

Appendix J
Queue Analysis

Queues

1: E. Glebe Road & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	247	65	219	15	27	75	190	2039	37	174	1322	35
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	260	299	0	16	28	79	200	2146	39	183	1429	0
v/c Ratio	1.21	0.84		0.21	0.15	0.20	0.44	0.98	0.04	0.62	0.76	
Control Delay	177.7	37.6		56.0	54.9	32.1	27.7	27.3	3.8	43.9	29.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	2.5	51.9	0.0	0.0	0.3	
Total Delay	177.7	37.6		56.0	54.9	32.1	30.2	79.2	3.8	43.9	29.6	
Queue Length 50th (ft)	~295	165		14	24	45	70	886	9	100	533	
Queue Length 95th (ft)	#383	255		36	52	85	m117	#1245	m6	#225	661	
Internal Link Dist (ft)		428			300			180			816	
Turn Bay Length (ft)									50	200		
Base Capacity (vph)	215	523		157	373	402	455	2201	987	297	1892	
Starvation Cap Reductn	0	0		0	0	0	153	291	0	0	0	
Spillback Cap Reductn	0	3		0	0	0	0	0	0	0	94	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.21	0.57		0.10	0.08	0.20	0.66	1.12	0.04	0.62	0.79	

Intersection Summary

~ 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.

Queues

3: Swann Ave. & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	30	0	6	3	0	32	9	2210	12	80	1555	19
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	0	38	0	0	37	0	0	2348	0	84	1657	0
v/c Ratio		0.37			0.27			0.87		0.44	0.51	
Control Delay		54.6			21.1			8.2		43.3	0.5	
Queue Delay		0.0			0.0			0.0		0.0	0.1	
Total Delay		54.6			21.1			8.3		43.3	0.5	
Queue Length 50th (ft)		28			3			165		35	4	
Queue Length 95th (ft)		66			39			#1253		m64	6	
Internal Link Dist (ft)		483			225			1000			680	
Turn Bay Length (ft)										200		
Base Capacity (vph)		337			395			2698		191	3247	
Starvation Cap Reductn		0			0			9		0	293	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.11			0.09			0.87		0.44	0.56	

Intersection Summary

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

Queue shown is maximum after two cycles.

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

Queues

4: Custis Ave & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	60	3	35	6	5	36	7	2190	2	14	1623	21
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	0	103	0	0	49	0	0	2314	0	15	1730	0
v/c Ratio		0.64			0.28			0.82		0.24	0.58	
Control Delay		50.4			43.9			2.3		10.7	3.0	
Queue Delay		0.0			0.0			0.8		0.0	0.0	
Total Delay		50.4			43.9			3.1		10.7	3.0	
Queue Length 50th (ft)		74			31			15		1	78	
Queue Length 95th (ft)		133			69			m20		m5	160	
Internal Link Dist (ft)		456			202			440			1000	
Turn Bay Length (ft)										150		
Base Capacity (vph)		341			381			2821		63	2972	
Starvation Cap Reductn		0			0			234		0	0	
Spillback Cap Reductn		0			0			86		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.30			0.13			0.89		0.24	0.58	

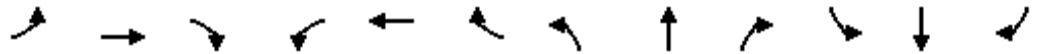
Intersection Summary

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

Queues

5: Howell Ave. & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	17	3	16	22	3	10	6	2635	33	75	1477	7
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	0	38	0	23	14	0	6	2774	35	79	1562	0
v/c Ratio		0.34		0.26	0.12		0.03	0.96	0.03	0.42	0.49	
Control Delay		40.6		62.5	32.7		1.8	18.0	3.5	22.1	3.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		40.6		62.5	32.7		1.8	18.0	3.5	22.1	3.4	
Queue Length 50th (ft)		19		20	3		1	475	5	36	154	
Queue Length 95th (ft)		56		51	26		m1	#1565	m8	m75	198	
Internal Link Dist (ft)		457			200			600			440	
Turn Bay Length (ft)							50		50	50		
Base Capacity (vph)		373		325	384		229	2891	1294	188	3212	
Starvation Cap Reductn		0		0	0		0	0	0	0	248	
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		0.10		0.07	0.04		0.03	0.96	0.03	0.42	0.53	

Intersection Summary

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

Queue shown is maximum after two cycles.

