0	
Total Split (%)				50.0%	50.0%		50.0%	50.0%			50.0%	
Maximum Green (s)				16.0	16.0		16.0	16.0			16.0	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.5	
All-Red Time (s)				0.5	0.5		0.5	0.5			0.5	
Lost Time Adjust (s)					0.0		0.0	0.0			0.0	
Total Lost Time (s)					4.0		4.0	4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
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)					16.0		16.0	16.0			16.0	
Actuated g/C Ratio					0.40		0.40	0.40			0.40	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio					0.60		0.63	0.35			0.29	
Control Delay					11.6		23.0	9.3			7.9	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					11.6		23.0	9.3			7.9	
LOS					B		C	A			A	
Approach Delay					11.6			13.1			7.9	
Approach LOS					B			B			A	
Queue Length 50th (ft)					59		32	37			27	
Queue Length 95th (ft)					125		#108	63			45	
Internal Link Dist (ft)		825			539			773			946	
Turn Bay Length (ft)												
Base Capacity (vph)					760		306	1415			2026	
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					0.60		0.63	0.35			0.29	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 11.0
 Intersection Capacity Utilization 56.7%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.




















Splits and Phases: 20: Main St



Existing PM Field Timing.syn

25: Amherst & Colvin

3/16/2015

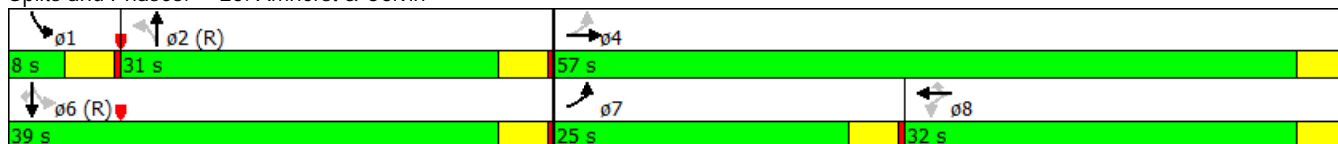
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	408	424	8	4	331	277	6	53	4	256	9	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	0		150	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00	0.99		1.00			0.99	0.98
Frt		0.997				0.850		0.992				0.850
Flt Protected	0.950				0.999			0.995			0.954	
Satd. Flow (prot)	1770	1856	0	0	1861	1583	0	1837	0	0	1777	1583
Flt Permitted	0.251				0.996			0.967			0.633	
Satd. Flow (perm)	468	1856	0	0	1855	1562	0	1785	0	0	1173	1547
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		2						3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			2100			523			2529	
Travel Time (s)		24.4			47.7			11.9			57.5	
Confl. Peds. (#/hr)	1		3	3		1	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	443	461	9	4	360	301	7	58	4	278	10	305
Shared Lane Traffic (%)												
Lane Group Flow (vph)	443	470	0	0	364	301	0	69	0	0	288	305
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8		8	2			6		6
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	20.0	20.0		8.0	20.0	20.0
Total Split (s)	25.0	57.0		32.0	32.0	32.0	31.0	31.0		8.0	39.0	39.0
Total Split (%)	26.0%	59.4%		33.3%	33.3%	33.3%	32.3%	32.3%		8.3%	40.6%	40.6%
Maximum Green (s)	21.0	53.0		28.0	28.0	28.0	27.0	27.0		4.0	35.0	35.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0			4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
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)	53.0	53.0			28.0	28.0		27.0			35.0	35.0
Actuated g/C Ratio	0.55	0.55			0.29	0.29		0.28			0.36	0.36

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.82	0.46			0.67	0.66		0.14			0.64	0.54
Control Delay	28.5	14.7			37.2	38.0		25.6			32.0	28.5
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	28.5	14.7			37.2	38.0		25.6			32.0	28.5
LOS	C	B			D	D		C			C	C
Approach Delay		21.4			37.6			25.6			30.2	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	152	161			195	161		30			131	145
Queue Length 95th (ft)	#304	238			295	254		64			206	230
Internal Link Dist (ft)		994			2020			443			2449	
Turn Bay Length (ft)	130					150						
Base Capacity (vph)	543	1025			541	455		504			452	564
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	0.82	0.46			0.67	0.66		0.14			0.64	0.54

Intersection Summary

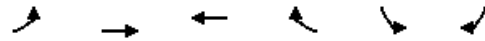
Area Type: Other
 Cycle Length: 96
 Actuated Cycle Length: 96
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 28.7
 Intersection Capacity Utilization 71.8%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Amherst & Colvin

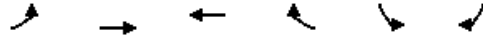


Existing PM Field Timing.syn
 26: Amherst & Starin Ave

3/16/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↕	↗	↖	↗	↘	↘
Volume (vph)	170	212	256	192	52	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.564				0.950	
Satd. Flow (perm)	1051	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				209		123
Link Speed (mph)		30	30		30	
Link Distance (ft)		2675	2050		1998	
Travel Time (s)		60.8	46.6		45.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	230	278	209	57	123
Shared Lane Traffic (%)						
Lane Group Flow (vph)	185	230	278	209	57	123
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	35.0	35.0	35.0	35.0	25.0	25.0
Total Split (%)	58.3%	58.3%	58.3%	58.3%	41.7%	41.7%
Maximum Green (s)	31.0	31.0	31.0	31.0	21.0	21.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/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)	31.0	31.0	31.0	31.0	21.0	21.0
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.35	0.35
v/c Ratio	0.34	0.24	0.29	0.23	0.09	0.19
Control Delay	10.7	8.8	9.3	2.1	13.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	8.8	9.3	2.1	13.7	4.1
LOS	B	A	A	A	B	A



