

Lanes, Volumes, Timings
2: Meadow Ave. & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	160		0	300		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.926			0.975			0.972			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1725	0	1770	1816	0	1770	3440	0	1770	3476	0
Flt Permitted	0.492			0.368			0.174			0.174		
Satd. Flow (perm)	916	1725	0	685	1816	0	324	3440	0	324	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			14			35			18	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		257			254			436			1546	
Travel Time (s)		5.8			5.8			9.9			35.1	
Volume (vph)	108	197	193	248	230	45	222	800	184	47	775	109
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)	117	214	210	270	250	49	241	870	200	51	842	118
Lane Group Flow (vph)	117	424	0	270	299	0	241	1070	0	51	960	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	44.0	44.0	0.0	44.0	44.0	0.0	14.0	37.0	0.0	9.0	32.0	0.0
Total Split (%)	48.9%	48.9%	0.0%	48.9%	48.9%	0.0%	15.6%	41.1%	0.0%	10.0%	35.6%	0.0%
Maximum Green (s)	39.0	39.0		39.0	39.0		9.0	32.0		4.0	27.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag							Lag	Lag		Lead	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	None	None		None	None		None	C-Min		None	C-Min	
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)	37.5	37.5		37.5	37.5		39.1	39.1		29.8	29.8	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.43	0.43		0.33	0.33	
v/c Ratio	0.31	0.56		0.95	0.39		0.77	0.71		0.26	0.82	
Control Delay	18.8	18.5		56.7	18.2		42.9	20.4		14.6	24.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.8	18.5		56.7	18.2		42.9	20.4		14.6	24.9	
LOS	B	B		E	B		D	C		B	C	

Lanes, Volumes, Timings
 2: Meadow Ave. & Union Ave.

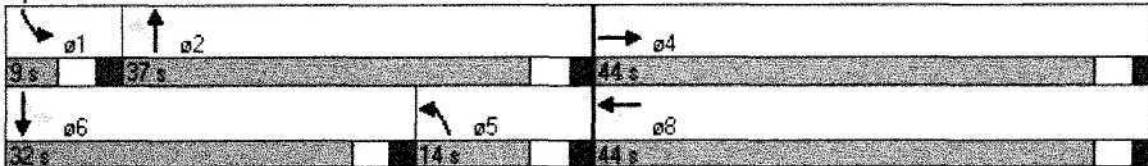
1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.5			36.5			24.5			24.4	
Approach LOS		B			D			C			C	
Queue Length 50th (ft)	41	139		136	103		76	193		13	264	
Queue Length 95th (ft)	82	226		#293	166		m#196	266		m22	#368	
Internal Link Dist (ft)		177			174			356			1466	
Turn Bay Length (ft)	140			160			300			160		
Base Capacity (vph)	407	806		304	815		311	1513		195	1164	
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	0.29	0.53		0.89	0.37		0.77	0.71		0.26	0.82	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 18 (20%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 25.5
 Intersection LOS: C
 Intersection Capacity Utilization 89.1%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Meadow Ave. & Union Ave.



Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		100	300		0	180		0
Storage Lanes	0		1	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt			0.850		0.901			0.998			0.983	
Flt Protected		0.953			0.990		0.950			0.950		
Satd. Flow (prot)	0	1775	1583	0	1662	0	1770	3532	0	1770	3479	0
Flt Permitted		0.715			0.942		0.093			0.181		
Satd. Flow (perm)	0	1332	1583	0	1581	0	173	3532	0	337	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			58		14			3			30	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		173			202			430			724	
Travel Time (s)		3.9			4.6			9.8			16.5	
Volume (vph)	255	4	103	4	1	13	63	1088	15	18	1301	163
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)	277	4	112	4	1	14	68	1183	16	20	1414	177
Lane Group Flow (vph)	0	281	112	0	19	0	68	1199	0	20	1591	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	28.0	28.0	28.0	28.0	28.0	0.0	62.0	62.0	0.0	62.0	62.0	0.0
Total Split (%)	31.1%	31.1%	31.1%	31.1%	31.1%	0.0%	68.9%	68.9%	0.0%	68.9%	68.9%	0.0%
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		57.0	57.0		57.0	57.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		24.0	24.0		24.0		58.0	58.0		58.0	58.0	
Actuated g/C Ratio		0.27	0.27		0.27		0.64	0.64		0.64	0.64	
v/c Ratio		0.79	0.24		0.04		0.61	0.53		0.09	0.71	
Control Delay		48.7	15.2		14.4		38.4	9.6		3.6	6.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		48.7	15.2		14.4		38.4	9.6		3.6	6.2	
LOS		D	B		B		D	A		A	A	
Approach Delay		39.2			14.4			11.2			6.2	
Approach LOS		D			B			B			A	
Queue Length 50th (ft)		148	23		2		20	172		2	148	
Queue Length 95th (ft)		#278	65		19		#100	221		m4	m173	
Internal Link Dist (ft)		93			122			350			644	
Turn Bay Length (ft)							300			180		

Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		355	465		432		111	2277		217	2253	
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		0.79	0.24		0.04		0.61	0.53		0.09	0.71	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 12.1
 Intersection Capacity Utilization 74.0%
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Newburgh Mall (North) Driveway & Union Ave.

↑ ø2 62 s	→ ø4 28 s
↓ ø6 62 s	← ø8 28 s

Lanes, Volumes, Timings
 9: Union Ave. & ROUTE 52

1/20/2006

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		0	250		0	0		0	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.981			0.984				0.850			0.850
Flt Protected	0.950			0.950				0.988			0.990	
Satd. Flow (prot)	1770	1827	0	1770	1833	0	0	1840	1583	0	1844	1583
Flt Permitted	0.156			0.263				0.714			0.754	
Satd. Flow (perm)	291	1827	0	490	1833	0	0	1330	1583	0	1405	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			9				209			38
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1546			567			646			681	
Travel Time (s)		35.1			12.9			14.7			15.5	
Volume (vph)	245	510	75	67	564	69	65	203	192	56	209	35
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)	266	554	82	73	613	75	71	221	209	61	227	38
Lane Group Flow (vph)	266	636	0	73	688	0	0	292	209	0	288	38
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6			4		4	8		8
Detector Phases	5	2		6	6		4	4	4	8	8	8
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	59.0	0.0	44.0	44.0	0.0	31.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	16.7%	65.6%	0.0%	48.9%	48.9%	0.0%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%
Maximum Green (s)	10.0	54.0		39.0	39.0		26.0	26.0	26.0	26.0	26.0	26.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag			Lead	Lead							
Lead-Lag Optimize?	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	C-Min		C-Min	C-Min		None	None	None	None	None	None
Walk Time (s)		5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	0
Act Effct Green (s)	58.3	58.3		44.0	44.0			23.7	23.7		23.7	23.7
Actuated g/C Ratio	0.65	0.65		0.49	0.49			0.26	0.26		0.26	0.26
v/c Ratio	0.74	0.53		0.30	0.76			0.83	0.37		0.78	0.09
Control Delay	25.3	2.6		20.4	27.1			42.8	5.2		39.2	8.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	25.3	2.6		20.4	27.1			42.8	5.2		39.2	8.1
LOS	C	A		C	C			D	A		D	A

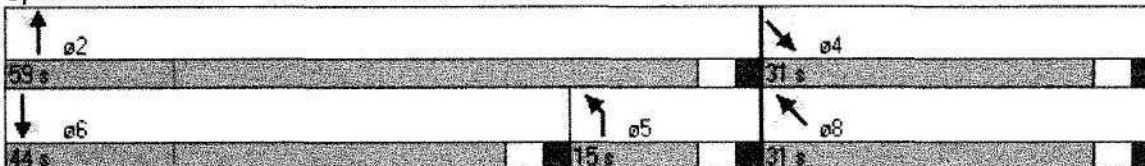
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Approach Delay		9.3			26.5			27.1			35.6	
Approach LOS		A			C			C			D	
Queue Length 50th (ft)	75	17		26	323			151	0		146	0
Queue Length 95th (ft) m#158		21		64	#542			#267	49		236	22
Internal Link Dist (ft)		1466			487			566			601	
Turn Bay Length (ft)	260			250								100
Base Capacity (vph)	372	1189		240	901			399	621		422	502
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	0.72	0.53		0.30	0.76			0.73	0.34		0.68	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 52 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 21.6
 Intersection Capacity Utilization 91.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service F

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: 9: Union Ave. & ROUTE 52



	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↕		↘	↓↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.983			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3479	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3479	0	1770	3539
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	304		724			436
Travel Time (s)	6.9		16.5			9.9
Volume (vph)	87	89	1201	155	91	1125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	95	97	1305	168	99	1223
Lane Group Flow (vph)	95	97	1473	0	99	1223
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 60.0% ICU Level of Service B
 Analysis Period (min) 15

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	160		0	300		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.926			0.975			0.972			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1725	0	1770	1816	0	1770	3440	0	1770	3472	0
Flt Permitted	0.478			0.352			0.174			0.174		
Satd. Flow (perm)	890	1725	0	656	1816	0	324	3440	0	324	3472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			14			34				18
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		257			254			436				1546
Travel Time (s)		5.8			5.8			9.9				35.1
Volume (vph)	114	209	205	263	244	48	235	848	195	50	822	116
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)	124	227	223	286	265	52	255	922	212	54	893	126
Lane Group Flow (vph)	124	450	0	286	317	0	255	1134	0	54	1019	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	45.0	45.0	0.0	45.0	45.0	0.0	13.0	36.0	0.0	9.0	32.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	14.4%	40.0%	0.0%	10.0%	35.6%	0.0%
Maximum Green (s)	40.0	40.0		40.0	40.0		8.0	31.0		4.0	27.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag							Lag	Lag		Lead	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	None	None		None	None		None	C-Min		None	C-Min	
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)	40.2	40.2		40.2	40.2		34.6	34.6		28.7	28.7	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.38	0.38		0.32	0.32	
v/c Ratio	0.31	0.56		0.98	0.39		0.94	0.84		0.29	0.91	
Control Delay	18.3	17.9		69.4	17.3		68.0	26.5		14.5	29.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.3	17.9		69.4	17.3		68.0	26.5		14.5	29.8	
LOS	B	B		E	B		E	C		B	C	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	350			0
Storage Lanes	1	1	1			1
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected			0.950			
Satd. Flow (prot)	1863	1583	1770	3539	3539	1583
Flt Permitted			0.950			
Satd. Flow (perm)	1863	1583	1770	3539	3539	1583
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	261			371	430	
Travel Time (s)	5.9			8.4	9.8	
Volume (vph)	0	345	487	1236	1166	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	375	529	1343	1267	43
Lane Group Flow (vph)	0	375	529	1343	1267	43
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 67.2%

ICU Level of Service C

Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		100	300		0	180		0
Storage Lanes	0		1	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.899			0.998			0.980	
Flt Protected		0.953			0.990		0.950			0.950		
Satd. Flow (prot)	0	1775	1583	0	1658	0	1770	3532	0	1770	3468	0
Flt Permitted		0.715			0.947		0.123			0.149		
Satd. Flow (perm)	0	1332	1583	0	1586	0	229	3532	0	278	3468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78		15			3				35
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		173			202			430				724
Travel Time (s)		3.9			4.6			9.8				16.5
Volume (vph)	270	4	109	4	1	14	67	1153	16	19	1093	173
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)	293	4	118	4	1	15	73	1253	17	21	1188	188
Lane Group Flow (vph)	0	297	118	0	20	0	73	1270	0	21	1376	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2				6
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	32.0	32.0	32.0	32.0	32.0	0.0	58.0	58.0	0.0	58.0	58.0	0.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	35.6%	0.0%	64.4%	64.4%	0.0%	64.4%	64.4%	0.0%
Maximum Green (s)	27.0	27.0	27.0	27.0	27.0		53.0	53.0		53.0	53.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		28.0	28.0		28.0		54.0	54.0		54.0	54.0	
Actuated g/C Ratio		0.31	0.31		0.31		0.60	0.60		0.60	0.60	
v/c Ratio		0.72	0.22		0.04		0.53	0.60		0.13	0.66	
Control Delay		39.0	10.5		12.6		28.5	12.7		6.6	6.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		39.0	10.5		12.6		28.5	12.7		6.6	6.9	
LOS		D	B		B		C	B		A	A	
Approach Delay		30.9			12.6			13.6			6.9	
Approach LOS		C			B			B			A	
Queue Length 50th (ft)		149	16		2		22	216		3	133	
Queue Length 95th (ft)		#264	55		18		#92	278		m4	m167	
Internal Link Dist (ft)		93			122			350			644	
Turn Bay Length (ft)							300			180		

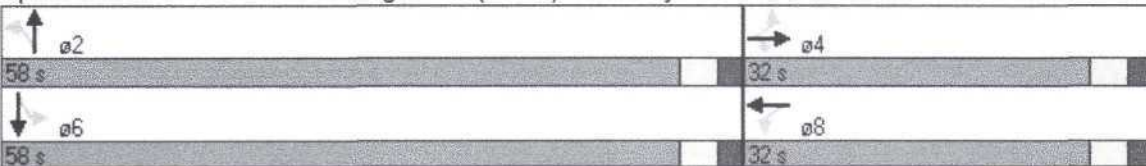






















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		414	546		504		137	2120		167	2095	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.72	0.22		0.04		0.53	0.60		0.13	0.66	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 6 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 12.9
 Intersection LOS: B
 Intersection Capacity Utilization 74.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Newburgh Mall (North) Driveway & Union Ave.



												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		0	250		0	0		0	0		100
Storage Lanes	1		0	1		0	0		1	0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.984				0.850			0.850
Flt Protected	0.950			0.950				0.988			0.990	
Satd. Flow (prot)	1770	1827	0	1770	1833	0	0	1840	1583	0	1844	1583
Flt Permitted	0.123			0.235				0.673			0.714	
Satd. Flow (perm)	229	1827	0	438	1833	0	0	1254	1583	0	1330	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			9				222			37
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1546			567			646			681	
Travel Time (s)		35.1			12.9			14.7			15.5	
Volume (vph)	260	541	80	71	598	73	69	215	204	59	222	37
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)	283	588	87	77	650	79	75	234	222	64	241	40
Lane Group Flow (vph)	283	675	0	77	729	0	0	309	222	0	305	40
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6			4		4	8		8
Detector Phases	5	2		6	6		4	4	4	8	8	8
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	59.0	0.0	44.0	44.0	0.0	31.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	16.7%	65.6%	0.0%	48.9%	48.9%	0.0%	34.4%	34.4%	34.4%	34.4%	34.4%	34.4%
Maximum Green (s)	10.0	54.0		39.0	39.0		26.0	26.0	26.0	26.0	26.0	26.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag			Lead	Lead							
Lead-Lag Optimize?	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	C-Min		C-Min	C-Min		None	None	None	None	None	None
Walk Time (s)		5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	0
Act Effct Green (s)	57.0	57.0		41.8	41.8			25.0	25.0		25.0	25.0
Actuated g/C Ratio	0.63	0.63		0.46	0.46			0.28	0.28		0.28	0.28
v/c Ratio	0.84	0.58		0.38	0.85			0.89	0.37		0.82	0.09
Control Delay	36.2	2.9		23.8	33.6			50.1	5.2		44.2	9.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	36.2	2.9		23.8	33.6			50.1	5.2		44.2	9.0
LOS	D	A		C	C			D	A		D	A














Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Approach Delay		12.8			32.7			31.3			40.1	
Approach LOS		B			C			C			D	
Queue Length 50th (ft)	104	18		29	365			162	0		157	1
Queue Length 95th (ft) m#155		m22		71	#596			#305	50		#285	24
Internal Link Dist (ft)		1466			487			566			601	
Turn Bay Length (ft)	260			250								100
Base Capacity (vph)	337	1162		204	856			376	630		399	501
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	0.58		0.38	0.85			0.82	0.35		0.76	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 54 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 26.2 Intersection LOS: C
 Intersection Capacity Utilization 96.4% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: Union Ave. & ROUTE 52

↑ ø2 59 s			↘ ø4 31 s
		↗ ø5 15 s	↖ ø8 31 s
↓ ø6 44 s			

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.983			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3479	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3479	0	1770	3539
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	304		724			436
Travel Time (s)	6.9		16.5			9.9
Volume (vph)	92	94	1273	164	96	1193
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	100	102	1384	178	104	1297
Lane Group Flow (vph)	100	102	1562	0	104	1297
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 62.8% ICU Level of Service B
 Analysis Period (min) 15