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

Queues

7: Slaters Lane & US Route 1

3/29/2006



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	0	204	2634	442	498	1698
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	0	215	2773	465	524	1787
v/c Ratio		0.22	0.92	0.46	0.84	0.70
Control Delay		31.5	32.7	11.7	53.1	11.6
Queue Delay		0.0	0.0	0.0	0.0	0.1
Total Delay		31.5	32.7	11.7	53.1	11.7
Queue Length 50th (ft)		74	838	146	360	443
Queue Length 95th (ft)		109	921	232	546	653
Internal Link Dist (ft)	326		186			891
Turn Bay Length (ft)						
Base Capacity (vph)		1036	3004	1005	657	2553
Starvation Cap Reductn		0	0	0	0	75
Spillback Cap Reductn		0	3	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.21	0.92	0.46	0.80	0.72
Intersection Summary						

Queues

8: Potomac Ave & US Route 1

3/29/2006



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	801	364	1704	1134	42	1220
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	843	383	1794	1194	44	1284
v/c Ratio	0.81	0.65	0.88	0.81	0.38	0.39
Control Delay	51.7	31.3	12.6	13.8	24.3	12.7
Queue Delay	72.6	8.4	0.4	96.5	10.6	0.0
Total Delay	124.3	39.7	13.0	110.2	35.0	12.7
Queue Length 50th (ft)	262	158	152	348	15	211
Queue Length 95th (ft)	m257	m163	204	m362	34	196
Internal Link Dist (ft)	209		891			600
Turn Bay Length (ft)						
Base Capacity (vph)	1037	591	2073	1479	116	3305
Starvation Cap Reductn	307	169	35	288	0	0
Spillback Cap Reductn	0	32	52	493	48	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.91	0.89	1.21	0.65	0.39

Intersection Summary

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

Queues

9: Potomac Ave & Main St

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	954	267	104	201	0	869	79	124	0	61	99
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%				0%		0%			
Lane Group Flow (vph)	0	1285	0	109	212	0	573	556	0	0	64	104
v/c Ratio	0.97		0.49		0.11		1.11		1.08		0.48	
Control Delay	46.8		68.5		18.2		108.8		97.1		63.1	
Queue Delay	196.6		0.0		0.3		0.0		3.2		0.0	
Total Delay	243.4		68.5		18.5		108.8		100.4		63.1	
Queue Length 50th (ft)	554		84		53		~618		~343		57	
Queue Length 95th (ft)	#818		170		76		#869		#827		105	
Internal Link Dist (ft)	209		131				102		587			
Turn Bay Length (ft)												
Base Capacity (vph)	1327		222		1898		516		516		346	
Starvation Cap Reductn	441		0		0		0		0		0	
Spillback Cap Reductn	0		0		1198		0		4		0	
Storage Cap Reductn	0		0		0		0		0		0	
Reduced v/c Ratio	1.45		0.49		0.30		1.11		1.09		0.18	

Intersection Summary

~ 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.

Queues

14: E. Glebe Road & Potomac Ave

3/29/2006



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Volume (vph)	25	124	165	785	240	51
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	26	131	174	826	307	0
v/c Ratio	0.13	0.45	0.21	0.29	0.14	
Control Delay	27.4	6.8	2.7	2.7	6.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	27.4	6.8	2.7	2.7	6.0	
Queue Length 50th (ft)	10	0	8	20	22	
Queue Length 95th (ft)	30	43	94	243	48	
Internal Link Dist (ft)	437			962	246	
Turn Bay Length (ft)						
Base Capacity (vph)	708	712	814	2884	2174	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.04	0.18	0.21	0.29	0.14	
Intersection Summary						

Queues

17: Howell Ave. & Potomac Ave

3/29/2006



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Volume (vph)	12	5	149	929	334	69
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	18	0	157	978	425	0
v/c Ratio	0.10		0.22	0.29	0.16	
Control Delay	24.1		1.5	2.0	4.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	24.1		1.5	2.0	4.1	
Queue Length 50th (ft)	5		0	0	31	
Queue Length 95th (ft)	22		m38	m280	74	
Internal Link Dist (ft)	295			601	435	
Turn Bay Length (ft)						
Base Capacity (vph)	719		749	3375	2721	
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	0.03		0.21	0.29	0.16	