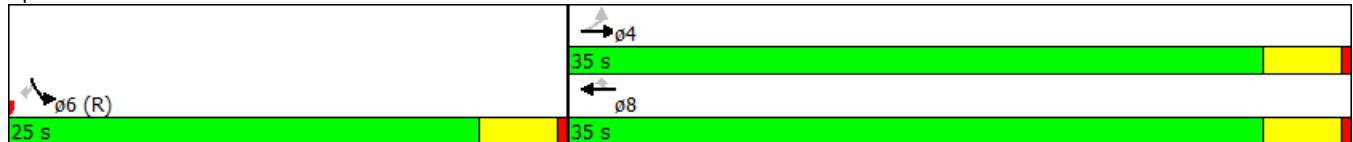
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		9.7	6.2		7.1	
Approach LOS		A	A		A	
Queue Length 50th (ft)	36	42	52	0	13	0
Queue Length 95th (ft)	74	77	92	26	34	28
Internal Link Dist (ft)		2595	1970		1918	
Turn Bay Length (ft)						
Base Capacity (vph)	543	962	962	918	619	634
Starvation Cap Reductn	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	0.34	0.24	0.29	0.23	0.09	0.19

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.34
 Intersection Signal Delay: 7.7
 Intersection Capacity Utilization 36.2%
 Analysis Period (min) 15

















Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 26: Amherst & Starin Ave



Existing PM Field Timing.syn
 28: Parker/Parker Ave & Amherst

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2050			438			444			1986	
Travel Time (s)		46.6			10.0			10.1			45.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
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 Effect Green (s)												
Actuated g/C Ratio												
v/c Ratio												
Control Delay												
Queue Delay												
Total Delay												
LOS												

Existing PM Field Timing.syn
 28: Parker/Parker Ave & Amherst

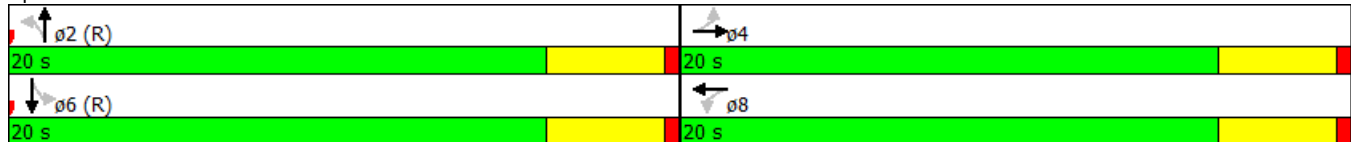
3/16/2015











Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay												
Approach LOS												
Queue Length 50th (ft)												
Queue Length 95th (ft)												
Internal Link Dist (ft)	1970			358			364			1906		
Turn Bay Length (ft)												
Base Capacity (vph)												
Starvation Cap Reductn												
Spillback Cap Reductn												
Storage Cap Reductn												
Reduced v/c Ratio												

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization	0.0%
Analysis Period (min)	15
	Intersection LOS: A
	ICU Level of Service A

Splits and Phases: 28: Parker/Parker Ave & Amherst



						
Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	3	127	38	1003	712	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	55	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95
Fr _t	0.856	0.850				
Fl _t Protected	0.998			0.998		
Satd. Flow (prot)	1591	1504	0	3532	3539	0
Fl _t Permitted	0.998			0.908		
Satd. Flow (perm)	1591	1504	0	3214	3539	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	68	70				
Link Speed (mph)	30			30	30	
Link Distance (ft)	444			289	544	
Travel Time (s)	10.1			6.6	12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	138	41	1090	774	0
Shared Lane Traffic (%)		49%				
Lane Group Flow (vph)	71	70	0	1131	774	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
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)	16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	
v/c Ratio	0.10	0.11		0.88	0.55	
Control Delay	3.3	3.2		22.3	9.7	

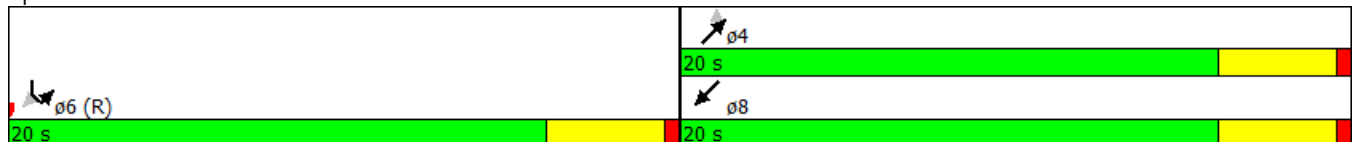


Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	3.3	3.2		22.3	9.7	
LOS	A	A		C	A	
Approach Delay	3.3			22.3	9.7	
Approach LOS	A			C	A	
Queue Length 50th (ft)	0	0		115	78	
Queue Length 95th (ft)	15	15		#223	125	
Internal Link Dist (ft)	364			209	464	
Turn Bay Length (ft)		55				
Base Capacity (vph)	677	643		1285	1415	
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	0.10	0.11		0.88	0.55	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 16.2
 Intersection Capacity Utilization 61.8%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 30: Main St & Parker