Lanes, Volumes, Timings
2: Meadow Ave. & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	160		0	300		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.923			0.977			0.974			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1719	0	1770	1820	0	1770	3447	0	1770	3483	0
Flt Permitted	0.446			0.306			0.167			0.167		
Satd. Flow (perm)	831	1719	0	570	1820	0	311	3447	0	311	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		75			13			31			15	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		257			254			436			1546	
Travel Time (s)		5.8			5.8			9.9			35.1	
Volume (vph)	114	221	230	263	269	48	248	936	195	50	947	116
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)	124	240	250	286	292	52	270	1017	212	54	1029	126
Lane Group Flow (vph)	124	490	0	286	344	0	270	1229	0	54	1155	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	44.0	44.0	0.0	44.0	44.0	0.0	13.0	37.0	0.0	9.0	33.0	0.0
Total Split (%)	48.9%	48.9%	0.0%	48.9%	48.9%	0.0%	14.4%	41.1%	0.0%	10.0%	36.7%	0.0%
Maximum Green (s)	39.0	39.0		39.0	39.0		8.0	32.0		4.0	28.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag							Lag	Lag		Lead	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	None	None		None	None		None	C-Min		None	C-Min	
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)	40.0	40.0		40.0	40.0		34.8	34.8		29.0	29.0	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.39	0.39		0.32	0.32	
v/c Ratio	0.34	0.61		1.13	0.42		1.02	0.91		0.30	1.02	
Control Delay	19.6	19.7		123.9	18.4		73.4	22.1		13.2	46.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	1.5		0.0	0.0	
Total Delay	19.6	19.7		123.9	18.4		73.4	23.6		13.2	46.2	
LOS	B	B		F	B		E	C		B	D	

Lanes, Volumes, Timings
 2: Meadow Ave. & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		19.7			66.3			32.6			44.7	
Approach LOS		B			E			C			D	
Queue Length 50th (ft)	45	173		~190	124		~92	239		12	~325	
Queue Length 95th (ft)	89	276		#346	195		m#199	#480		m18	m#403	
Internal Link Dist (ft)		177			174			356			1466	
Turn Bay Length (ft)	140			160			300			160		
Base Capacity (vph)	369	806		253	816		266	1352		181	1132	
Starvation Cap Reductn	0	0		0	0		0	41		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	0.34	0.61		1.13	0.42		1.02	0.94		0.30	1.02	

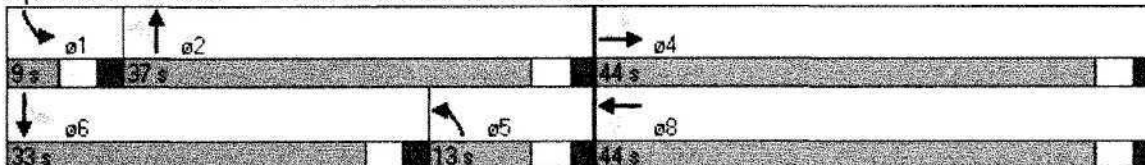
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 20 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 39.7
 Intersection Capacity Utilization 99.9%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service F

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

Splits and Phases: 2: Meadow Ave. & Union Ave.



Lanes, Volumes, Timings

3: Newburgh Mall (South) Driveway & Union Ave.

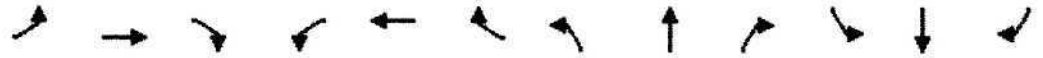
1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	350		250	150		0
Storage Lanes	0		1	2		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted				0.713			0.100			0.203		
Satd. Flow (perm)	0	1863	1583	2577	1863	1583	186	3539	1583	378	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			375			82			739			43
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		261			177			371				430
Travel Time (s)		5.9			4.0			8.4				9.8
Volume (vph)	0	63	345	552	63	75	487	1236	740	75	1279	40
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	68	375	600	68	82	529	1343	804	82	1390	43
Lane Group Flow (vph)	0	68	375	600	68	82	529	1343	804	82	1390	43
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	Perm		Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	26.0	66.0	66.0	40.0	40.0	40.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	28.9%	73.3%	73.3%	44.4%	44.4%	44.4%
Maximum Green (s)	19.0	19.0	19.0	19.0	19.0	19.0	21.0	61.0	61.0	35.0	35.0	35.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)		20.0	20.0	20.0	20.0	20.0	62.0	62.0	62.0	36.0	36.0	36.0
Actuated g/C Ratio		0.22	0.22	0.22	0.22	0.22	0.69	0.69	0.69	0.40	0.40	0.40
v/c Ratio		0.16	0.58	1.05	0.16	0.20	1.03	0.55	0.61	0.54	0.98	0.07
Control Delay		29.6	7.4	86.3	29.6	8.2	73.2	8.1	2.9	27.1	36.7	3.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0
Total Delay		29.6	7.4	86.3	29.6	8.2	73.2	8.1	2.9	27.1	47.1	3.2
LOS		C	A	F	C	A	E	A	A	C	D	A
Approach Delay		10.8			72.6			19.4			44.7	
Approach LOS		B			E			B			D	
Queue Length 50th (ft)		31	0	~193	31	0	~273	174	10	31	297	2
Queue Length 95th (ft)		67	71	#297	67	36	#471	222	45	m48	#548	m3
Internal Link Dist (ft)		181			97			291			350	
Turn Bay Length (ft)							350		250	150		

Lanes, Volumes, Timings

3: Newburgh Mall (South) Driveway & Union Ave.

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		414	643	573	414	416	515	2438	1320	151	1416	659
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	58	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.16	0.58	1.05	0.16	0.20	1.03	0.55	0.61	0.54	1.02	0.07

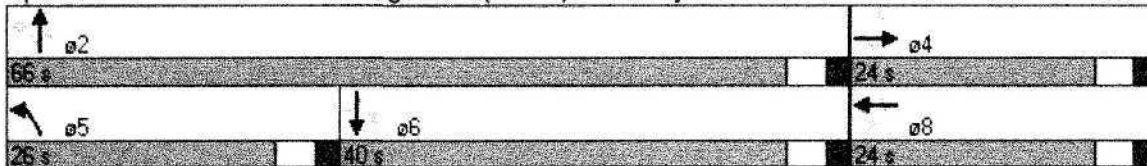
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 30 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 33.2
 Intersection Capacity Utilization 98.1%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service F

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

Splits and Phases: 3: Newburgh Mall (South) Driveway & Union Ave.



Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		100	200		0	180		0
Storage Lanes	0		1	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.899			0.998			0.982	
Flt Protected		0.953			0.990		0.950			0.950		
Satd. Flow (prot)	0	1775	1583	0	1658	0	1770	3532	0	1770	3476	0
Flt Permitted		0.715			0.944		0.092			0.139		
Satd. Flow (perm)	0	1332	1583	0	1581	0	171	3532	0	259	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			58		15			3			32	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		173			202			430			724	
Travel Time (s)		3.9			4.6			9.8			16.5	
Volume (vph)	270	4	109	4	1	14	67	1229	16	19	1281	173
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)	293	4	118	4	1	15	73	1336	17	21	1392	188
Lane Group Flow (vph)	0	297	118	0	20	0	73	1353	0	21	1580	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	29.0	29.0	29.0	29.0	29.0	0.0	61.0	61.0	0.0	61.0	61.0	0.0
Total Split (%)	32.2%	32.2%	32.2%	32.2%	32.2%	0.0%	67.8%	67.8%	0.0%	67.8%	67.8%	0.0%
Maximum Green (s)	24.0	24.0	24.0	24.0	24.0		56.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		25.0	25.0		25.0		57.0	57.0		57.0	57.0	
Actuated g/C Ratio		0.28	0.28		0.28		0.63	0.63		0.63	0.63	
v/c Ratio		0.80	0.24		0.04		0.68	0.60		0.13	0.71	
Control Delay		48.6	15.2		13.8		37.3	5.0		3.6	4.7	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.2	
Total Delay		48.6	15.2		13.8		37.3	5.0		3.6	4.9	
LOS		D	B		B		D	A		A	A	
Approach Delay		39.1			13.8			6.7			4.9	
Approach LOS		D			B			A			A	
Queue Length 50th (ft)		157	26		2		6	58		2	82	
Queue Length 95th (ft)		#290	68		19		m#95	77		m3	92	
Internal Link Dist (ft)		93			122			350			644	
Turn Bay Length (ft)							200			180		

Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		370	482		450		108	2238		164	2213	
Starvation Cap Reductn		0	0		0		0	47		0	0	
Spillback Cap Reductn		0	2		0		0	0		0	145	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.80	0.25		0.04		0.68	0.62		0.13	0.76	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 9.8
 Intersection Capacity Utilization 77.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service D





















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: 5: Newburgh Mall (North) Driveway & Union Ave.

↑ ø2 61 s	→ ø4 23 s
↓ ø6 61 s	← ø8 23 s

Lanes, Volumes, Timings
 9: Union Ave. & ROUTE 52

1/20/2006

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		0	250		0	0		0	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.986				0.850			0.850
Flt Protected	0.950			0.950				0.989			0.991	
Satd. Flow (prot)	1770	1831	0	1770	1837	0	0	1842	1583	0	1846	1583
Flt Permitted	0.093			0.164				0.632			0.700	
Satd. Flow (perm)	173	1831	0	305	1837	0	0	1177	1583	0	1304	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			7				249			80
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1546			567			646			681	
Travel Time (s)		35.1			12.9			14.7			15.5	
Volume (vph)	272	616	80	96	698	73	69	240	229	59	259	87
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)	296	670	87	104	759	79	75	261	249	64	282	95
Lane Group Flow (vph)	296	757	0	104	838	0	0	336	249	0	346	95
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6			4		4	8		8
Detector Phases	5	2		6	6		4	4	4	8	8	8
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	15.0	58.0	0.0	43.0	43.0	0.0	32.0	32.0	32.0	32.0	32.0	32.0
Total Split (%)	16.7%	64.4%	0.0%	47.8%	47.8%	0.0%	35.6%	35.6%	35.6%	35.6%	35.6%	35.6%
Maximum Green (s)	10.0	53.0		38.0	38.0		27.0	27.0	27.0	27.0	27.0	27.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag			Lead	Lead							
Lead-Lag Optimize?	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	C-Min		C-Min	C-Min		None	None	None	None	None	None
Walk Time (s)		5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	0
Act Effct Green (s)	54.7	54.7		39.7	39.7			27.3	27.3		27.3	27.3
Actuated g/C Ratio	0.61	0.61		0.44	0.44			0.30	0.30		0.30	0.30
v/c Ratio	0.99	0.68		0.77	1.03			0.94	0.38		0.88	0.18
Control Delay	61.1	4.6		61.5	65.9			62.8	5.0		51.0	8.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	61.1	4.6		61.5	65.9			62.8	5.0		51.0	8.1
LOS	E	A		E	E			E	A		D	A

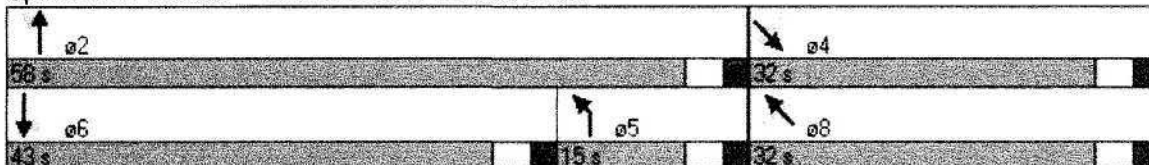
												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Approach Delay		20.5			65.4			38.2			41.7	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)	123	19		49	~522			183	0		183	6
Queue Length 95th (ft) m#182		m26		#147	#751			#348	52		#338	40
Internal Link Dist (ft)		1466			487			566			601	
Turn Bay Length (ft)	260			250								100
Base Capacity (vph)	300	1119		135	815			366	664		406	548
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	0.99	0.68		0.77	1.03			0.92	0.38		0.85	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 54 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 41.0
 Intersection Capacity Utilization 105.6%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service G

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

Splits and Phases: 9: Union Ave. & ROUTE 52



Lanes, Volumes, Timings
 11: Auto Zone Driveway & Union Ave.

1/20/2006

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↑		↙	↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.984			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3483	0	1770	3539
Flt Permitted	0.950				0.074	
Satd. Flow (perm)	1770	1583	3483	0	138	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		129	23			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	304		724			436
Travel Time (s)	6.9		16.5			9.9
Volume (vph)	205	119	1348	164	172	1268
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	129	1465	178	187	1378
Lane Group Flow (vph)	223	129	1643	0	187	1378
Turn Type		Perm			pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.0	21.0	21.0		9.0	21.0
Total Split (s)	22.0	22.0	54.0	0.0	14.0	68.0
Total Split (%)	24.4%	24.4%	60.0%	0.0%	15.6%	75.6%
Maximum Green (s)	17.0	17.0	49.0		9.0	63.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		None	C-Min
Walk Time (s)	5.0	5.0	5.0			5.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	15.8	15.8	52.9		66.2	66.2
Actuated g/C Ratio	0.18	0.18	0.59		0.74	0.74
v/c Ratio	0.72	0.34	0.80		0.70	0.53
Control Delay	43.1	8.0	13.4		24.3	3.2
Queue Delay	0.0	0.0	0.5		0.0	0.5
Total Delay	43.1	8.0	13.9		24.3	3.7
LOS	D	A	B		C	A

Lanes, Volumes, Timings
 11: Auto Zone Driveway & Union Ave.

1/20/2006



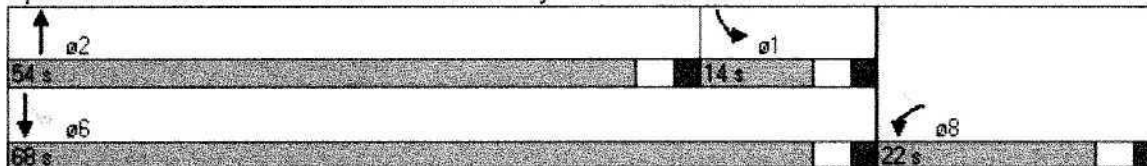
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	30.2		13.9			6.1
Approach LOS	C		B			A
Queue Length 50th (ft)	118	0	185		65	99
Queue Length 95th (ft)	193	45	269		m74	m93
Internal Link Dist (ft)	224		644			356
Turn Bay Length (ft)					100	
Base Capacity (vph)	354	420	2057		284	2602
Starvation Cap Reductn	0	0	1		0	678
Spillback Cap Reductn	0	4	120		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.63	0.31	0.85		0.66	0.72

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 12.1
 Intersection Capacity Utilization 75.4%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 11: Auto Zone Driveway & Union Ave.



Lanes, Volumes, Timings
2: Meadow Ave. & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	160		0	300		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.918			0.984			0.980			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1710	0	1770	1833	0	1770	3468	0	1770	3479	0
Flt Permitted	0.504			0.392			0.248			0.138		
Satd. Flow (perm)	939	1710	0	730	1833	0	462	3468	0	257	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			6			20			12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		257			254			436			1546	
Travel Time (s)		5.8			5.8			9.9			35.1	
Volume (vph)	98	138	167	135	197	23	283	950	148	30	623	79
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)	107	150	182	147	214	25	308	1033	161	33	677	86
Lane Group Flow (vph)	107	332	0	147	239	0	308	1194	0	33	763	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	48.0	48.0	0.0	48.0	48.0	0.0	32.0	61.0	0.0	11.0	40.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	26.7%	50.8%	0.0%	9.2%	33.3%	0.0%
Maximum Green (s)	43.0	43.0		43.0	43.0		27.0	56.0		6.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag							Lag	Lag		Lead	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	None	None		None	None		None	C-Min		None	C-Min	
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)	29.1	29.1		29.1	29.1		75.8	75.8		56.1	56.1	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.63	0.63		0.47	0.47	
v/c Ratio	0.47	0.72		0.83	0.53		0.57	0.54		0.15	0.47	
Control Delay	38.5	35.3		49.1	38.0		17.9	9.9		24.5	25.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.5	35.3		49.1	38.0		17.9	9.9		24.5	25.0	
LOS	D	D		D	D		B	A		C	C	

Lanes, Volumes, Timings
 2: Meadow Ave. & Union Ave.