Existing PM Field Timing.syn
 31: Main St & Filmore & Vernon PI

3/16/2015

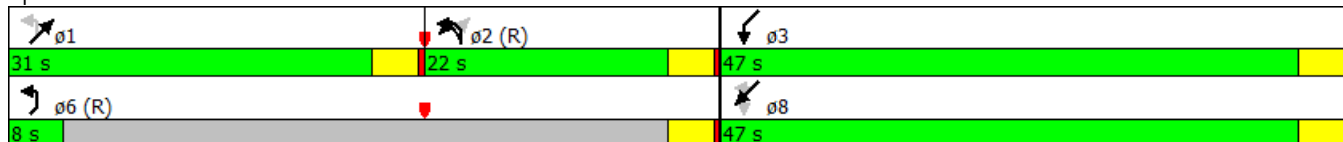
Lane Group	EBL	EBR	NBL2	NBL	NBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Volume (vph)	0	0	23	27	187	6	845	21	204	618	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		90	0	60		0	200		0
Storage Lanes	0	0		1	1	1		0	1		1
Taper Length (ft)	25			25		25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fr _t					0.850		0.996				0.850
Fl _t Protected				0.950		0.950			0.950		
Satd. Flow (prot)	0	0	0	1770	1583	1770	3525	0	1770	3539	1583
Fl _t Permitted				0.950		0.000			0.000		
Satd. Flow (perm)	0	0	0	1770	1583	0	3525	0	0	3539	1583
Right Turn on Red					Yes			Yes			Yes
Satd. Flow (RTOR)					203		2				55
Link Speed (mph)	30			30			30			30	
Link Distance (ft)	1166			1133			1854			289	
Travel Time (s)	26.5			25.8			42.1			6.6	
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
Adj. Flow (vph)	0	0	25	29	203	7	918	23	222	672	18
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	0	0	54	203	7	941	0	222	672	18
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0			12			12			12	
Link Offset(ft)	0			0			0			0	
Crosswalk Width(ft)	16			16			16			16	
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15		9	15		9
Turn Type			Prot	Prot	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases			2!	2!		6!	1		3	8	
Permitted Phases					2	1			8		8
Minimum Split (s)			20.0	20.0	20.0	8.0	20.0		8.0	20.0	20.0
Total Split (s)			22.0	22.0	22.0	8.0	31.0		47.0	47.0	47.0
Total Split (%)			22.0%	22.0%	22.0%	8.0%	31.0%		47.0%	47.0%	47.0%
Maximum Green (s)			18.0	18.0	18.0	4.0	27.0		43.0	43.0	43.0
Yellow Time (s)			3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)			0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)				0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)				4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lag		Lead				
Lead-Lag Optimize?			Yes	Yes	Yes		Yes				
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)				18.0	18.0	49.0	27.0		43.0	43.0	43.0
Actuated g/C Ratio				0.18	0.18	0.49	0.27		0.43	0.43	0.43
v/c Ratio				0.17	0.45	0.01	0.99		0.29	0.44	0.03
Control Delay				36.4	8.7	13.2	63.4		19.9	21.2	0.1

Lane Group	EBL	EBR	NBL2	NBL	NBR	NEL	NET	NER	SWL	SWT	SWR
Queue Delay				0.0	0.0	0.0	0.0		2.1	4.0	0.0
Total Delay				36.4	8.7	13.2	63.4		22.1	25.2	0.1
LOS				D	A	B	E		C	C	A
Approach Delay				14.5			63.1			24.0	
Approach LOS				B			E			C	
Queue Length 50th (ft)				29	0	2	313		90	154	0
Queue Length 95th (ft)				64	61	10	#453		145	204	0
Internal Link Dist (ft)	1086			1053			1774			209	
Turn Bay Length (ft)				90			60		200		
Base Capacity (vph)				318	451	867	953		761	1521	712
Starvation Cap Reductn				0	0	0	0		403	747	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				0.17	0.45	0.01	0.99		0.62	0.87	0.03

Intersection Summary











Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBL and 6:NEL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 40.3
 Intersection Capacity Utilization 48.7%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 ! Phase conflict between lane groups.

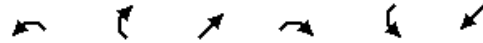
Splits and Phases: 31: Main St & Filmore & Vernon PI



Existing PM Field Timing.syn
 34: Main St & Rodney Ave

3/16/2015

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		60	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	1863	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	1863	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	354		1130			1854
Travel Time (s)	8.0		25.7			42.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot			Perm		
Protected Phases	2		4			8
Permitted Phases				4	8	
Minimum Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (%)	50.0%		50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	16.0		16.0	16.0	16.0	16.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.0		4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)	274		1050		1774	
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2:NWL and 6:, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization:	0.0%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 34: Main St & Rodney Ave

<p>20 s</p>	<p>20 s</p>
<p>20 s</p>	<p>20 s</p>

Existing PM Field Timing.syn
 36: Main St & Leroy Ave

3/16/2015



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		30	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	1863	0	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	1863	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	1183		517			1297
Travel Time (s)	26.9		11.8			29.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot			Perm		
Protected Phases	8!		4!			6
Permitted Phases				4		
Minimum Split (s)	20.0		20.0	20.0		20.0
Total Split (s)	20.0		20.0	20.0		20.0
Total Split (%)	50.0%		50.0%	50.0%		50.0%
Maximum Green (s)	16.0		16.0	16.0		16.0
Yellow Time (s)	3.5		3.5	3.5		3.5
All-Red Time (s)	0.5		0.5	0.5		0.5
Lost Time Adjust (s)	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.0		4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						



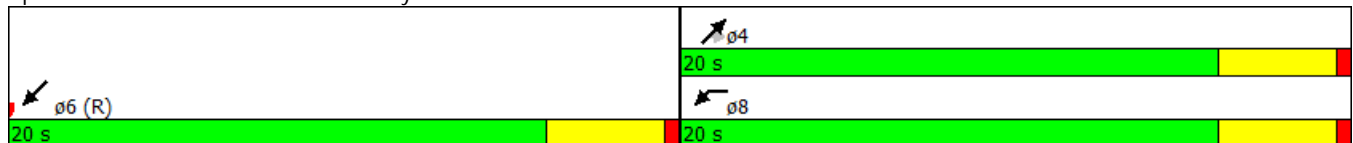
Lane Group	WBL	WBR	NET	NER	SWL	SWT
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)	1103		437		1217	
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2: and 6:SWT, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization:	0.0%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

! Phase conflict between lane groups.

Splits and Phases: 36: Main St & Leroy Ave



Existing PM Field Timing.syn
 38: Main St & Dewey Ave

3/16/2015



Lane Group	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	3539	0	1863	3539
Flt Permitted						
Satd. Flow (perm)	1863	0	3539	0	1863	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30		30	
Link Distance (ft)	1756		455		552	
Travel Time (s)	39.9		10.3		12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot				Perm	
Protected Phases	8!		4!			6
Permitted Phases					6	
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	20.0		20.0		20.0	20.0
Total Split (%)	50.0%		50.0%		50.0%	50.0%
Maximum Green (s)	16.0		16.0		16.0	16.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
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)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						



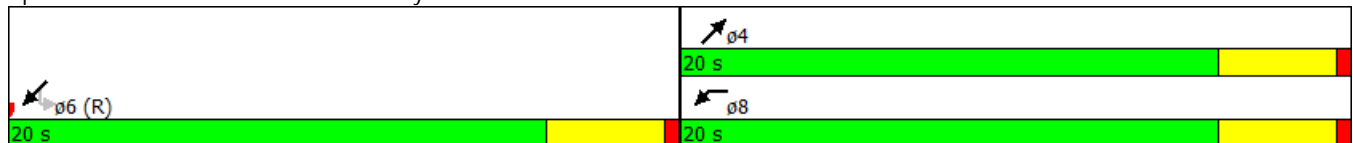
Lane Group	WBL	WBR	NET	NER	SWL	SWT
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)	1676		375		472	
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Area Type:	Other
Cycle Length:	40
Actuated Cycle Length:	40
Offset:	0 (0%), Referenced to phase 2: and 6:SWTL, Start of Green
Natural Cycle:	40
Control Type:	Pretimed
Maximum v/c Ratio:	0.00
Intersection Signal Delay:	0.0
Intersection Capacity Utilization:	0.0%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A





















! Phase conflict between lane groups.

Splits and Phases: 38: Main St & Dewey Ave















Existing PM Field Timing.syn
40: Parkside Ave & Linden

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	94	60	0	57	90	96	520	186	10	197	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Flt			0.850			0.850			0.850			0.850
Flt Protected		0.993						0.992			0.998	
Satd. Flow (prot)	0	1850	1583	0	1863	1583	0	3511	1583	0	3532	1583
Flt Permitted		0.966						0.854			0.925	
Satd. Flow (perm)	0	1799	1583	0	1863	1583	0	3022	1583	0	3274	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			65			98			202			23
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1441			1288			2138			680	
Travel Time (s)		32.8			29.3			48.6			15.5	
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)	17	102	65	0	62	98	104	565	202	11	214	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	119	65	0	62	98	0	669	202	0	225	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm		NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%
Maximum Green (s)	26.0	26.0	26.0	26.0	26.0	26.0	56.0	56.0	56.0	56.0	56.0	56.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lead/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	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)		26.0	26.0		26.0	26.0		56.0	56.0		56.0	56.0
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.62	0.62		0.62	0.62
v/c Ratio		0.23	0.13		0.12	0.19		0.36	0.19		0.11	0.02
Control Delay		25.9	7.2		24.4	6.3		8.9	1.5		7.1	2.8
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay		25.9	7.2		24.4	6.3		8.9	1.5		7.1	2.8
LOS		C	A		C	A		A	A		A	A

Existing PM Field Timing.syn
 40: Parkside Ave & Linden

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		19.3			13.3			7.2			6.7	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		51	0		26	0		87	0		24	0
Queue Length 95th (ft)		95	29		56	35		120	24		38	9
Internal Link Dist (ft)		1361			1208			2058			600	
Turn Bay Length (ft)												
Base Capacity (vph)		519	503		538	527		1880	1061		2037	993
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		0.23	0.13		0.12	0.19		0.36	0.19		0.11	0.02

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.36
 Intersection Signal Delay: 9.3 Intersection LOS: A
 Intersection Capacity Utilization 45.4% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 40: Parkside Ave & Linden