1/20/2006

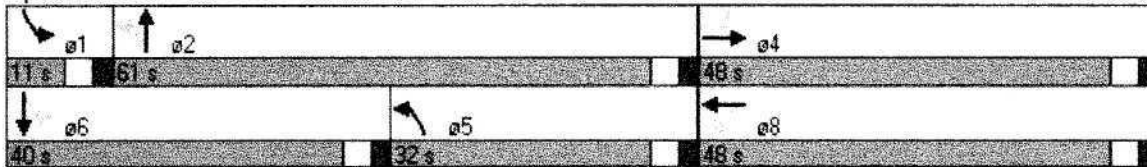
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		36.1			42.2			11.5			25.0	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	72	199		109	158		76	155		13	193	
Queue Length 95th (ft)	109	255		164	201		187	274		43	344	
Internal Link Dist (ft)		177			174			356			1466	
Turn Bay Length (ft)	140			160			300			160		
Base Capacity (vph)	344	663		268	676		617	2197		215	1634	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.31	0.50		0.55	0.35		0.50	0.54		0.15	0.47	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 26 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 22.2
 Intersection Capacity Utilization 76.4%
 Analysis Period (min) 15















Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 2: Meadow Ave. & Union Ave.



Lanes, Volumes, Timings
 3: Newburgh Mall (South) Driveway & Union Ave.

1/20/2006

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	350			0
Storage Lanes	1	1	1			1
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected			0.950			
Satd. Flow (prot)	1863	1583	1770	3539	3539	1583
Flt Permitted			0.950			
Satd. Flow (perm)	1863	1583	1770	3539	3539	1583
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	261			371	430	
Travel Time (s)	5.9			8.4	9.8	
Volume (vph)	0	236	345	1389	934	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	257	375	1510	1015	22
Lane Group Flow (vph)	0	257	375	1510	1015	22
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 52.9% ICU Level of Service A
 Analysis Period (min) 15

Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		100	300		0	180		0
Storage Lanes	0		1	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.894						0.985	
Flt Protected		0.953			0.989		0.950			0.950		
Satd. Flow (prot)	0	1775	1583	0	1647	0	1770	3539	0	1770	3486	0
Flt Permitted		0.714			0.954		0.207			0.102		
Satd. Flow (perm)	0	1330	1583	0	1589	0	386	3539	0	190	3486	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80		18						18	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		173			202			430			724	
Travel Time (s)		3.9			4.6			9.8			16.5	
Volume (vph)	160	4	74	5	0	17	38	1349	2	15	875	98
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	4	80	5	0	18	41	1466	2	16	951	107
Lane Group Flow (vph)	0	178	80	0	23	0	41	1468	0	16	1058	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	43.0	43.0	43.0	43.0	43.0	0.0	77.0	77.0	0.0	77.0	77.0	0.0
Total Split (%)	35.8%	35.8%	35.8%	35.8%	35.8%	0.0%	64.2%	64.2%	0.0%	64.2%	64.2%	0.0%
Maximum Green (s)	38.0	38.0	38.0	38.0	38.0		72.0	72.0		72.0	72.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		39.0	39.0		39.0		73.0	73.0		73.0	73.0	
Actuated g/C Ratio		0.32	0.32		0.32		0.61	0.61		0.61	0.61	
v/c Ratio		0.41	0.14		0.04		0.17	0.68		0.14	0.50	
Control Delay		35.2	6.8		14.1		12.6	17.8		5.1	6.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		35.2	6.8		14.1		12.6	17.8		5.1	6.3	
LOS		D	A		B		B	B		A	A	
Approach Delay		26.4			14.1			17.7			6.2	
Approach LOS		C			B			B			A	
Queue Length 50th (ft)		107	0		3		13	376		3	142	
Queue Length 95th (ft)		175	35		22		33	454		m2	51	
Internal Link Dist (ft)		93			122			350			644	
Turn Bay Length (ft)							300			180		

Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006



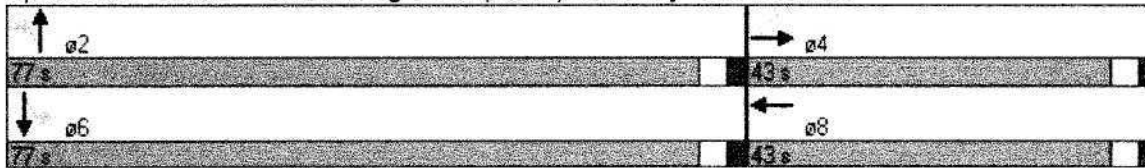
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		432	568		529		235	2153		116	2128	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.41	0.14		0.04		0.17	0.68		0.14	0.50	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 14.1
 Intersection Capacity Utilization 62.4%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.





















Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: Newburgh Mall (North) Driveway & Union Ave.



Lanes, Volumes, Timings
 9: Union Ave. & ROUTE 52

1/20/2006

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		0	250		0	0		0	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.965				0.850			0.850
Flt Protected	0.950			0.950				0.988			0.991	
Satd. Flow (prot)	1770	1818	0	1770	1798	0	0	1840	1583	0	1846	1583
Flt Permitted	0.148			0.174				0.601			0.740	
Satd. Flow (perm)	276	1818	0	324	1798	0	0	1120	1583	0	1378	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			23				255			66
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1546			567			646			681	
Travel Time (s)		35.1			12.9			14.7			15.5	
Volume (vph)	269	599	113	74	446	134	88	287	235	78	355	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	292	651	123	80	485	146	96	312	255	85	386	72
Lane Group Flow (vph)	292	774	0	80	631	0	0	408	255	0	471	72
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6			4		4	8		8
Detector Phases	5	2		6	6		4	4	4	8	8	8
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	11.0	38.0	0.0	27.0	27.0	0.0	32.0	32.0	32.0	32.0	32.0	32.0
Total Split (%)	15.7%	54.3%	0.0%	38.6%	38.6%	0.0%	45.7%	45.7%	45.7%	45.7%	45.7%	45.7%
Maximum Green (s)	6.0	33.0		22.0	22.0		27.0	27.0	27.0	27.0	27.0	27.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag			Lead	Lead							
Lead-Lag Optimize?	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	Min		Min	Min		None	None	None	None	None	None
Walk Time (s)		5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	0
Act Effct Green (s)	34.1	34.1		23.0	23.0			26.9	26.9		26.9	26.9
Actuated g/C Ratio	0.49	0.49		0.33	0.33			0.39	0.39		0.39	0.39
v/c Ratio	1.01	0.85		0.74	1.03			0.93	0.33		0.88	0.11
Control Delay	86.3	27.0		64.7	68.5			48.5	3.4		37.1	4.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	86.3	27.0		64.7	68.5			48.5	3.4		37.1	4.9
LOS	F	C		E	E			D	A		D	A

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Approach Delay		43.2			68.1			31.1			32.9	
Approach LOS		D			E			C			C	
Queue Length 50th (ft)	~82	273		30	~294			161	0		179	2
Queue Length 95th (ft)	#231	#499		#104	#486			#328	40		#347	24
Internal Link Dist (ft)		1466			487			566			601	
Turn Bay Length (ft)	260			250								100
Base Capacity (vph)	288	907		108	615			448	786		551	673
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	1.01	0.85		0.74	1.03			0.91	0.32		0.85	0.11

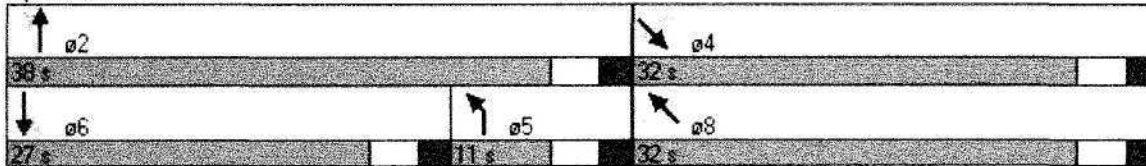
Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 69
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 44.6
 Intersection Capacity Utilization 105.5%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service G

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 9: Union Ave. & ROUTE 52





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↵	↕	↵	↵	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.985			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3486	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3486	0	1770	3539
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	304		724			436
Travel Time (s)	6.9		16.5			9.9
Volume (vph)	61	30	1375	151	13	927
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	33	1495	164	14	1008
Lane Group Flow (vph)	66	33	1659	0	14	1008
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 54.8% ICU Level of Service A
 Analysis Period (min) 15

Lanes, Volumes, Timings
2: Meadow Ave. & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	160		0	300		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.918			0.985			0.980			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1710	0	1770	1835	0	1770	3468	0	1770	3479	0
Flt Permitted	0.487			0.370			0.130			0.161		
Satd. Flow (perm)	907	1710	0	689	1835	0	242	3468	0	300	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			5			20			12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		257			254			436			1546	
Travel Time (s)		5.8			5.8			9.9			35.1	
Volume (vph)	104	146	177	143	209	24	300	1007	157	32	660	84
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)	113	159	192	155	227	26	326	1095	171	35	717	91
Lane Group Flow (vph)	113	351	0	155	253	0	326	1266	0	35	808	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		5	2		1	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	48.0	48.0	0.0	48.0	48.0	0.0	31.0	63.0	0.0	9.0	41.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	25.8%	52.5%	0.0%	7.5%	34.2%	0.0%
Maximum Green (s)	43.0	43.0		43.0	43.0		26.0	58.0		4.0	36.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag							Lead	Lag		Lead	Lag	
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	None	None		None	None		None	C-Min		None	C-Min	
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)	31.2	31.2		31.2	31.2		80.8	74.4		63.9	57.2	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.67	0.62		0.53	0.48	
v/c Ratio	0.48	0.72		0.87	0.53		0.79	0.59		0.14	0.49	
Control Delay	37.8	35.0		51.3	37.1		38.0	9.8		13.1	25.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.8	35.0		51.3	37.1		38.0	9.8		13.1	25.6	
LOS	D	D		D	D		D	A		B	C	

Lanes, Volumes, Timings
 2: Meadow Ave. & Union Ave.

1/20/2006

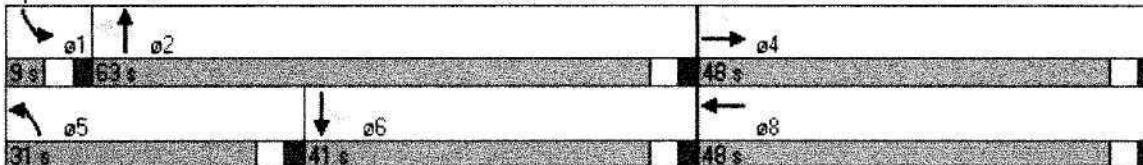
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.7			42.5			15.6			25.1	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	74	209		115	164		167	114		8	215	
Queue Length 95th (ft)	115	272		179	212		220	367		26	366	
Internal Link Dist (ft)		177			174			356			1466	
Turn Bay Length (ft)	140			160			300			160		
Base Capacity (vph)	333	663		253	676		507	2158		242	1665	
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	0.34	0.53		0.61	0.37		0.64	0.59		0.14	0.49	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 56 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 24.2
 Intersection Capacity Utilization 80.0%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service D














Splits and Phases: 2: Meadow Ave. & Union Ave.



Lanes, Volumes, Timings

3: Newburgh Mall (South) Driveway & Union Ave.

1/20/2006

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	350			0
Storage Lanes	1	1	1			1
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected			0.950			
Satd. Flow (prot)	1863	1583	1770	3539	3539	1583
Flt Permitted			0.950			
Satd. Flow (perm)	1863	1583	1770	3539	3539	1583
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	261			371	430	
Travel Time (s)	5.9			8.4	9.8	
Volume (vph)	0	250	366	1472	990	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	272	398	1600	1076	23
Lane Group Flow (vph)	0	272	398	1600	1076	23
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 55.6% ICU Level of Service B
 Analysis Period (min) 15

Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		100	300		0	180		0
Storage Lanes	0		1	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.892						0.985	
Flt Protected		0.954			0.990		0.950			0.950		
Satd. Flow (prot)	0	1777	1583	0	1645	0	1770	3539	0	1770	3486	0
Flt Permitted		0.716			0.956		0.190			0.088		
Satd. Flow (perm)	0	1334	1583	0	1588	0	354	3539	0	164	3486	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		20						19	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		173			202			430			724	
Travel Time (s)		3.9			4.6			9.8			16.5	
Volume (vph)	170	6	78	5	0	18	40	1430	2	16	928	104
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)	185	7	85	5	0	20	43	1554	2	17	1009	113
Lane Group Flow (vph)	0	192	85	0	25	0	43	1556	0	17	1122	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	42.0	42.0	42.0	42.0	42.0	0.0	78.0	78.0	0.0	78.0	78.0	0.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	0.0%	65.0%	65.0%	0.0%	65.0%	65.0%	0.0%
Maximum Green (s)	37.0	37.0	37.0	37.0	37.0		73.0	73.0		73.0	73.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		38.0	38.0		38.0		74.0	74.0		74.0	74.0	
Actuated g/C Ratio		0.32	0.32		0.32		0.62	0.62		0.62	0.62	
v/c Ratio		0.45	0.15		0.05		0.20	0.71		0.17	0.52	
Control Delay		37.0	6.9		13.7		12.9	18.1		23.8	19.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		37.0	6.9		13.7		12.9	18.1		23.8	19.8	
LOS		D	A		B		B	B		C	B	
Approach Delay		27.7			13.7			17.9			19.8	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		118	0		3		14	406		4	201	
Queue Length 95th (ft)		191	36		23		35	489		m22	515	
Internal Link Dist (ft)		93			122			350			644	
Turn Bay Length (ft)							300			180		

Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		422	559		517		218	2182		101	2157	
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		0.45	0.15		0.05		0.20	0.71		0.17	0.52	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 19.5

Intersection LOS: B

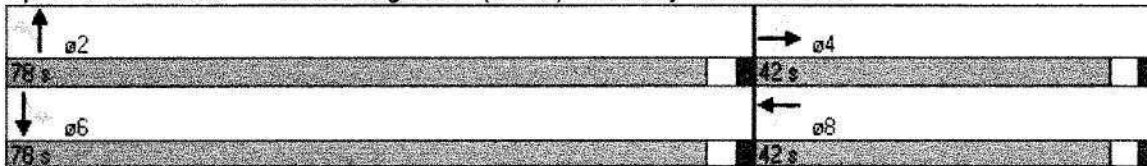
Intersection Capacity Utilization 65.3%

ICU Level of Service C

Analysis Period (min) 15





















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

Splits and Phases: 5: Newburgh Mall (North) Driveway & Union Ave.



Lanes, Volumes, Timings
 9: Union Ave. & ROUTE 52

1/20/2006

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		0	250		0	0		0	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr		0.976			0.965				0.850			0.850
Flt Protected	0.950			0.950				0.988			0.991	
Satd. Flow (prot)	1770	1818	0	1770	1798	0	0	1840	1583	0	1846	1583
Flt Permitted	0.148			0.174				0.551			0.697	
Satd. Flow (perm)	276	1818	0	324	1798	0	0	1026	1583	0	1298	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			23				271			65
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1546			567			646			681	
Travel Time (s)		35.1			12.9			14.7			15.5	
Volume (vph)	285	635	120	78	473	142	93	304	249	83	376	70
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)	310	690	130	85	514	154	101	330	271	90	409	76
Lane Group Flow (vph)	310	820	0	85	668	0	0	431	271	0	499	76
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6			4		4	8		8
Detector Phases	5	2		6	6		4	4	4	8	8	8
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	11.0	38.0	0.0	27.0	27.0	0.0	32.0	32.0	32.0	32.0	32.0	32.0
Total Split (%)	15.7%	54.3%	0.0%	38.6%	38.6%	0.0%	45.7%	45.7%	45.7%	45.7%	45.7%	45.7%
Maximum Green (s)	6.0	33.0		22.0	22.0		27.0	27.0	27.0	27.0	27.0	27.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag			Lead	Lead							
Lead-Lag Optimize?	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	Min		Min	Min		None	None	None	None	None	None
Walk Time (s)		5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	0
Act Effct Green (s)	34.0	34.0		23.0	23.0			28.0	28.0		28.0	28.0
Actuated g/C Ratio	0.49	0.49		0.33	0.33			0.40	0.40		0.40	0.40
v/c Ratio	1.10	0.92		0.80	1.10			1.05	0.34		0.96	0.11
Control Delay	109.9	34.3		74.7	93.1			83.4	3.3		54.8	5.4
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	109.9	34.3		74.7	93.1			83.4	3.3		54.8	5.4
LOS	F	C		E	F			F	A		D	A

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Approach Delay		55.1			91.0			52.5			48.3	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~103	303		33	~329			~207	0		203	3
Queue Length 95th (ft)	#251	#546		#112	#525			#370	41		#392	26
Internal Link Dist (ft)		1466			487			566			601	
Turn Bay Length (ft)	260			250								100
Base Capacity (vph)	283	893		106	606			410	796		519	672
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	1.10	0.92		0.80	1.10			1.05	0.34		0.96	0.11

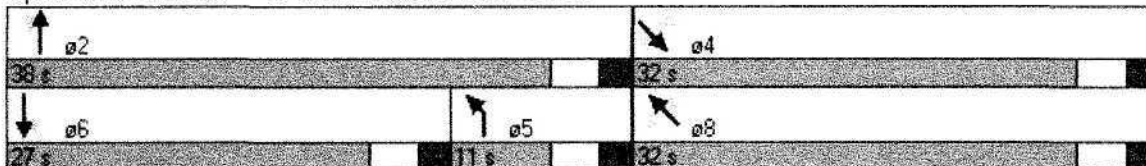
Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.10
 Intersection Signal Delay: 61.8
 Intersection Capacity Utilization 110.8%
 Analysis Period (min) 15

Intersection LOS: E
 ICU Level of Service H

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 9: Union Ave. & ROUTE 52



Lanes, Volumes, Timings
 11: Auto Zone Driveway & Union Ave.