3 lane AM.syn
2: Parkside Ave & Amherst

3/16/2015

Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	136	159	39	196	202	49	45	618	54	60	308	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80	0		100		0	150		200		0	50
Storage Lanes	1	1		1		0	0		1		2	1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.97			0.99		0.99			0.99		0.98
Frt		0.850			0.971			0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950	0.950	
Satd. Flow (prot)	1770	1583	0	1770	1797	0	1770	3497	0	1770	1770	1583
Flt Permitted	0.379			0.177			0.591			0.624		
Satd. Flow (perm)	706	1539	0	330	1797	0	1095	3497	0	1150	1863	1551
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		61			18			11				
Link Speed (mph)	30				30			30				30
Link Distance (ft)	2675				1099			2138			2100	
Travel Time (s)	60.8				25.0			48.6			47.7	
Confl. Peds. (#/hr)			3	5		5	3			5		5
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)	148	173	42	213	220	53	49	672	59	65	335	513
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	215	0	213	273	0	49	731	0	65	335	513
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12			12			24	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15	9	9	15		9	15		9	15	15	9
Turn Type	pm+pt	Perm		pm+pt	NA		Perm	NA		Perm	Perm	Perm
Protected Phases	3			5	2			6				
Permitted Phases	8	8		2			6			4	4	4
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	6.0	45.0		13.0	45.0		32.0	32.0		39.0	39.0	39.0
Total Split (%)	6.7%	50.0%		14.4%	50.0%		35.6%	35.6%		43.3%	43.3%	43.3%
Maximum Green (s)	2.0	41.0		9.0	41.0		28.0	28.0		35.0	35.0	35.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	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
Lead/Lag	Lead			Lead			Lag	Lag		Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes			Yes	Yes		Yes	Yes	Yes
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)	41.0	41.0		41.0	41.0		28.0	28.0		35.0	35.0	35.0
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.31	0.31		0.39	0.39	0.39

3 lane AM.syn
 2: Parkside Ave & Amherst

3/16/2015

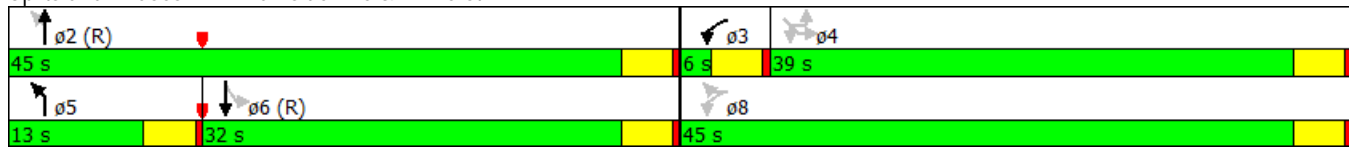


Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
v/c Ratio	0.43	0.29		0.72	0.33		0.14	0.67		0.15	0.46	0.85
Control Delay	20.2	12.1		31.5	16.0		26.2	33.6		19.0	23.1	40.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	20.2	12.1		31.5	16.0		26.2	33.6		19.0	23.1	40.7
LOS	C	B		C	B		C	C		B	C	D
Approach Delay	15.4				22.8			33.2			32.7	
Approach LOS	B				C			C			C	

Intersection Summary



















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 28.5 Intersection LOS: C
 Intersection Capacity Utilization 73.4% ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Parkside Ave & Amherst



3 lane AM.syn
8: Parkside Ave & Jewett Pkwy

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	6	9	37	23	28	48	372	59	25	979	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925			0.957			0.979			0.998	
Flt Protected		0.997			0.979		0.950			0.950		
Satd. Flow (prot)	0	1718	0	0	1745	0	1770	1824	0	1770	1859	0
Flt Permitted		0.988			0.872		0.091			0.495		
Satd. Flow (perm)	0	1702	0	0	1554	0	170	1824	0	922	1859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			24			29			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		951			3114			890			1388	
Travel Time (s)		21.6			70.8			20.2			31.5	
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)	1	7	10	40	25	30	52	404	64	27	1064	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	95	0	52	468	0	27	1081	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	16.0	16.0		16.0	16.0		6.0	64.0		58.0	58.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		7.5%	80.0%		72.5%	72.5%	
Maximum Green (s)	12.0	12.0		12.0	12.0		2.0	60.0		54.0	54.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
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)		12.0			12.0		60.0	60.0		54.0	54.0	
Actuated g/C Ratio		0.15			0.15		0.75	0.75		0.68	0.68	
v/c Ratio		0.07			0.38		0.31	0.34		0.04	0.86	
Control Delay		20.9			28.4		7.4	3.9		4.6	19.4	

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		20.9			28.4		7.4	3.9		4.6	19.4	
LOS		C			C		A	A		A	B	
Approach Delay		20.9			28.4			4.2			19.1	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 15.2
 Intersection Capacity Utilization 70.8%
 Analysis Period (min) 15











Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 8: Parkside Ave & Jewett Pkwy



3 lane AM.syn
5: Parkside Ave & Florence Ave

3/16/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	105	14	492	14	16	994
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984		0.996			
Flt Protected	0.958				0.950	
Satd. Flow (prot)	1756	0	1855	0	1770	1863
Flt Permitted	0.958				0.416	
Satd. Flow (perm)	1756	0	1855	0	775	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	4		3			
Link Speed (mph)	30		30			30
Link Distance (ft)	1918		921			810
Travel Time (s)	43.6		20.9			18.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	114	15	535	15	17	1080
Shared Lane Traffic (%)						
Lane Group Flow (vph)	129	0	550	0	17	1080
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		custom	NA
Protected Phases						
Permitted Phases	6		8		4	4
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	27.0		109.0		109.0	109.0
Total Split (%)	19.9%		80.1%		80.1%	80.1%
Maximum Green (s)	23.0		105.0		105.0	105.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
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)	23.0		105.0		105.0	105.0
Actuated g/C Ratio	0.17		0.77		0.77	0.77
v/c Ratio	0.43		0.38		0.03	0.75
Control Delay	54.1		5.9		3.8	12.6

3 lane AM.syn
 5: Parkside Ave & Florence Ave

3/16/2015



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	54.1		5.9		3.8	12.6
LOS	D		A		A	B
Approach Delay	54.1		5.9			12.5
Approach LOS	D		A			B

Intersection Summary

Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 136
 Offset: 0 (0%), Referenced to phase 6:WBL, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 13.5
 Intersection Capacity Utilization 65.7%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 5: Parkside Ave & Florence Ave













 φ6 (L) 27 s	 φ4 109 s
	 φ8 109 s

Colvin WB LT lane AM.syn

25: Amherst & Colvin

3/16/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	328	29	11	379	68	8	9	5	441	38	564
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	100		150	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98		1.00				0.97
Frt		0.988				0.850		0.972				0.850
Flt Protected	0.950			0.950				0.982			0.956	
Satd. Flow (prot)	1770	1840	0	1770	1863	1583	0	1778	0	0	1781	1583
Flt Permitted	0.205			0.532				0.875			0.725	
Satd. Flow (perm)	381	1840	0	991	1863	1556	0	1583	0	0	1350	1543
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		9						5				332
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			2100			523			2529	
Travel Time (s)		24.4			47.7			11.9			57.5	
Confl. Peds. (#/hr)	5					5	3					3
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)	151	357	32	12	412	74	9	10	5	479	41	613
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	389	0	12	412	74	0	24	0	0	520	613
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	7	4			8			2		1	6	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		8	8	8	2	2		1	6	6
Switch Phase												
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)	8.0	20.0		20.0	20.0	20.0	20.0	20.0		8.0	20.0	20.0
Total Split (s)	8.0	29.0		21.0	21.0	21.0	23.0	23.0		8.0	31.0	31.0
Total Split (%)	13.3%	48.3%		35.0%	35.0%	35.0%	38.3%	38.3%		13.3%	51.7%	51.7%
Maximum Green (s)	4.0	25.0		17.0	17.0	17.0	19.0	19.0		4.0	27.0	27.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
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	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)	21.6	21.6		15.5	15.5	15.5		27.3			27.3	27.3
Actuated g/C Ratio	0.38	0.38		0.27	0.27	0.27		0.48			0.48	0.48
v/c Ratio	0.62	0.55		0.04	0.81	0.17		0.03			0.80	0.67
Control Delay	25.0	16.5		16.3	35.0	17.6		8.2			27.1	10.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	25.0	16.5		16.3	35.0	17.6		8.2			27.1	10.1
LOS	C	B		B	C	B		A			C	B
Approach Delay		18.9			32.0			8.2			17.9	
Approach LOS		B			C			A			B	
Queue Length 50th (ft)	33	97		3	136	20		4			159	65
Queue Length 95th (ft)	#77	166		14	#265	48		14			#332	176
Internal Link Dist (ft)		994			2020			443			2449	
Turn Bay Length (ft)	130			100		150						
Base Capacity (vph)	243	820		298	561	468		760			646	911
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	0.62	0.47		0.04	0.73	0.16		0.03			0.80	0.67