1/20/2006



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶	↷	↷	↶	↷
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.985			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3486	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	3486	0	1770	3539
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	304		724			436
Travel Time (s)	6.9		16.5			9.9
Volume (vph)	65	32	1458	160	14	983
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	35	1585	174	15	1068
Lane Group Flow (vph)	71	35	1759	0	15	1068
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 57.4% ICU Level of Service B
 Analysis Period (min) 15

Lanes, Volumes, Timings
2: Meadow Ave. & Union Ave.

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	160		0	300		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.917			0.986			0.981			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1837	0	1770	3472	0	1770	3486	0
Flt Permitted	0.460			0.326			0.142			0.108		
Satd. Flow (perm)	857	1708	0	607	1837	0	265	3472	0	201	3486	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			5			25			12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		257			254			436			1546	
Travel Time (s)		5.8			5.8			9.9			35.1	
Volume (vph)	104	156	196	143	227	24	309	1072	157	32	753	84
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)	113	170	213	155	247	26	336	1165	171	35	818	91
Lane Group Flow (vph)	113	383	0	155	273	0	336	1336	0	35	909	0
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		5	2		6	6	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		21.0	21.0	
Total Split (s)	43.0	43.0	0.0	43.0	43.0	0.0	26.0	67.0	0.0	41.0	41.0	0.0
Total Split (%)	39.1%	39.1%	0.0%	39.1%	39.1%	0.0%	23.6%	60.9%	0.0%	37.3%	37.3%	0.0%
Maximum Green (s)	38.0	38.0		38.0	38.0		21.0	62.0		36.0	36.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		C-Min	C-Min	
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)	31.7	31.7		31.7	31.7		70.3	70.3		40.9	40.9	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.64	0.64		0.37	0.37	
v/c Ratio	0.46	0.71		0.89	0.51		0.65	0.60		0.47	0.70	
Control Delay	33.8	31.7		55.6	32.7		22.8	6.2		27.8	18.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.3		0.0	0.0	
Total Delay	33.8	31.7		55.6	32.7		22.8	6.5		27.8	18.0	
LOS	C	C		E	C		C	A		C	B	

Lanes, Volumes, Timings
 2: Meadow Ave. & Union Ave.

1/20/2006



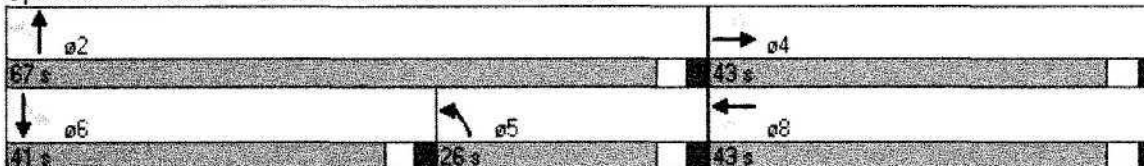
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.2			41.0			9.8				18.3
Approach LOS		C			D			A				B
Queue Length 50th (ft)	63	194		100	151		113	121		12	235	
Queue Length 95th (ft)	112	284		#202	217		#236	141		m24	m245	
Internal Link Dist (ft)		177			174			356				1466
Turn Bay Length (ft)	140			160			300			160		
Base Capacity (vph)	304	647		215	655		516	2227		75	1305	
Starvation Cap Reductn	0	0		0	0		0	322		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.37	0.59		0.72	0.42		0.65	0.70		0.47	0.70	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 24 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 19.0
 Intersection Capacity Utilization 84.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service E

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: Meadow Ave. & Union Ave.



Lanes, Volumes, Timings

3: Newburgh Mall (South) Driveway & Union Ave.

1/20/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	350		250	150		0
Storage Lanes	0		1	2		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted				0.723			0.083			0.157		
Satd. Flow (perm)	0	1863	1583	2613	1863	1583	155	3539	1583	292	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			272			47			593			22
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		261			177			371			430	
Travel Time (s)		5.9			4.0			8.4			9.8	
Volume (vph)	0	48	250	491	46	74	366	1472	546	68	1073	21
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	52	272	534	50	80	398	1600	593	74	1166	23
Lane Group Flow (vph)	0	52	272	534	50	80	398	1600	593	74	1166	23
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	Perm		Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	9.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	31.0	31.0	79.0	79.0	48.0	48.0	48.0
Total Split (%)	28.2%	28.2%	28.2%	28.2%	28.2%	28.2%	28.2%	71.8%	71.8%	43.6%	43.6%	43.6%
Maximum Green (s)	26.0	26.0	26.0	26.0	26.0	26.0	26.0	74.0	74.0	43.0	43.0	43.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)		27.0	27.0	27.0	27.0	27.0	75.0	75.0	75.0	44.0	44.0	44.0
Actuated g/C Ratio		0.25	0.25	0.25	0.25	0.25	0.68	0.68	0.68	0.40	0.40	0.40
v/c Ratio		0.11	0.46	0.83	0.11	0.19	0.79	0.66	0.47	0.63	0.82	0.04
Control Delay		33.1	6.8	52.1	33.1	17.3	39.8	11.8	1.8	39.3	22.0	4.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Total Delay		33.1	6.8	52.1	33.1	17.3	39.8	11.9	1.8	39.3	22.8	4.0
LOS		C	A	D	C	B	D	B	A	D	C	A
Approach Delay		11.0			46.5			13.8			23.5	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)		29	0	185	28	18	208	309	0	31	278	3
Queue Length 95th (ft)		61	64	#269	60	58	#355	379	33	m#106	424	m8
Internal Link Dist (ft)		181			97			291			350	
Turn Bay Length (ft)							350		250	150		

Lanes, Volumes, Timings

3: Newburgh Mall (South) Driveway & Union Ave.

1/20/2006



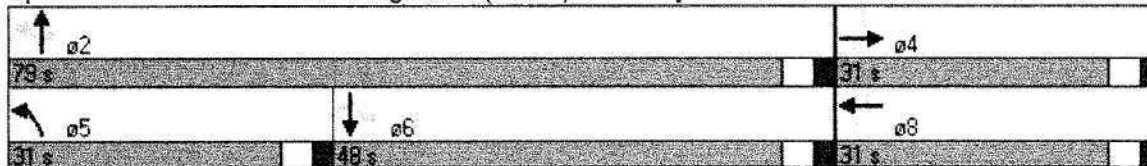
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		457	594	641	457	424	502	2413	1268	117	1416	646
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	76	0
Spillback Cap Reductn		0	0	0	0	0	0	6	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.11	0.46	0.83	0.11	0.19	0.79	0.66	0.47	0.63	0.87	0.04

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 40 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 20.6
 Intersection Capacity Utilization 83.9%
 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.

Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 3: Newburgh Mall (South) Driveway & Union Ave.



Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

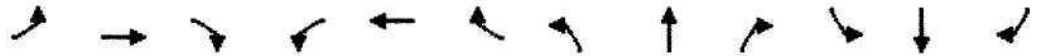
1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	0		0	200		0	180		0
Storage Lanes	0		1	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.892						0.986	
Flt Protected		0.954			0.990		0.950			0.950		
Satd. Flow (prot)	0	1777	1583	0	1645	0	1770	3539	0	1770	3490	0
Flt Permitted		0.716			0.955		0.159			0.074		
Satd. Flow (perm)	0	1334	1583	0	1587	0	296	3539	0	138	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		20						18	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		173			202			430			724	
Travel Time (s)		3.9			4.6			9.8			16.5	
Volume (vph)	170	6	78	5	0	18	40	1504	2	16	1039	104
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)	185	7	85	5	0	20	43	1635	2	17	1129	113
Lane Group Flow (vph)	0	192	85	0	25	0	43	1637	0	17	1242	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	38.0	38.0	38.0	38.0	38.0	0.0	72.0	72.0	0.0	72.0	72.0	0.0
Total Split (%)	34.5%	34.5%	34.5%	34.5%	34.5%	0.0%	65.5%	65.5%	0.0%	65.5%	65.5%	0.0%
Maximum Green (s)	33.0	33.0	33.0	33.0	33.0		67.0	67.0		67.0	67.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
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	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		34.0	34.0		34.0		68.0	68.0		68.0	68.0	
Actuated g/C Ratio		0.31	0.31		0.31		0.62	0.62		0.62	0.62	
v/c Ratio		0.47	0.16		0.05		0.23	0.75		0.20	0.57	
Control Delay		35.2	6.8		13.3		8.4	8.4		12.3	9.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.1	
Total Delay		35.2	6.8		13.3		8.4	8.5		12.3	9.0	
LOS		D	A		B		A	A		B	A	
Approach Delay		26.5			13.3			8.5			9.1	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)		109	0		2		6	121		2	148	
Queue Length 95th (ft)		180	36		23		m10	140		m5	174	
Internal Link Dist (ft)		93			122			350			644	
Turn Bay Length (ft)			100				200			180		

Lanes, Volumes, Timings

5: Newburgh Mall (North) Driveway & Union Ave.

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		412	548		504		183	2188		85	2164	
Starvation Cap Reductn		0	0		0		0	27		0	0	
Spillback Cap Reductn		0	3		0		0	0		0	134	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.47	0.16		0.05		0.23	0.76		0.20	0.61	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 10.3

Intersection LOS: B

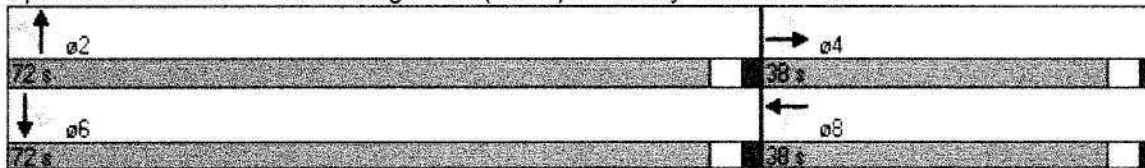
Intersection Capacity Utilization 67.4%

ICU Level of Service C

Analysis Period (min) 15





















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

Splits and Phases: 5: Newburgh Mall (North) Driveway & Union Ave.



Lanes, Volumes, Timings
 9: Union Ave. & NYS ROUTE 52

1/20/2006

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		0	250		0	0		0	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.978			0.969				0.850			0.850
Flt Protected	0.950			0.950				0.989			0.992	
Satd. Flow (prot)	1770	1822	0	1770	1805	0	0	1842	1583	0	1848	1583
Flt Permitted	0.103			0.114				0.577			0.712	
Satd. Flow (perm)	192	1822	0	212	1805	0	0	1075	1583	0	1326	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			12				291			69
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30				30			30
Link Distance (ft)		1546			567				646			681
Travel Time (s)		35.1			12.9				14.7			15.5
Volume (vph)	294	691	120	97	547	142	93	323	268	83	404	107
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)	320	751	130	105	595	154	101	351	291	90	439	116
Lane Group Flow (vph)	320	881	0	105	749	0	0	452	291	0	529	116
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	5	2			6				4			8
Permitted Phases	2			6			4		4	8		8
Detector Phases	5	2		6	6		4	4	4	8	8	8
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0		21.0	21.0		21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	14.0	53.0	0.0	39.0	39.0	0.0	57.0	57.0	57.0	57.0	57.0	57.0
Total Split (%)	12.7%	48.2%	0.0%	35.5%	35.5%	0.0%	51.8%	51.8%	51.8%	51.8%	51.8%	51.8%
Maximum Green (s)	9.0	48.0		34.0	34.0		52.0	52.0	52.0	52.0	52.0	52.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	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	C-Min		C-Min	C-Min		None	None	None	None	None	None
Walk Time (s)		5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0	0	0	0	0
Act Effct Green (s)	53.1	53.1		35.0	35.0			48.9	48.9		48.9	48.9
Actuated g/C Ratio	0.48	0.48		0.32	0.32			0.44	0.44		0.44	0.44
v/c Ratio	1.08	1.00		1.57	1.28			0.95	0.34		0.90	0.16
Control Delay	105.6	46.8		345.1	173.5			47.6	2.9		40.1	7.7
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	105.6	46.8		345.1	173.5			47.6	2.9		40.1	7.7
LOS	F	D		F	F			D	A		D	A

Lanes, Volumes, Timings
 9: Union Ave. & NYS ROUTE 52

1/20/2006



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Approach Delay		62.5			194.6			30.1			34.3	
Approach LOS		E			F			C			C	
Queue Length 50th (ft)	~251	~698		~105	~673			276	0		312	17
Queue Length 95th (ft)	#426	#927		#217	#908			#483	44		#518	49
Internal Link Dist (ft)		1466			487			566			601	
Turn Bay Length (ft)	260			250								100
Base Capacity (vph)	295	885		67	583			518	914		639	798
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	1.08	1.00		1.57	1.28			0.87	0.32		0.83	0.15

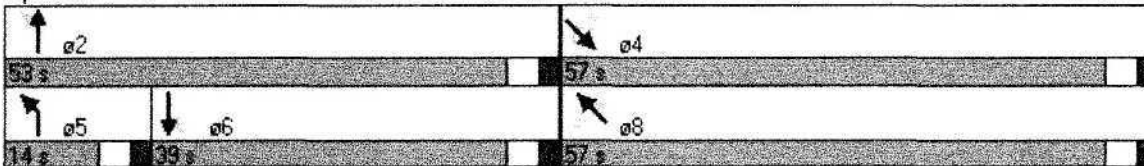
Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 86 (78%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.57
 Intersection Signal Delay: 83.0
 Intersection Capacity Utilization 117.7%
 Analysis Period (min) 15

Intersection LOS: F
 ICU Level of Service H

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Union Ave. & NYS ROUTE 52



Lanes, Volumes, Timings
 11: Auto Zone Driveway & Union Ave.

1/20/2006

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↓		↗	↘↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Fr _t		0.850	0.986			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3490	0	1770	3539
Flt Permitted	0.950				0.078	
Satd. Flow (perm)	1770	1583	3490	0	145	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		35	27			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	304		724			436
Travel Time (s)	6.9		16.5			9.9
Volume (vph)	65	32	1532	160	14	1904
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	35	1665	174	15	2070
Lane Group Flow (vph)	71	35	1839	0	15	2070
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Detector Phases	8	8	2		6	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0
Total Split (s)	25.0	25.0	85.0	0.0	85.0	85.0
Total Split (%)	22.7%	22.7%	77.3%	0.0%	77.3%	77.3%
Maximum Green (s)	20.0	20.0	80.0		80.0	80.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Min		C-Min	C-Min
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)	10.5	10.5	94.4		94.4	94.4
Actuated g/C Ratio	0.10	0.10	0.86		0.86	0.86
v/c Ratio	0.42	0.19	0.61		0.12	0.68
Control Delay	47.5	15.1	2.5		2.9	3.1
Queue Delay	0.0	0.0	0.0		0.0	0.4
Total Delay	47.5	15.1	2.5		2.9	3.5
LOS	D	B	A		A	A

Lanes, Volumes, Timings
 11: Auto Zone Driveway & Union Ave.