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 21.2

Intersection Capacity Utilization 70.7%

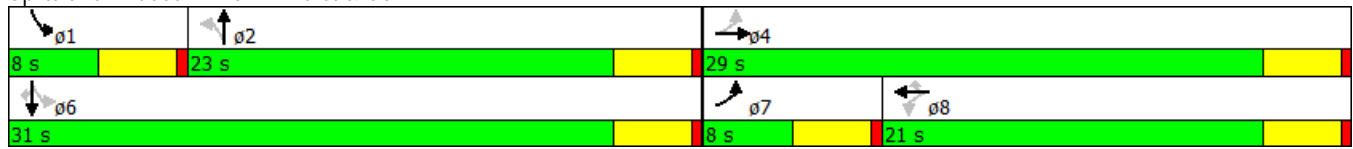
Analysis Period (min) 15

Intersection LOS: C

ICU Level of Service C






















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

Splits and Phases: 25: Amherst & Colvin



3 lane PM.syn
2: Parkside Ave & Amherst

3/16/2015

												
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	73	211	46	292	607	58	18	167	29	130	277	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80	0		100		0	150		200		0	50
Storage Lanes	1	1		1		0	1		1		2	1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98		0.99	1.00		1.00			0.99		0.97
Frt		0.850			0.987			0.978				0.850
Flt Protected	0.950			0.950			0.950			0.950	0.950	
Satd. Flow (prot)	1770	1583	0	1770	1833	0	1770	3461	0	1770	1770	1583
Flt Permitted	0.577			0.560			0.255			0.950		
Satd. Flow (perm)	1075	1556	0	1034	1833	0	474	3461	0	1759	1863	1530
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		158			8			28				
Link Speed (mph)	30				30			30			30	
Link Distance (ft)	2675				1099			2138			2100	
Travel Time (s)	60.8				25.0			48.6			47.7	
Confl. Peds. (#/hr)			3	5		5	3			5		5
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)	79	229	50	317	660	63	20	182	32	141	301	192
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	279	0	317	723	0	20	214	0	141	301	192
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12			12			24	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15	9	9	15		9	15		9	15	15	9
Turn Type	pm+pt	Perm		pm+pt	NA		Perm	NA		Prot	Perm	Perm
Protected Phases	3			5	2			6		7		
Permitted Phases	8	8		2			6				4	4
Minimum Split (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	8.0	18.0		10.0	53.0		43.0	43.0		19.0	29.0	29.0
Total Split (%)	8.9%	20.0%		11.1%	58.9%		47.8%	47.8%		21.1%	32.2%	32.2%
Maximum Green (s)	4.0	14.0		6.0	49.0		39.0	39.0		15.0	25.0	25.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	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
Lead/Lag	Lead	Lag		Lead			Lag	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	Yes
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)	18.0	14.0		49.0	49.0		39.0	39.0		15.0	25.0	25.0
Actuated g/C Ratio	0.20	0.16		0.54	0.54		0.43	0.43		0.17	0.28	0.28

3 lane PM.syn
 2: Parkside Ave & Amherst

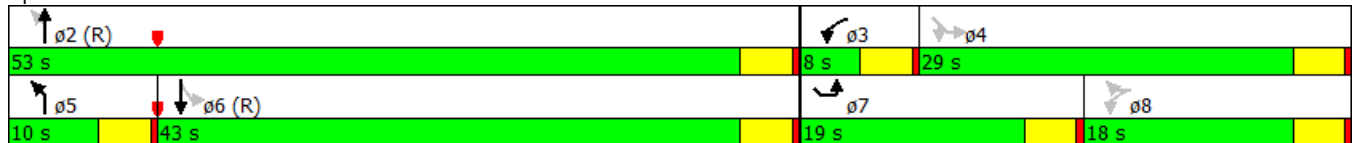
3/16/2015

	↙	↖	↗	↘	↑	↙	↘	↓	↙	↘	↙	↘
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
v/c Ratio	0.32	0.74		0.52	0.72		0.10	0.14		0.48	0.58	0.45
Control Delay	25.2	29.4		15.4	20.4		31.1	27.7		40.1	33.4	31.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	25.2	29.4		15.4	20.4		31.1	27.7		40.1	33.4	31.0
LOS	C	C		B	C		C	C		D	C	C
Approach Delay	28.5				18.9			28.0			34.1	
Approach LOS	C				B			C			C	
Queue Length 50th (ft)	29	64		94	287		12	61		73	147	90
Queue Length 95th (ft)	60	#181		148	428		m28	95		133	232	154
Internal Link Dist (ft)	2595				1019			2058			2020	
Turn Bay Length (ft)	80			100			150					50
Base Capacity (vph)	245	375		612	1001		205	1515		295	517	425
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	0.32	0.74		0.52	0.72		0.10	0.14		0.48	0.58	0.45

Intersection Summary



















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 25.6
 Intersection Capacity Utilization 80.9%
 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: 2: Parkside Ave & Amherst



3 lane PM.syn
8: Parkside Ave & Jewett Pkwy

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	9	38	41	13	34	69	1107	77	18	569	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.923			0.948			0.990			0.996	
Flt Protected		0.986			0.977		0.950			0.950		
Satd. Flow (prot)	0	1695	0	0	1725	0	1770	1844	0	1770	1855	0
Flt Permitted		0.922			0.861		0.328			0.084		
Satd. Flow (perm)	0	1585	0	0	1520	0	611	1844	0	156	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			27			11			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		951			3114			890			1388	
Travel Time (s)		21.6			70.8			20.2			31.5	
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)	21	10	41	45	14	37	75	1203	84	20	618	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	96	0	75	1287	0	20	634	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	18.0	18.0		18.0	18.0		8.0	80.0		72.0	72.0	
Total Split (%)	18.4%	18.4%		18.4%	18.4%		8.2%	81.6%		73.5%	73.5%	
Maximum Green (s)	14.0	14.0		14.0	14.0		4.0	76.0		68.0	68.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
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)		14.0			14.0		76.0	76.0		68.0	68.0	
Actuated g/C Ratio		0.14			0.14		0.78	0.78		0.69	0.69	
v/c Ratio		0.28			0.40		0.14	0.90		0.19	0.49	
Control Delay		22.5			33.3		3.2	18.8		10.1	8.5	

3 lane PM.syn
 8: Parkside Ave & Jewett Pkwy

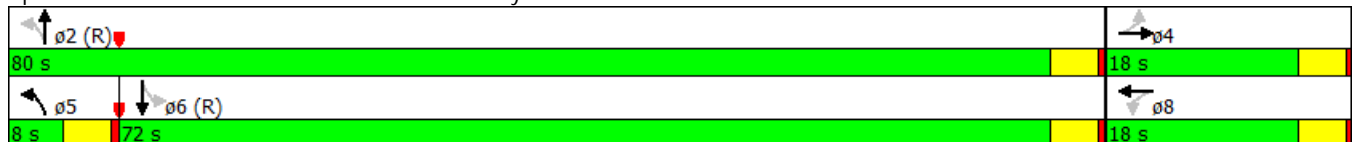
3/16/2015

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		22.5			33.3		3.2	18.8		10.1	8.5	
LOS		C			C		A	B		B	A	
Approach Delay		22.5			33.3			18.0			8.6	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		17			39		9	468		4	160	
Queue Length 95th (ft)		58			89		18	#999		16	233	
Internal Link Dist (ft)		871			3034			810			1308	
Turn Bay Length (ft)							75			75		
Base Capacity (vph)		261			240		521	1432		108	1288	
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		0.28			0.40		0.14	0.90		0.19	0.49	