1/20/2006



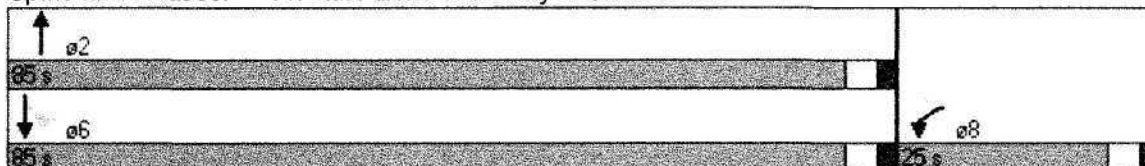
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	36.8		2.5			3.5
Approach LOS	D		A			A
Queue Length 50th (ft)	48	0	92		1	58
Queue Length 95th (ft)	91	30	106		m2	115
Internal Link Dist (ft)	224		644			356
Turn Bay Length (ft)					100	
Base Capacity (vph)	338	331	3000		125	3039
Starvation Cap Reductn	0	0	0		0	410
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.21	0.11	0.61		0.12	0.79

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 3.9
 Intersection Capacity Utilization 64.6%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 11: Auto Zone Driveway & Union Ave.



Lanes, Volumes, Timings
 1: 5th Avenue & Route 52

1/20/2006

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↑			↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973		0.965			
Flt Protected	0.962					0.993
Satd. Flow (prot)	1744	0	1798	0	0	1850
Flt Permitted	0.962					0.993
Satd. Flow (perm)	1744	0	1798	0	0	1850
Headway Factor	1.00	1.00	1.00	1.00	1.09	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	176		367			226
Travel Time (s)	4.0		8.3			5.1
Volume (vph)	92	23	490	175	75	444
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	100	25	533	190	82	483
Lane Group Flow (vph)	125	0	723	0	0	565
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 82.5% ICU Level of Service E
 Analysis Period (min) 15

Lanes, Volumes, Timings
 2: I-84 On/Off Ramp East Bound & Route 52

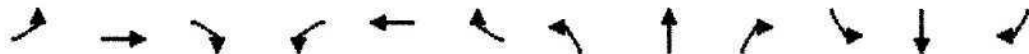
1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	80		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850						0.987	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	1770	1583	0	1770	1863	0	0	1839	0
Flt Permitted				0.950			0.278					
Satd. Flow (perm)	0	0	0	1770	1583	0	518	1863	0	0	1839	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					404						8	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		223			234			452			367	
Travel Time (s)		5.1			5.3			10.3			8.3	
Volume (vph)	0	0	0	100	0	175	150	480	0	0	486	50
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	109	0	190	163	522	0	0	528	54
Lane Group Flow (vph)	0	0	0	109	190	0	163	522	0	0	582	0
Turn Type				Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Minimum Split (s)				21.0	21.0		9.0	21.0			21.0	
Total Split (s)	0.0	0.0	0.0	25.0	25.0	0.0	17.0	65.0	0.0	0.0	48.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	27.8%	27.8%	0.0%	18.9%	72.2%	0.0%	0.0%	53.3%	0.0%
Maximum Green (s)				20.0	20.0		12.0	60.0			43.0	
Yellow Time (s)				3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
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)				21.0	21.0		61.0	61.0			44.0	
Actuated g/C Ratio				0.23	0.23		0.68	0.68			0.49	
v/c Ratio				0.26	0.28		0.31	0.41			0.64	
Control Delay				30.3	1.0		2.9	2.2			21.0	
Queue Delay				0.0	0.0		0.0	0.5			0.0	
Total Delay				30.3	1.0		2.9	2.7			21.0	
LOS				C	A		A	A			C	
Approach Delay					11.7			2.7			21.0	
Approach LOS					B			A			C	
Queue Length 50th (ft)				51	0		8	26			233	
Queue Length 95th (ft)				96	0		m12	35			348	
Internal Link Dist (ft)		143			154			372			287	
Turn Bay Length (ft)				100			80					

Lanes, Volumes, Timings

2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)				413	679		532	1263			903	
Starvation Cap Reductn				0	0		0	349			0	
Spillback Cap Reductn				0	0		0	0			0	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				0.26	0.28		0.31	0.57			0.64	

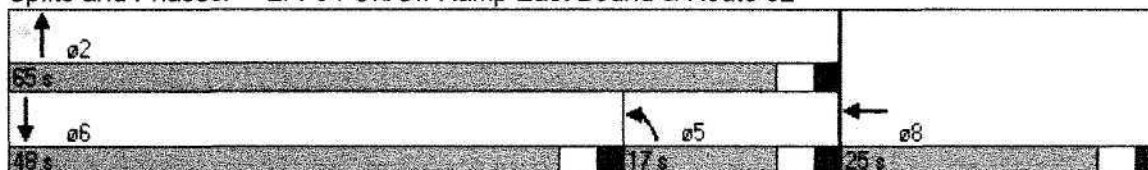
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 11.2
 Intersection Capacity Utilization 59.8%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B




















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

Splits and Phases: 2: I-84 On/Off Ramp East Bound & Route 52



Lanes, Volumes, Timings
 4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		170	70		0
Storage Lanes	1		1	0		0	0		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	0	1583	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted	0.950									0.252		
Satd. Flow (perm)	1770	0	1583	0	0	0	0	1863	1583	469	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152						72			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			244			170			452	
Travel Time (s)		6.0			5.5			3.9			10.3	
Volume (vph)	53	0	140	0	0	0	0	577	66	127	459	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)	58	0	152	0	0	0	0	627	72	138	499	0
Lane Group Flow (vph)	58	0	152	0	0	0	0	627	72	138	499	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Minimum Split (s)	21.0		21.0					21.0	21.0	9.0	21.0	
Total Split (s)	25.0	0.0	25.0	0.0	0.0	0.0	0.0	49.0	49.0	16.0	65.0	0.0
Total Split (%)	27.8%	0.0%	27.8%	0.0%	0.0%	0.0%	0.0%	54.4%	54.4%	17.8%	72.2%	0.0%
Maximum Green (s)	20.0		20.0					44.0	44.0	11.0	60.0	
Yellow Time (s)	3.0		3.0					3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0					2.0	2.0	2.0	2.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
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)	21.0		21.0					45.0	45.0	61.0	61.0	
Actuated g/C Ratio	0.23		0.23					0.50	0.50	0.68	0.68	
v/c Ratio	0.14		0.31					0.67	0.09	0.28	0.40	
Control Delay	28.5		6.9					21.5	3.3	2.5	2.0	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.2	
Total Delay	28.5		6.9					21.5	3.3	2.5	2.2	
LOS	C		A					C	A	A	A	
Approach Delay								19.6			2.2	
Approach LOS								B			A	
Queue Length 50th (ft)	26		0					256	0	10	46	
Queue Length 95th (ft)	58		47					379	20	m9	48	
Internal Link Dist (ft)		184			164			90			372	
Turn Bay Length (ft)			100						170	70		

Lanes, Volumes, Timings

4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006



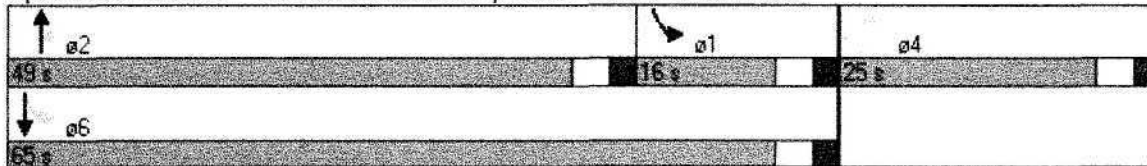
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	413		486					932	828	491	1263	
Starvation Cap Reductn	0		0					0	0	0	217	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.14		0.31					0.67	0.09	0.28	0.48	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 11.5
 Intersection Capacity Utilization 59.8%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 4: I-84 On/Off Ramp West Bound & Route 52





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.974		0.964			
Flt Protected	0.961					0.993
Satd. Flow (prot)	1744	0	1796	0	0	1850
Flt Permitted	0.961					0.993
Satd. Flow (perm)	1744	0	1796	0	0	1850
Headway Factor	1.00	1.00	1.00	1.00	1.09	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	176		367			226
Travel Time (s)	4.0		8.3			5.1
Volume (vph)	98	24	519	186	80	471
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	26	564	202	87	512
Lane Group Flow (vph)	133	0	766	0	0	599
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 86.7% ICU Level of Service E
 Analysis Period (min) 15

Lanes, Volumes, Timings
 2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	80		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850						0.987	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	1770	1583	0	1770	1863	0	0	1839	0
Flt Permitted				0.950			0.267					
Satd. Flow (perm)	0	0	0	1770	1583	0	497	1863	0	0	1839	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					387						8	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		223			234			452			367	
Travel Time (s)		5.1			5.3			10.3			8.3	
Volume (vph)	0	0	0	106	0	186	159	509	0	0	515	53
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	115	0	202	173	553	0	0	560	58
Lane Group Flow (vph)	0	0	0	115	202	0	173	553	0	0	618	0
Turn Type				Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Minimum Split (s)				21.0	21.0		9.0	21.0			21.0	
Total Split (s)	0.0	0.0	0.0	24.0	24.0	0.0	16.0	66.0	0.0	0.0	50.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	26.7%	26.7%	0.0%	17.8%	73.3%	0.0%	0.0%	55.6%	0.0%
Maximum Green (s)				19.0	19.0		11.0	61.0			45.0	
Yellow Time (s)				3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
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)				20.0	20.0		62.0	62.0			46.0	
Actuated g/C Ratio				0.22	0.22		0.69	0.69			0.51	
v/c Ratio				0.29	0.31		0.34	0.43			0.65	
Control Delay				31.6	1.2		3.3	2.1			20.1	
Queue Delay				0.0	0.0		0.0	0.5			0.0	
Total Delay				31.6	1.2		3.3	2.6			20.1	
LOS				C	A		A	A			C	
Approach Delay					12.2			2.8			20.1	
Approach LOS					B			A			C	
Queue Length 50th (ft)				55	0		9	28			242	
Queue Length 95th (ft)				103	0		m12	36			361	
Internal Link Dist (ft)		143			154			372			287	
Turn Bay Length (ft)				100			80					

Lanes, Volumes, Timings

2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006



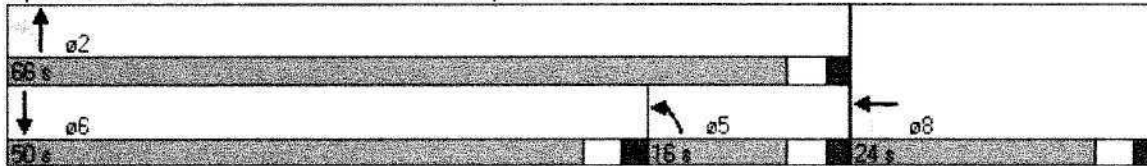
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)				393	653		512	1283			944	
Starvation Cap Reductn				0	0		0	353			0	
Spillback Cap Reductn				0	0		0	0			0	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				0.29	0.31		0.34	0.59			0.65	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 11.0
 Intersection Capacity Utilization 62.6%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.




















Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: I-84 On/Off Ramp East Bound & Route 52



Lanes, Volumes, Timings
 4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		170	70		0
Storage Lanes	1		1	0		0	0		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	0	1583	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted	0.950									0.233		
Satd. Flow (perm)	1770	0	1583	0	0	0	0	1863	1583	434	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161						73			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			244			170			452	
Travel Time (s)		6.0			5.5			3.9			10.3	
Volume (vph)	56	0	148	0	0	0	0	612	70	135	487	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)	61	0	161	0	0	0	0	665	76	147	529	0
Lane Group Flow (vph)	61	0	161	0	0	0	0	665	76	147	529	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Minimum Split (s)	21.0		21.0					21.0	21.0	9.0	21.0	
Total Split (s)	24.0	0.0	24.0	0.0	0.0	0.0	0.0	50.0	50.0	16.0	66.0	0.0
Total Split (%)	26.7%	0.0%	26.7%	0.0%	0.0%	0.0%	0.0%	55.6%	55.6%	17.8%	73.3%	0.0%
Maximum Green (s)	19.0		19.0					45.0	45.0	11.0	61.0	
Yellow Time (s)	3.0		3.0					3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0					2.0	2.0	2.0	2.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
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)	20.0		20.0					46.0	46.0	62.0	62.0	
Actuated g/C Ratio	0.22		0.22					0.51	0.51	0.69	0.69	
v/c Ratio	0.16		0.34					0.70	0.09	0.31	0.41	
Control Delay	29.5		7.1					21.6	3.4	2.8	2.0	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.2	
Total Delay	29.5		7.1					21.6	3.4	2.8	2.2	
LOS	C		A					C	A	A	A	
Approach Delay								19.8			2.3	
Approach LOS								B			A	
Queue Length 50th (ft)	28		0					273	1	7	49	
Queue Length 95th (ft)	61		49					404	21	m6	33	
Internal Link Dist (ft)		184			164			90			372	
Turn Bay Length (ft)			100						170	70		

Lanes, Volumes, Timings

4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006



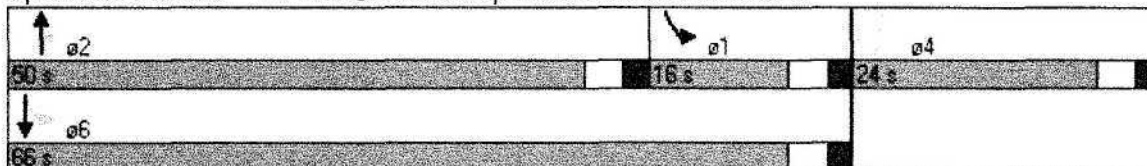
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	393		477					952	845	477	1283	
Starvation Cap Reductn	0		0					0	0	0	213	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.16		0.34					0.70	0.09	0.31	0.49	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 11.7
 Intersection Capacity Utilization 62.6%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 4: I-84 On/Off Ramp West Bound & Route 52



Lanes, Volumes, Timings

1: Site Access Driveway & Route 52

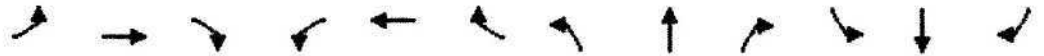
1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	10	12	12
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.978				0.850		0.996	
Flt Protected		0.976			0.968		0.950			0.950		
Satd. Flow (prot)	0	1818	1583	0	1881	0	1770	1863	1583	1652	1855	0
Flt Permitted		0.847			0.766		0.393			0.388		
Satd. Flow (perm)	0	1578	1583	0	1489	0	732	1863	1583	675	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			403		8				202		3	
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		213			176			367			226	
Travel Time (s)		4.8			4.0			8.3			5.1	
Volume (vph)	26	26	392	98	26	24	313	519	186	80	497	13
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	28	426	107	28	26	340	564	202	87	540	14
Lane Group Flow (vph)	0	56	426	0	161	0	340	564	202	87	554	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0	21.0	21.0	21.0	
Total Split (s)	29.0	29.0	29.0	29.0	29.0	0.0	81.0	81.0	81.0	81.0	81.0	0.0
Total Split (%)	26.4%	26.4%	26.4%	26.4%	26.4%	0.0%	73.6%	73.6%	73.6%	73.6%	73.6%	0.0%
Maximum Green (s)	24.0	24.0	24.0	24.0	24.0		76.0	76.0	76.0	76.0	76.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
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)		25.0	25.0		25.0		77.0	77.0	77.0	77.0	77.0	
Actuated g/C Ratio		0.23	0.23		0.23		0.70	0.70	0.70	0.70	0.70	
v/c Ratio		0.16	0.63		0.47		0.66	0.43	0.17	0.18	0.43	
Control Delay		35.5	9.5		40.0		14.3	6.2	0.6	6.8	8.2	
Queue Delay		0.0	0.8		0.6		0.2	0.6	0.0	0.0	0.1	
Total Delay		35.5	10.2		40.6		14.5	6.8	0.6	6.8	8.3	
LOS		D	B		D		B	A	A	A	A	
Approach Delay		13.2			40.6			8.1			8.1	
Approach LOS		B			D			A			A	
Queue Length 50th (ft)		32	13		94		83	94	0	19	147	
Queue Length 95th (ft)		67	106		161		m275	176	m9	39	209	
Internal Link Dist (ft)		133			96			287			146	
Turn Bay Length (ft)												
Base Capacity (vph)		359	671		345		512	1304	1169	473	1299	

Lanes, Volumes, Timings

1: Site Access Driveway & Route 52

1/20/2006



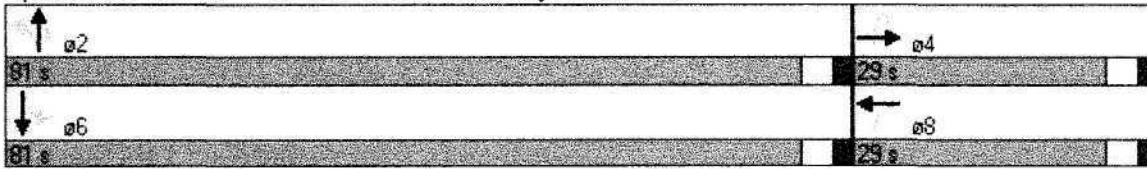
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0				10	385	0	0	0	
Spillback Cap Reductn		0	70				0	0	0	0	112	
Storage Cap Reductn		0	0				0	0	0	0	0	
Reduced v/c Ratio		0.16	0.71				0.68	0.61	0.17	0.18	0.47	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 11.3
 Intersection Capacity Utilization 72.5%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.


















Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: Site Access Driveway & Route 52



Lanes, Volumes, Timings
 2: I-84 On/Off Ramp East Bound & Route 52

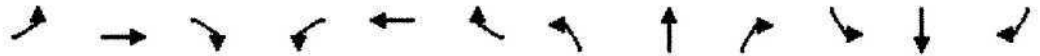
1/20/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	80		0	0		0
Storage Lanes	0		0	1		1	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850					0.978	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	1770	0	1583	1770	1863	0	0	1822	0
Flt Permitted				0.950			0.173					
Satd. Flow (perm)	0	0	0	1770	0	1583	322	1863	0	0	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						340					27	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		223			234			452			367	
Travel Time (s)		5.1			5.3			10.3			8.3	
Volume (vph)	0	0	0	106	0	368	185	639	0	0	828	157
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	115	0	400	201	695	0	0	900	171
Lane Group Flow (vph)	0	0	0	115	0	400	201	695	0	0	1071	0
Turn Type				custom		custom	Perm					
Protected Phases								2			6	
Permitted Phases				8		8	2					
Minimum Split (s)				21.0		21.0	21.0	21.0			21.0	
Total Split (s)	0.0	0.0	0.0	21.0	0.0	21.0	89.0	89.0	0.0	0.0	89.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	19.1%	0.0%	19.1%	80.9%	80.9%	0.0%	0.0%	80.9%	0.0%
Maximum Green (s)				16.0		16.0	84.0	84.0			84.0	
Yellow Time (s)				3.0		3.0	3.0	3.0			3.0	
All-Red Time (s)				2.0		2.0	2.0	2.0			2.0	
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)				17.0		17.0	85.0	85.0			85.0	
Actuated g/C Ratio				0.15		0.15	0.77	0.77			0.77	
v/c Ratio				0.42		0.75	0.81	0.48			0.76	
Control Delay				47.4		18.2	30.2	3.3			11.6	
Queue Delay				0.0		0.1	0.0	0.2			0.0	
Total Delay				47.4		18.3	30.2	3.5			11.6	
LOS				D		B	C	A			B	
Approach Delay								9.5			11.6	
Approach LOS								A			B	
Queue Length 50th (ft)				74		38	84	63			446	
Queue Length 95th (ft)				132		150	#263	78			706	
Internal Link Dist (ft)		143			154			372			287	
Turn Bay Length (ft)				100			80					

Lanes, Volumes, Timings

2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)				274		532	249	1440			1414	
Starvation Cap Reductn				0		0	0	215			3	
Spillback Cap Reductn				0		3	0	17			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.42		0.76	0.81	0.57			0.76	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 108 (98%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 13.6

Intersection LOS: B

Intersection Capacity Utilization 81.2%

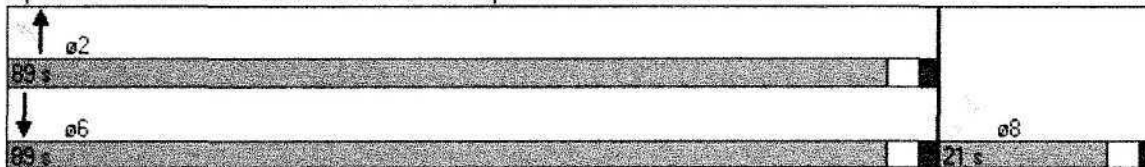
ICU Level of Service D

Analysis Period (min) 15

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



















Queue shown is maximum after two cycles.

Splits and Phases: 2: I-84 On/Off Ramp East Bound & Route 52



Lanes, Volumes, Timings
 4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		170	70		0
Storage Lanes	1		1	0		0	0		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	0	1583	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted	0.950									0.279		
Satd. Flow (perm)	1770	0	1583	0	0	0	0	1863	1583	520	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161						76			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			244			117			452	
Travel Time (s)		6.0			5.5			2.7			10.3	
Volume (vph)	56	0	148	0	0	0	0	768	70	291	643	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)	61	0	161	0	0	0	0	835	76	316	699	0
Lane Group Flow (vph)	61	0	161	0	0	0	0	835	76	316	699	0
Turn Type	custom		custom						Perm	Perm		
Protected Phases								2				6
Permitted Phases	4		4						2	6		
Minimum Split (s)	21.0		21.0					21.0	21.0	21.0	21.0	
Total Split (s)	21.0	0.0	21.0	0.0	0.0	0.0	0.0	89.0	89.0	89.0	89.0	0.0
Total Split (%)	19.1%	0.0%	19.1%	0.0%	0.0%	0.0%	0.0%	80.9%	80.9%	80.9%	80.9%	0.0%
Maximum Green (s)	16.0		16.0					84.0	84.0	84.0	84.0	
Yellow Time (s)	3.0		3.0					3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0					2.0	2.0	2.0	2.0	
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)	17.0		17.0					85.0	85.0	85.0	85.0	
Actuated g/C Ratio	0.15		0.15					0.77	0.77	0.77	0.77	
v/c Ratio	0.22		0.42					0.58	0.06	0.79	0.49	
Control Delay	43.2		10.2					7.1	0.8	15.9	3.8	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.8	
Total Delay	43.2		10.2					7.1	0.8	15.9	4.6	
LOS	D		B					A	A	B	A	
Approach Delay								6.6			8.1	
Approach LOS								A			A	
Queue Length 50th (ft)	38		0					200	0	53	112	
Queue Length 95th (ft)	79		58					283	9 m#319		124	
Internal Link Dist (ft)		184			164			37			372	
Turn Bay Length (ft)			100						170	70		

Lanes, Volumes, Timings
 4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	274		381					1440	1241	402	1440	
Starvation Cap Reductn	0		0					0	0	0	418	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.22		0.42					0.58	0.06	0.79	0.68	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 104 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 8.6
 Intersection Capacity Utilization 81.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service D

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: 4: I-84 On/Off Ramp West Bound & Route 52

↑ ø2	ø4
89 s	21 s
↓ ø6	
89 s	

Lanes, Volumes, Timings
 1: 5th Avenue & Route 52

1/20/2006



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↘		↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980		0.972			
Flt Protected	0.959					0.998
Satd. Flow (prot)	1751	0	1811	0	0	1859
Flt Permitted	0.959					0.998
Satd. Flow (perm)	1751	0	1811	0	0	1859
Headway Factor	1.00	1.00	1.00	1.00	1.09	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	176		367			226
Travel Time (s)	4.0		8.3			5.1
Volume (vph)	63	11	625	165	25	489
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	12	679	179	27	532
Lane Group Flow (vph)	80	0	858	0	0	559
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 55.1%
 Analysis Period (min) 15
 ICU Level of Service B

Lanes, Volumes, Timings
 2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	80		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.850						0.989	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	1770	1583	0	1770	1863	0	0	1842	0
Flt Permitted				0.950			0.256					
Satd. Flow (perm)	0	0	0	1770	1583	0	477	1863	0	0	1842	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					346						7	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		223			234			452			367	
Travel Time (s)		5.1			5.3			10.3			8.3	
Volume (vph)	0	0	0	130	0	200	308	590	0	0	506	46
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	141	0	217	335	641	0	0	550	50
Lane Group Flow (vph)	0	0	0	141	217	0	335	641	0	0	600	0
Turn Type				Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Minimum Split (s)				21.0	21.0		9.0	21.0			21.0	
Total Split (s)	0.0	0.0	0.0	21.0	21.0	0.0	22.0	69.0	0.0	0.0	47.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	23.3%	23.3%	0.0%	24.4%	76.7%	0.0%	0.0%	52.2%	0.0%
Maximum Green (s)				16.0	16.0		17.0	64.0			42.0	
Yellow Time (s)				3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Walk Time (s)				5.0	5.0			5.0			5.0	
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)				0	0			0			0	
Act Effct Green (s)				17.0	17.0		65.0	65.0			43.0	
Actuated g/C Ratio				0.19	0.19		0.72	0.72			0.48	
v/c Ratio				0.42	0.37		0.56	0.48			0.68	
Control Delay				36.7	1.8		7.4	1.8			22.8	
Queue Delay				0.0	0.0		0.0	0.4			0.0	
Total Delay				36.7	1.8		7.4	2.2			22.8	
LOS				D	A		A	A			C	
Approach Delay					15.6			4.0			22.8	
Approach LOS					B			A			C	
Queue Length 50th (ft)				71	0		31	32			250	
Queue Length 95th (ft)				129	0		m46	42			373	
Internal Link Dist (ft)		143			154			372			287	
Turn Bay Length (ft)				100			80					

Lanes, Volumes, Timings

2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006



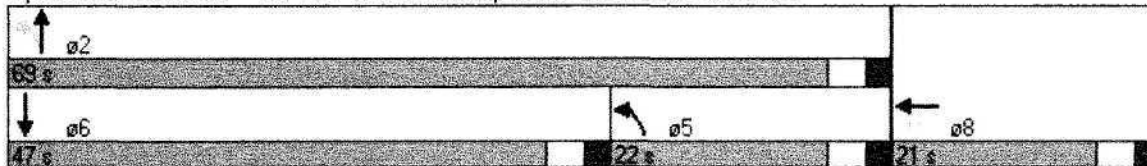
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)				334	580		603	1346			884	
Starvation Cap Reductn				0	0		0	272			0	
Spillback Cap Reductn				0	0		0	0			0	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				0.42	0.37		0.56	0.60			0.68	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 11.9
 Intersection Capacity Utilization 70.9%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service C




















Splits and Phases: 2: I-84 On/Off Ramp East Bound & Route 52



Lanes, Volumes, Timings

4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		170	70		0
Storage Lanes	1		1	0		0	0		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr't			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	0	1583	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted	0.950									0.172		
Satd. Flow (perm)	1770	0	1583	0	0	0	0	1863	1583	320	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			328						124			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			244			170			452	
Travel Time (s)		6.0			5.5			3.9			10.3	
Volume (vph)	80	0	302	0	0	0	0	818	123	116	520	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)	87	0	328	0	0	0	0	889	134	126	565	0
Lane Group Flow (vph)	87	0	328	0	0	0	0	889	134	126	565	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Minimum Split (s)	21.0		21.0					21.0	21.0	9.0	21.0	
Total Split (s)	21.0	0.0	21.0	0.0	0.0	0.0	0.0	60.0	60.0	9.0	69.0	0.0
Total Split (%)	23.3%	0.0%	23.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	10.0%	76.7%	0.0%
Maximum Green (s)	16.0		16.0					55.0	55.0	4.0	64.0	
Yellow Time (s)	3.0		3.0					3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0					2.0	2.0	2.0	2.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
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)	17.0		17.0					56.0	56.0	65.0	65.0	
Actuated g/C Ratio	0.19		0.19					0.62	0.62	0.72	0.72	
v/c Ratio	0.26		0.58					0.77	0.13	0.40	0.42	
Control Delay	33.6		8.5					17.9	1.9	6.4	2.3	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.4	
Total Delay	33.6		8.5					17.9	1.9	6.4	2.7	
LOS	C		A					B	A	A	A	
Approach Delay								15.8			3.3	
Approach LOS								B			A	
Queue Length 50th (ft)	43		0					331	2	8	65	
Queue Length 95th (ft)	85		70					499	22	m7	54	
Internal Link Dist (ft)		184			164			90			372	
Turn Bay Length (ft)			100						170	70		

Lanes, Volumes, Timings

4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	334		565					1159	1032	312	1346	
Starvation Cap Reductn	0		0					0	0	0	351	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.26		0.58					0.77	0.13	0.40	0.57	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 11.4
 Intersection Capacity Utilization 70.9%
 Analysis Period (min) 15
 m. Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 4: I-84 On/Off Ramp West Bound & Route 52

↑ ø2	↘ ø1	ø4
60 s	9 s	21 s
↓ ø6		
69 s		

Lanes, Volumes, Timings
 1: 5th Avenue & Route 52

1/20/2006




















Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		P			4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980		0.972			
Flt Protected	0.959					0.998
Satd. Flow (prot)	1751	0	1811	0	0	1859
Flt Permitted	0.959					0.998
Satd. Flow (perm)	1751	0	1811	0	0	1859
Headway Factor	1.00	1.00	1.00	1.00	1.09	1.00
Link Speed (mph)	30		30			30
Link Distance (ft)	176		367			226
Travel Time (s)	4.0		8.3			5.1
Volume (vph)	67	12	663	175	27	518
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	13	721	190	29	563
Lane Group Flow (vph)	86	0	911	0	0	592
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 58.1% ICU Level of Service B
 Analysis Period (min) 15

Lanes, Volumes, Timings
 2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	80		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850						0.989	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	1770	1583	0	1770	1863	0	0	1842	0
Flt Permitted				0.950			0.228					
Satd. Flow (perm)	0	0	0	1770	1583	0	425	1863	0	0	1842	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					322						7	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		223			234			452			367	
Travel Time (s)		5.1			5.3			10.3			8.3	
Volume (vph)	0	0	0	138	0	212	326	625	0	0	536	49
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	150	0	230	354	679	0	0	583	53
Lane Group Flow (vph)	0	0	0	150	230	0	354	679	0	0	636	0
Turn Type				Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Minimum Split (s)				21.0	21.0		9.0	21.0			21.0	
Total Split (s)	0.0	0.0	0.0	21.0	21.0	0.0	22.0	69.0	0.0	0.0	47.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	23.3%	23.3%	0.0%	24.4%	76.7%	0.0%	0.0%	52.2%	0.0%
Maximum Green (s)				16.0	16.0		17.0	64.0			42.0	
Yellow Time (s)				3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Walk Time (s)				5.0	5.0			5.0			5.0	
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)				0	0			0			0	
Act Effct Green (s)				17.0	17.0		65.0	65.0			43.0	
Actuated g/C Ratio				0.19	0.19		0.72	0.72			0.48	
v/c Ratio				0.45	0.41		0.61	0.50			0.72	
Control Delay				37.3	3.0		9.6	1.8			24.2	
Queue Delay				0.0	0.0		0.0	0.5			0.0	
Total Delay				37.3	3.0		9.6	2.3			24.2	
LOS				D	A		A	A			C	
Approach Delay					16.6			4.8			24.2	
Approach LOS					B			A			C	
Queue Length 50th (ft)				76	0		48	35			274	
Queue Length 95th (ft)				135	13		m58	m43			406	
Internal Link Dist (ft)		143			154			372			287	
Turn Bay Length (ft)				100			80					

Lanes, Volumes, Timings

2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)				334	560		576	1346			884	
Starvation Cap Reductn				0	0		0	273			0	
Spillback Cap Reductn				0	0		0	0			0	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				0.45	0.41		0.61	0.63			0.72	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 13.0
 Intersection Capacity Utilization 74.4%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 2: I-84 On/Off Ramp East Bound & Route 52



Lanes, Volumes, Timings

4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		170	70		0
Storage Lanes	1		1	0		0	0		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	0	1583	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted	0.950									0.141		
Satd. Flow (perm)	1770	0	1583	0	0	0	0	1863	1583	263	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			348						124			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			244			170			452	
Travel Time (s)		6.0			5.5			3.9			10.3	
Volume (vph)	85	0	320	0	0	0	0	867	130	123	551	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)	92	0	348	0	0	0	0	942	141	134	599	0
Lane Group Flow (vph)	92	0	348	0	0	0	0	942	141	134	599	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Minimum Split (s)	21.0		21.0					21.0	21.0	9.0	21.0	
Total Split (s)	21.0	0.0	21.0	0.0	0.0	0.0	0.0	60.0	60.0	9.0	69.0	0.0
Total Split (%)	23.3%	0.0%	23.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	10.0%	76.7%	0.0%
Maximum Green (s)	16.0		16.0					55.0	55.0	4.0	64.0	
Yellow Time (s)	3.0		3.0					3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0					2.0	2.0	2.0	2.0	
Lead/Lag								Lead	Lead	Lag		
Lead-Lag Optimize?								Yes	Yes	Yes		
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)	17.0		17.0					56.0	56.0	65.0	65.0	
Actuated g/C Ratio	0.19		0.19					0.62	0.62	0.72	0.72	
v/c Ratio	0.28		0.60					0.81	0.14	0.49	0.45	
Control Delay	33.8		8.6					20.3	2.1	11.2	2.3	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.5	
Total Delay	33.8		8.6					20.3	2.1	11.2	2.8	
LOS	C		A					C	A	B	A	
Approach Delay								17.9			4.3	
Approach LOS								B			A	
Queue Length 50th (ft)	45		0					371	3	8	70	
Queue Length 95th (ft)	89		74					566	24	m21	56	
Internal Link Dist (ft)		184			164			90			372	
Turn Bay Length (ft)			100						170	70		



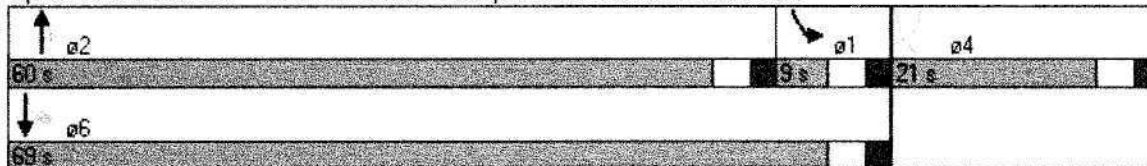
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	334		581					1159	1032	274	1346	
Starvation Cap Reductn	0		0					0	0	0	351	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.28		0.60					0.81	0.14	0.49	0.60	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 12.7
 Intersection Capacity Utilization 74.4%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 4: I-84 On/Off Ramp West Bound & Route 52



Lanes, Volumes, Timings

1: Site Access Driveway & Route 52

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12	12	12	12	10	12	12
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.984				0.850		0.997	
Flt Protected		0.976			0.967		0.950			0.950		
Satd. Flow (prot)	0	1818	1583	0	1891	0	1770	1863	1583	1652	1857	0
Flt Permitted		0.858			0.784		0.245			0.260		
Satd. Flow (perm)	0	1598	1583	0	1533	0	456	1863	1583	452	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			239		6				190		1	
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		213			176			367			226	
Travel Time (s)		4.8			4.0			8.3			5.1	
Volume (vph)	19	19	220	67	19	12	232	663	175	27	538	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	21	239	73	21	13	252	721	190	29	585	11
Lane Group Flow (vph)	0	42	239	0	107	0	252	721	190	29	596	0
Turn Type	Perm		Perm	Perm			pm+pt		Perm	Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		9.0	21.0	21.0	21.0	21.0	
Total Split (s)	28.0	28.0	28.0	28.0	28.0	0.0	26.0	82.0	82.0	56.0	56.0	0.0
Total Split (%)	25.5%	25.5%	25.5%	25.5%	25.5%	0.0%	23.6%	74.5%	74.5%	50.9%	50.9%	0.0%
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		21.0	77.0	77.0	51.0	51.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	
Act Effct Green (s)		24.0	24.0		24.0		78.0	78.0	78.0	52.0	52.0	
Actuated g/C Ratio		0.22	0.22		0.22		0.71	0.71	0.71	0.47	0.47	
v/c Ratio		0.12	0.45		0.32		0.43	0.55	0.16	0.14	0.68	
Control Delay		35.7	7.5		37.1		8.9	5.7	0.6	18.5	27.3	
Queue Delay		0.0	0.4		0.4		0.0	0.6	0.0	0.0	0.3	
Total Delay		35.7	7.9		37.5		8.9	6.3	0.6	18.5	27.7	
LOS		D	A		D		A	A	A	B	C	
Approach Delay		12.1			37.5			5.9			27.2	
Approach LOS		B			D			A			C	
Queue Length 50th (ft)		24	0		60		35	111	0	11	316	
Queue Length 95th (ft)		55	64		112		m59	181	m8	31	447	
Internal Link Dist (ft)		133			96			287			146	
Turn Bay Length (ft)												
Base Capacity (vph)		349	532		339		586	1321	1178	214	878	

Lanes, Volumes, Timings

1: Site Access Driveway & Route 52

1/20/2006



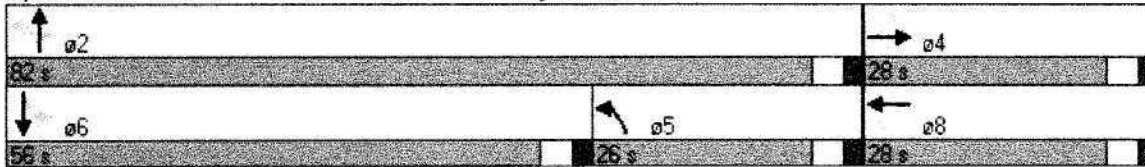
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0		0	271	0	0	0	
Spillback Cap Reductn		0	63		53		0	0	0	0	46	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.12	0.51		0.37		0.43	0.69	0.16	0.14	0.72	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 14.4
 Intersection Capacity Utilization 67.2%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: Site Access Driveway & Route 52



Lanes, Volumes, Timings
 2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	80		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.850						0.981	
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	0	0	1770	1583	0	1770	1863	0	0	1827	0
Flt Permitted				0.950			0.062					
Satd. Flow (perm)	0	0	0	1770	1583	0	115	1863	0	0	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					291						12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		223			234			452			367	
Travel Time (s)		5.1			5.3			10.3			8.3	
Volume (vph)	0	0	0	138	0	347	346	722	0	0	768	126
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	150	0	377	376	785	0	0	835	137
Lane Group Flow (vph)	0	0	0	150	377	0	376	785	0	0	972	0
Turn Type				Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Minimum Split (s)				21.0	21.0		9.0	21.0			21.0	
Total Split (s)	0.0	0.0	0.0	21.0	21.0	0.0	24.0	89.0	0.0	0.0	65.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	19.1%	19.1%	0.0%	21.8%	80.9%	0.0%	0.0%	59.1%	0.0%
Maximum Green (s)				16.0	16.0		19.0	84.0			60.0	
Yellow Time (s)				3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Walk Time (s)				5.0	5.0			5.0			5.0	
Flash Dont Walk (s)				11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)				0	0			0			0	
Act Effct Green (s)				17.0	17.0		85.0	85.0			61.0	
Actuated g/C Ratio				0.15	0.15		0.77	0.77			0.55	
v/c Ratio				0.55	0.77		0.96	0.55			0.95	
Control Delay				51.3	22.7		50.0	1.3			29.3	
Queue Delay				0.0	0.0		0.0	1.0			0.0	
Total Delay				51.3	22.7		50.0	2.3			29.3	
LOS				D	C		D	A			C	
Approach Delay					30.8			17.8			29.3	
Approach LOS					C			B			C	
Queue Length 50th (ft)				99	55		219	17			630	
Queue Length 95th (ft)				167	#193		m#264	m32			#933	
Internal Link Dist (ft)		143			154			372			287	
Turn Bay Length (ft)				100			80					

Lanes, Volumes, Timings

2: I-84 On/Off Ramp East Bound & Route 52

1/20/2006

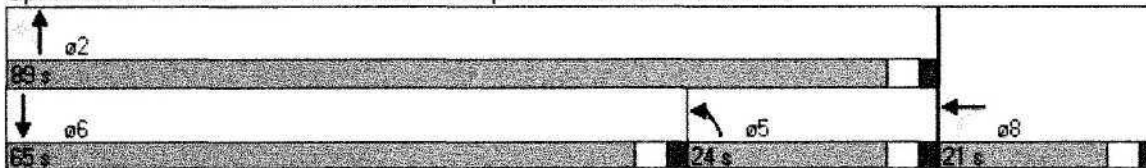
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)				274	491		390	1440			1019	
Starvation Cap Reductn				0	0		0	375			0	
Spillback Cap Reductn				0	0		0	0			0	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				0.55	0.77		0.96	0.74			0.95	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 104 (95%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 24.6
 Intersection Capacity Utilization 100.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service G

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: I-84 On/Off Ramp East Bound & Route 52



Lanes, Volumes, Timings

4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		170	70		0
Storage Lanes	1		1	0		0	0		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	0	1583	0	0	0	0	1863	1583	1770	1863	0
Flt Permitted	0.950									0.056		
Satd. Flow (perm)	1770	0	1583	0	0	0	0	1863	1583	104	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			323						86			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			244			170			452	
Travel Time (s)		6.0			5.5			3.9			10.3	
Volume (vph)	85	0	320	0	0	0	0	983	130	239	667	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)	92	0	348	0	0	0	0	1068	141	260	725	0
Lane Group Flow (vph)	92	0	348	0	0	0	0	1068	141	260	725	0
Turn Type	custom		custom						Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases	4		4						2	6		
Minimum Split (s)	21.0		21.0					21.0	21.0	9.0	21.0	
Total Split (s)	21.0	0.0	21.0	0.0	0.0	0.0	0.0	71.0	71.0	18.0	89.0	0.0
Total Split (%)	19.1%	0.0%	19.1%	0.0%	0.0%	0.0%	0.0%	64.5%	64.5%	16.4%	80.9%	0.0%
Maximum Green (s)	16.0		16.0					66.0	66.0	13.0	84.0	
Yellow Time (s)	3.0		3.0					3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0					2.0	2.0	2.0	2.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
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)	17.0		17.0					67.0	67.0	85.0	85.0	
Actuated g/C Ratio	0.15		0.15					0.61	0.61	0.77	0.77	
v/c Ratio	0.34		0.67					0.94	0.14	0.89	0.50	
Control Delay	45.4		13.5					36.7	4.2	55.4	1.6	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.7	
Total Delay	45.4		13.5					36.7	4.2	55.4	2.4	
LOS	D		B					D	A	E	A	
Approach Delay								32.9			16.3	
Approach LOS								C			B	
Queue Length 50th (ft)	59		15					644	15	127	18	
Queue Length 95th (ft)	109		109					#988	40	m154	m36	
Internal Link Dist (ft)		184			164			90			372	
Turn Bay Length (ft)			100						170	70		

Lanes, Volumes, Timings

4: I-84 On/Off Ramp West Bound & Route 52

1/20/2006

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	274		518					1135	998	292	1440	
Starvation Cap Reductn	0		0					0	0	0	380	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.34		0.67					0.94	0.14	0.89	0.68	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 104 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 24.6
 Intersection Capacity Utilization 100.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service G

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: 4: I-84 On/Off Ramp West Bound & Route 52

18 s	71 s						21 s				
63 s											

Lanes, Volumes, Timings
 5: MEADOW AVENUE &

1/10/2006














	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	843			651	395	
Travel Time (s)	19.2			14.8	9.0	
Volume (vph)	0	0	0	0	0	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
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

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













Lanes, Volumes, Timings
 19: MEADOW AVENUE & NYS ROUTE 52

1/10/2006

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations		↕			↕			↕			↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.940			0.963			0.993			0.993		
Flt Protected		0.996			0.995			0.992			0.987		
Satd. Flow (prot)	0	1744	0	0	1785	0	0	1835	0	0	1826	0	
Flt Permitted		0.959			0.942			0.816			0.718		
Satd. Flow (perm)	0	1679	0	0	1690	0	0	1509	0	0	1328	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		58			27			4			4		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		651			1385			2174			667		
Travel Time (s)		14.8			31.5			49.4			15.2		
Volume (vph)	31	164	158	23	137	60	63	312	21	170	450	33	
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)	34	178	172	25	149	65	68	339	23	185	489	36	
Lane Group Flow (vph)	0	384	0	0	239	0	0	430	0	0	710	0	
Turn Type	Perm			Perm			Perm			Perm			
Protected Phases		4			4			2			2		
Permitted Phases	4			4			2			2			
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0		
Total Split (s)	44.0	44.0	0.0	44.0	44.0	0.0	46.0	46.0	0.0	46.0	46.0	0.0	
Total Split (%)	48.9%	48.9%	0.0%	48.9%	48.9%	0.0%	51.1%	51.1%	0.0%	51.1%	51.1%	0.0%	
Maximum Green (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		
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)		40.0			40.0			42.0			42.0		
Actuated g/C Ratio		0.44			0.44			0.47			0.47		
v/c Ratio		0.49			0.31			0.61			1.14		
Uniform Delay, d1		14.7			14.1			17.7			23.9		
Control Delay		17.5			15.6			22.3			107.3		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		17.5			15.6			22.3			107.3		
LOS		B			B			C			F		
Approach Delay		17.5			15.6			22.3			107.3		
Approach LOS		B			B			C			F		
Queue Length 50th (ft)		126			74			174			~478		
Queue Length 95th (ft)		207			128			274			#696		
Internal Link Dist (ft)		571			1305			2094			587		
Turn Bay Length (ft)													
Base Capacity (vph)		778			766			706			622		

Lanes, Volumes, Timings
 19: MEADOW AVENUE & NYS ROUTE 52

1/10/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
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		0.49			0.31			0.61			1.14	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NWSE, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 54.6
 Intersection Capacity Utilization 88.9%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

~ 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: 19: MEADOW AVENUE & NYS ROUTE 52



Lanes, Volumes, Timings
 5: MEADOW AVENUE &

1/10/2006













						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit						
Fit Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Fit Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	843			651	395	
Travel Time (s)	19.2			14.8	9.0	
Volume (vph)	0	0	0	0	0	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
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

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

Lanes, Volumes, Timings
 19: MEADOW AVENUE & NYS ROUTE 52

1/10/2006

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↔			↔			↔			↔	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.942			0.968			0.990			0.991	
Flt Protected		0.997			0.996			0.991			0.985	
Satd. Flow (prot)	0	1749	0	0	1796	0	0	1828	0	0	1818	0
Flt Permitted		0.967			0.946			0.838			0.711	
Satd. Flow (perm)	0	1697	0	0	1706	0	0	1545	0	0	1312	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			20			7			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			1385			2174			667	
Travel Time (s)		14.8			31.5			49.4			15.2	
Volume (vph)	25	190	160	24	181	63	73	303	30	158	317	35
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)	27	207	174	26	197	68	79	329	33	172	345	38
Lane Group Flow (vph)	0	408	0	0	291	0	0	441	0	0	555	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	40.0	40.0	0.0	40.0	40.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
Total Split (%)	44.4%	44.4%	0.0%	44.4%	44.4%	0.0%	55.6%	55.6%	0.0%	55.6%	55.6%	0.0%
Maximum Green (s)	35.0	35.0		35.0	35.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
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)		36.0			36.0			46.0			46.0	
Actuated g/C Ratio		0.40			0.40			0.51			0.51	
v/c Ratio		0.58			0.42			0.56			0.82	
Uniform Delay, d1		18.1			18.0			14.7			18.4	
Control Delay		22.2			20.3			18.1			30.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.2			20.3			18.1			30.9	
LOS		C			C			B			C	
Approach Delay		22.2			20.3			18.1			30.9	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)		154			108			160			251	
Queue Length 95th (ft)		248			177			251			#458	
Internal Link Dist (ft)		571			1305			2094			587	
Turn Bay Length (ft)												
Base Capacity (vph)		709			694			793			674	

Lanes, Volumes, Timings

19: MEADOW AVENUE & NYS ROUTE 52

1/10/2006

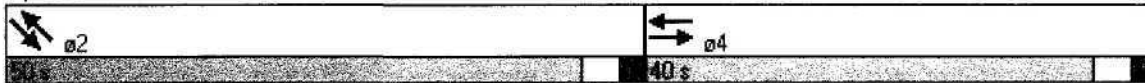
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.58			0.42			0.56			0.82	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NWSE, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 23.7
 Intersection Capacity Utilization 79.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