Intersection Summary











Area Type: Other
 Cycle Length: 98
 Actuated Cycle Length: 98
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 16.0
 Intersection Capacity Utilization 77.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: Parkside Ave & Jewett Pkwy



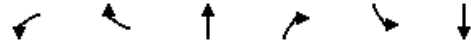
3 lane PM.syn
5: Parkside Ave & Florence Ave

3/16/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	82	25	1291	54	11	563
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.969		0.995			
Flt Protected	0.963				0.950	
Satd. Flow (prot)	1738	0	1853	0	1770	1863
Flt Permitted	0.963				0.056	
Satd. Flow (perm)	1738	0	1853	0	104	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	9		8			
Link Speed (mph)	30		30			30
Link Distance (ft)	1918		921			810
Travel Time (s)	43.6		20.9			18.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	27	1403	59	12	612
Shared Lane Traffic (%)						
Lane Group Flow (vph)	116	0	1462	0	12	612
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Perm		NA		custom	NA
Protected Phases						
Permitted Phases	6		8		4	4
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	16.0		120.0		120.0	120.0
Total Split (%)	11.8%		88.2%		88.2%	88.2%
Maximum Green (s)	12.0		116.0		116.0	116.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.0		4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
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)	12.0		116.0		116.0	116.0
Actuated g/C Ratio	0.09		0.85		0.85	0.85
v/c Ratio	0.72		0.92		0.14	0.39
Control Delay	80.1		19.0		5.2	2.9

3 lane PM.syn
 5: Parkside Ave & Florence Ave

3/16/2015



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	80.1		19.0		5.2	2.9
LOS	F		B		A	A
Approach Delay	80.1		19.0			3.0
Approach LOS	F		B			A
Queue Length 50th (ft)	94		672		1	89
Queue Length 95th (ft)	#186		#1496		6	119
Internal Link Dist (ft)	1838		841			730
Turn Bay Length (ft)					75	
Base Capacity (vph)	161		1581		88	1589
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	0.72		0.92		0.14	0.39

Intersection Summary

Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 136
 Offset: 0 (0%), Referenced to phase 6:WBL, Start of Green
 Natural Cycle: 100
 Control Type: Pretimed
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 17.7
 Intersection Capacity Utilization 84.0%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.





















Splits and Phases: 5: Parkside Ave & Florence Ave












 ø6 (R) 16 s	 ø4 120 s
	 ø8 120 s

Colvin WB LT lane PM.syn

25: Amherst & Colvin

3/16/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	408	424	8	4	331	277	6	53	4	256	9	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	100		150	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00		0.99		1.00			1.00	0.98
Frt		0.997				0.850		0.992				0.850
Flt Protected	0.950			0.950				0.995			0.954	
Satd. Flow (prot)	1770	1856	0	1770	1863	1583	0	1837	0	0	1777	1583
Flt Permitted	0.282			0.494				0.967			0.683	
Satd. Flow (perm)	525	1856	0	917	1863	1562	0	1785	0	0	1268	1549
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		3						4				305
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1074			2100			523			2529	
Travel Time (s)		24.4			47.7			11.9			57.5	
Confl. Peds. (#/hr)	1		3	3		1	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	443	461	9	4	360	301	7	58	4	278	10	305
Shared Lane Traffic (%)												
Lane Group Flow (vph)	443	470	0	4	360	301	0	69	0	0	288	305
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	7	4			8			2		1	6	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		6
Detector Phase	7	4		8	8	8	2	2		1	6	6
Switch Phase												
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)	8.0	20.0		20.0	20.0	20.0	20.0	20.0		8.0	20.0	20.0
Total Split (s)	15.0	43.0		28.0	28.0	28.0	14.0	14.0		8.0	22.0	22.0
Total Split (%)	23.1%	66.2%		43.1%	43.1%	43.1%	21.5%	21.5%		12.3%	33.8%	33.8%
Maximum Green (s)	11.0	39.0		24.0	24.0	24.0	10.0	10.0		4.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
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	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)	32.4	32.4		17.3	17.3	17.3		18.1			18.1	18.1
Actuated g/C Ratio	0.55	0.55		0.30	0.30	0.30		0.31			0.31	0.31
v/c Ratio	0.84	0.46		0.01	0.66	0.65		0.12			0.73	0.44
Control Delay	25.7	9.2		13.5	23.8	24.9		16.5			34.1	5.0
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	25.7	9.2		13.5	23.8	24.9		16.5			34.1	5.0
LOS	C	A		B	C	C		B			C	A
Approach Delay		17.2			24.3			16.5			19.2	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	82	87		1	109	91		16			91	0
Queue Length 95th (ft)	#193	142		6	182	160		47			#229	52
Internal Link Dist (ft)		994			2020			443			2449	
Turn Bay Length (ft)	130			100		150						
Base Capacity (vph)	525	1245		378	768	644		555			392	689
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	0.84	0.38		0.01	0.47	0.47		0.12			0.73	0.44

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 58.6

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 19.8

Intersection Capacity Utilization 71.3%

Analysis Period (min) 15

Intersection LOS: B

ICU Level of Service C

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

Splits and Phases: 25: Amherst & Colvin