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

Splits and Phases: 19: MEADOW AVENUE & NYS ROUTE 52



Lanes, Volumes, Timings
5: MEADOW AVENUE &

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	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	843			651	395	
Travel Time (s)	19.2			14.8	9.0	
Volume (vph)	0	0	0	0	0	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
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

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

Lanes, Volumes, Timings
 19: MEADOW AVENUE & NYS ROUTE 52

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.940			0.963			0.993			0.993	
Fl _t Protected		0.996			0.995			0.992			0.987	
Satd. Flow (prot)	0	1744	0	0	1785	0	0	1835	0	0	1826	0
Fl _t Permitted		0.956			0.940			0.800			0.701	
Satd. Flow (perm)	0	1674	0	0	1686	0	0	1480	0	0	1297	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			27			4			4	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			1385			2174			667	
Travel Time (s)		14.8			31.5			49.4			15.2	
Volume (vph)	33	174	167	24	145	64	67	331	22	180	477	35
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)	36	189	182	26	158	70	73	360	24	196	518	38
Lane Group Flow (vph)	0	407	0	0	254	0	0	457	0	0	752	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	44.0	44.0	0.0	44.0	44.0	0.0	46.0	46.0	0.0	46.0	46.0	0.0
Total Split (%)	48.9%	48.9%	0.0%	48.9%	48.9%	0.0%	51.1%	51.1%	0.0%	51.1%	51.1%	0.0%
Maximum Green (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
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)		40.0			40.0			42.0			42.0	
Actuated g/C Ratio		0.44			0.44			0.47			0.47	
v/c Ratio		0.52			0.33			0.66			1.24	
Uniform Delay, d1		15.2			14.4			18.3			23.8	
Control Delay		18.3			15.9			24.0			146.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		18.3			15.9			24.0			146.3	
LOS		B			B			C			F	
Approach Delay		18.3			15.9			24.0			146.3	
Approach LOS		B			B			C			F	
Queue Length 50th (ft)		138			81			191			~538	
Queue Length 95th (ft)		224			137			301			#760	
Internal Link Dist (ft)		571			1305			2094			587	
Turn Bay Length (ft)												
Base Capacity (vph)		776			764			693			607	

Lanes, Volumes, Timings
 19: MEADOW AVENUE & NYS ROUTE 52

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
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		0.52			0.33			0.66			1.24	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NWSE, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 1.24
 Intersection Signal Delay: 70.8
 Intersection Capacity Utilization 93.8%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service F

~ 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: 19: MEADOW AVENUE & NYS ROUTE 52



Lanes, Volumes, Timings
5: MEADOW AVENUE &

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	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↓	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	843			651	395	
Travel Time (s)	19.2			14.8	9.0	
Volume (vph)	0	0	0	0	0	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
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

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

Lanes, Volumes, Timings
 19: MEADOW AVENUE & NYS ROUTE 52













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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.942			0.968			0.990			0.991	
Flt Protected		0.997			0.996			0.991			0.985	
Satd. Flow (prot)	0	1749	0	0	1796	0	0	1828	0	0	1818	0
Flt Permitted		0.964			0.944			0.826			0.692	
Satd. Flow (perm)	0	1692	0	0	1702	0	0	1523	0	0	1277	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			21			7			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			1385			2174			667	
Travel Time (s)		14.8			31.5			49.4			15.2	
Volume (vph)	27	201	170	25	192	67	77	321	32	167	336	37
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)	29	218	185	27	209	73	84	349	35	182	365	40
Lane Group Flow (vph)	0	432	0	0	309	0	0	468	0	0	587	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	40.0	40.0	0.0	40.0	40.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
Total Split (%)	44.4%	44.4%	0.0%	44.4%	44.4%	0.0%	55.6%	55.6%	0.0%	55.6%	55.6%	0.0%
Maximum Green (s)	35.0	35.0		35.0	35.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
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)		36.0			36.0			46.0			46.0	
Actuated g/C Ratio		0.40			0.40			0.51			0.51	
v/c Ratio		0.61			0.45			0.60			0.89	
Uniform Delay, d1		18.6			18.2			15.2			19.6	
Control Delay		23.2			20.8			19.2			38.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.2			20.8			19.2			38.7	
LOS		C			C			B			D	
Approach Delay		23.2			20.8			19.2			38.7	
Approach LOS		C			C			B			D	
Queue Length 50th (ft)		168			116			175			284	
Queue Length 95th (ft)		268			189			275			#511	
Internal Link Dist (ft)		571			1305			2094			587	
Turn Bay Length (ft)												
Base Capacity (vph)		707			693			782			656	

Lanes, Volumes, Timings

19: MEADOW AVENUE & NYS ROUTE 52

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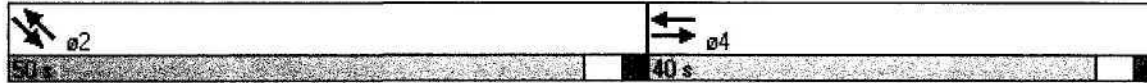
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.61			0.45			0.60			0.89	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2: NWSE, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 26.8
 Intersection Capacity Utilization 83.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service E













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

Splits and Phases: 19: MEADOW AVENUE & NYS ROUTE 52



Lanes, Volumes, Timings
 7: MEADOW AVENUE & SITE ACCESS

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Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.662			
Satd. Flow (perm)	1770	1583	1233	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		21				377
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	537			661	200	
Travel Time (s)	12.2			15.0	4.5	
Volume (vph)	374	19	19	125	116	347
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	407	21	21	136	126	377
Lane Group Flow (vph)	407	21	21	136	126	377
Turn Type		Free	Perm			Free
Protected Phases	4			2	6	
Permitted Phases		Free	2			Free
Detector Phases	4		2	2	6	
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	21.0		21.0	21.0	21.0	
Total Split (s)	57.0	0.0	33.0	33.0	33.0	0.0
Total Split (%)	63.3%	0.0%	36.7%	36.7%	36.7%	0.0%
Maximum Green (s)	52.0		28.0	28.0	28.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Max		Min	Min	Min	
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)	69.8	90.0	12.3	12.3	12.3	90.0
Actuated g/C Ratio	0.78	1.00	0.14	0.14	0.14	1.00
v/c Ratio	0.30	0.01	0.12	0.54	0.50	0.24
Uniform Delay, d1	3.0	0.0	34.1	36.2	36.0	0.0
Control Delay	4.0	0.0	32.8	36.4	38.6	0.3
Queue Delay	0.0	0.0	0.0	0.2	0.2	0.0
Total Delay	4.0	0.0	32.8	36.6	38.7	0.3
LOS	A	A	C	D	D	A
Approach Delay	3.8			36.1	9.9	

Lanes, Volumes, Timings
 7: MEADOW AVENUE & SITE ACCESS

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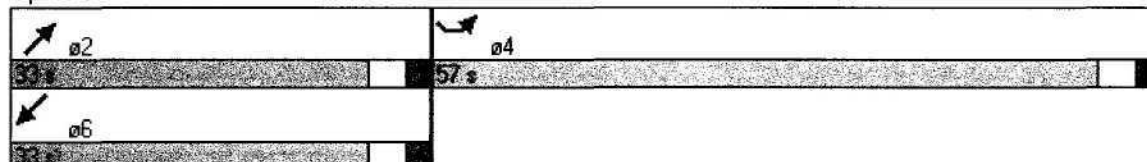
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Approach LOS	A			D	A	
Queue Length 50th (ft)	52	0	11	73	71	0
Queue Length 95th (ft)	104	0	31	124	123	0
Internal Link Dist (ft)	457			581	120	
Turn Bay Length (ft)						
Base Capacity (vph)	1371	1583	397	600	600	1583
Starvation Cap Reductn	0	0	0	0	119	0
Spillback Cap Reductn	45	0	0	106	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.01	0.05	0.28	0.26	0.24

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 59 (66%), Referenced to phase 4:SEL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 11.3
 Intersection Capacity Utilization 37.8%
 Analysis Period (min) 15










Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 7: MEADOW AVENUE & SITE ACCESS



Lanes, Volumes, Timings
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit						
Fit Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Fit Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	837			537	401	
Travel Time (s)	19.0			12.2	9.1	
Volume (vph)	0	0	0	0	0	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
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	

Intersection Summary

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













Lanes, Volumes, Timings
 19: NYS ROUTE 52 & POWDER MILL ROAD

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Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.990			0.928			0.967	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1770	1805	0	1770	1844	0	1770	1729	0	0	1792	0
Flt Permitted	0.215			0.309			0.472				0.865	
Satd. Flow (perm)	400	1805	0	576	1844	0	879	1729	0	0	1558	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			5			56			20	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2200			642			200			1333	
Travel Time (s)		50.0			14.6			4.5			30.3	
Volume (vph)	67	340	90	200	487	35	110	203	187	24	174	64
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)	73	370	98	217	529	38	120	221	203	26	189	70
Lane Group Flow (vph)	73	468	0	217	567	0	120	424	0	0	285	0
Turn Type	pm+pt			pm+pt			Perm			Perm		
Protected Phases	1	2		1	2			3			3	
Permitted Phases	2			2			3			3		
Detector Phases	1	2		1	2		3	3		3	3	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	13.0	42.0	0.0	13.0	42.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	14.4%	46.7%	0.0%	14.4%	46.7%	0.0%	38.9%	38.9%	0.0%	38.9%	38.9%	0.0%
Maximum Green (s)	8.0	37.0		8.0	37.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag	Lead	Lag		Lead	Lag							
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	None	C-Max		None	C-Max		Min	Min		Min	Min	
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)	53.3	43.8		53.3	43.8		24.7	24.7			24.7	
Actuated g/C Ratio	0.59	0.49		0.59	0.49		0.27	0.27			0.27	
v/c Ratio	0.19	0.53		0.46	0.63		0.50	0.82			0.64	
Uniform Delay, d1	6.3	15.2		6.9	16.9		27.4	26.4			26.6	
Control Delay	9.1	19.6		11.5	22.6		24.3	25.8			29.2	
Queue Delay	0.0	0.2		0.1	0.0		2.0	21.1			0.0	
Total Delay	9.1	19.8		11.6	22.6		26.3	46.9			29.2	

Lanes, Volumes, Timings
 19: NYS ROUTE 52 & POWDER MILL ROAD

1/10/2006

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
LOS	A	B		B	C		C	D				C
Approach Delay		18.3			19.6			42.3				29.2
Approach LOS		B			B			D				C
Queue Length 50th (ft)	15	180		48	242		49	208				130
Queue Length 95th (ft)	37	295		94	387		81	113				197
Internal Link Dist (ft)		2120			562			120				1253
Turn Bay Length (ft)	250			250								
Base Capacity (vph)	386	887		472	900		303	632				550
Starvation Cap Reductn	0	0		0	0		88	206				0
Spillback Cap Reductn	0	62		19	0		0	0				0
Storage Cap Reductn	0	0		0	0		0	0				0
Reduced v/c Ratio	0.19	0.57		0.48	0.63		0.56	1.00				0.52

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2: NWSE, Start of Green, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 26.3
 Intersection Capacity Utilization 82.0%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 19: NYS ROUTE 52 & POWDER MILL ROAD









Lanes, Volumes, Timings
 7: MEADOW AVENUE & SITE ACCESS

1/10/2006

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.648			
Satd. Flow (perm)	1770	1583	1207	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		28				425
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	537			661	200	
Travel Time (s)	12.2			15.0	4.5	
Volume (vph)	398	26	26	170	157	391
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	433	28	28	185	171	425
Lane Group Flow (vph)	433	28	28	185	171	425
Turn Type		Free	Perm			Free
Protected Phases	4			2	6	
Permitted Phases		Free	2			Free
Detector Phases	4		2	2	6	
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	21.0		21.0	21.0	21.0	
Total Split (s)	35.0	0.0	55.0	55.0	55.0	0.0
Total Split (%)	38.9%	0.0%	61.1%	61.1%	61.1%	0.0%
Maximum Green (s)	30.0		50.0	50.0	50.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Max		Min	Min	Min	
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 Effect Green (s)	67.4	90.0	14.6	14.6	14.6	90.0
Actuated g/C Ratio	0.75	1.00	0.16	0.16	0.16	1.00
v/c Ratio	0.33	0.02	0.14	0.61	0.57	0.27
Uniform Delay, d1	3.8	0.0	32.3	35.1	34.8	0.0
Control Delay	5.1	0.0	30.3	34.5	33.3	0.4
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	5.1	0.0	30.3	34.6	33.3	0.4
LOS	A	A	C	C	C	A
Approach Delay	4.8			34.0	9.8	

Lanes, Volumes, Timings
 7: MEADOW AVENUE & SITE ACCESS

1/10/2006

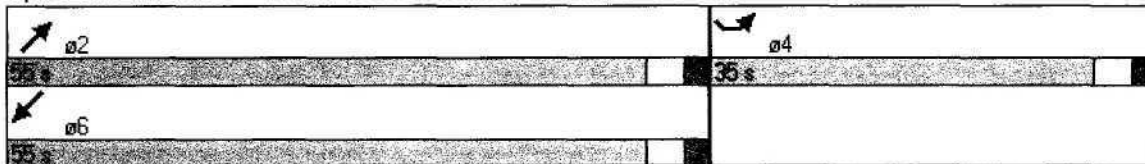
						
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Approach LOS	A			C		A
Queue Length 50th (ft)	68	0	14	99	87	0
Queue Length 95th (ft)	137	0	35	154	137	0
Internal Link Dist (ft)	457			581	120	
Turn Bay Length (ft)						
Base Capacity (vph)	1325	1583	684	1056	1056	1583
Starvation Cap Reductn	0	0	0	0	171	0
Spillback Cap Reductn	42	0	0	187	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.02	0.04	0.21	0.19	0.27

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 59 (66%), Referenced to phase 4:SEL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 12.1
 Intersection Capacity Utilization 46.3%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 7: MEADOW AVENUE & SITE ACCESS



Lanes, Volumes, Timings
 8: MEADOW AVENUE &

1/10/2006

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↓	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frts						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	837			537	401	
Travel Time (s)	19.0			12.2	9.1	
Volume (vph)	0	0	0	0	0	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
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	

Intersection Summary

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

Lanes, Volumes, Timings

19: NYS ROUTE 52 & POWDER MILL ROAD

1/10/2006

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.960			0.986			0.933			0.972	
Fl't Protected	0.950			0.950			0.950				0.996	
Satd. Flow (prot)	1770	1788	0	1770	1837	0	1770	1738	0	0	1803	0
Fl't Permitted	0.330			0.248			0.455				0.932	
Satd. Flow (perm)	615	1788	0	462	1837	0	848	1738	0	0	1687	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			7			55			18	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2200			642			200			1333	
Travel Time (s)		50.0			14.6			4.5			30.3	
Volume (vph)	77	334	123	194	349	37	131	241	196	25	231	67
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)	84	363	134	211	379	40	142	262	213	27	251	73
Lane Group Flow (vph)	84	497	0	211	419	0	142	475	0	0	351	0
Turn Type	pm+pt			pm+pt			Perm			Perm		
Protected Phases	1	2		1	2			3			3	
Permitted Phases	2			2			3			3		
Detector Phases	1	2		1	2		3	3		3	3	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	10.0	39.0	0.0	10.0	39.0	0.0	41.0	41.0	0.0	41.0	41.0	0.0
Total Split (%)	11.1%	43.3%	0.0%	11.1%	43.3%	0.0%	45.6%	45.6%	0.0%	45.6%	45.6%	0.0%
Maximum Green (s)	5.0	34.0		5.0	34.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag	Lead	Lag		Lead	Lag							
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	None	C-Max		None	C-Max		Min	Min		Min	Min	
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)	50.2	41.0		50.2	41.0		27.8	27.8			27.8	
Actuated g/C Ratio	0.56	0.46		0.56	0.46		0.31	0.31			0.31	
v/c Ratio	0.18	0.60		0.54	0.50		0.54	0.83			0.66	
Uniform Delay, d1	7.6	17.3		8.2	16.9		25.8	25.3			25.5	
Control Delay	10.6	22.9		17.7	21.2		27.2	28.2			26.9	
Queue Delay	0.0	0.1		0.4	0.0		1.5	6.2			0.0	
Total Delay	10.6	23.0		18.1	21.2		28.8	34.4			27.0	