Intersection Summary

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

Queues

1: E. Glebe Road & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	159	65	203	67	92	232	340	1511	11	173	1937	157
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	167	282	0	71	97	244	358	1591	12	182	2204	0
v/c Ratio	0.75	0.70		0.66	0.42	0.55	0.87	0.73	0.01	0.73	1.21	
Control Delay	71.9	35.0		64.1	56.3	40.5	57.4	11.8	3.8	50.7	129.1	
Queue Delay	0.0	1.3		1.1	0.0	0.0	28.3	2.6	0.0	0.0	27.2	
Total Delay	71.9	36.2		65.2	56.3	40.5	85.8	14.3	3.8	50.7	156.3	
Queue Length 50th (ft)	138	150		63	83	161	218	350	2	104	~1285	
Queue Length 95th (ft)	197	234		111	132	232	#529	481	m2	#212	#1418	
Internal Link Dist (ft)		428			300			180			816	
Turn Bay Length (ft)									50	200		
Base Capacity (vph)	223	517		171	373	454	413	2174	973	261	1829	
Starvation Cap Reductn	0	0		0	0	0	67	442	0	0	0	
Spillback Cap Reductn	0	95		23	0	0	0	0	0	0	88	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.75	0.67		0.48	0.26	0.54	1.03	0.92	0.01	0.70	1.27	

Intersection Summary

~ 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.

Queues

3: Swann Ave. & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	59	0	18	53	0	52	3	1884	10	75	2118	14
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	0	81	0	0	111	0	0	1997	0	79	2244	0
v/c Ratio		0.59			0.65			0.79		0.44	0.75	
Control Delay		53.9			43.8			14.6		34.7	5.3	
Queue Delay		0.0			0.0			0.2		0.0	0.3	
Total Delay		53.9			43.8			14.8		34.7	5.5	
Queue Length 50th (ft)		63			69			437		29	79	
Queue Length 95th (ft)		115			130			696		m22	m3	
Internal Link Dist (ft)		483			225			1000			680	
Turn Bay Length (ft)										200		
Base Capacity (vph)		309			357			2523		179	2990	
Starvation Cap Reductn		0			0			104		0	207	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.26			0.31			0.83		0.44	0.81	

Intersection Summary

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

Queues

4: Custis Ave & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	21	6	15	3	10	20	23	1861	6	33	2186	39
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	0	44	0	0	35	0	0	1989	0	35	2342	0
v/c Ratio		0.38			0.27			0.89		0.41	0.74	
Control Delay		47.5			33.0			10.6		10.6	1.7	
Queue Delay		0.0			0.0			0.2		0.0	0.1	
Total Delay		47.5			33.0			10.7		10.6	1.8	
Queue Length 50th (ft)		27			12			156		1	30	
Queue Length 95th (ft)		67			48			770		m1	37	
Internal Link Dist (ft)		456			202			440			1000	
Turn Bay Length (ft)										100		
Base Capacity (vph)		366			402			2237		85	3168	
Starvation Cap Reductn		0			0			0		0	109	
Spillback Cap Reductn		0			0			19		0	26	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.12			0.09			0.90		0.41	0.77	

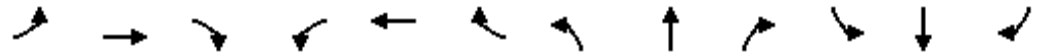
Intersection Summary

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

Queues

5: Howell Ave. & US Route 1

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	10	2	8	65	7	83	32	2324	9	22	2134	22
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	0	21	0	68	94	0	34	2446	9	23	2269	0
v/c Ratio		0.14		0.54	0.49		0.22	0.86	0.01	0.16	0.80	
Control Delay		40.6		61.4	29.9		9.5	12.5	2.6	3.4	4.8	
Queue Delay		0.0		0.0	0.0		0.0	0.4	0.0	0.0	0.1	
Total Delay		40.6		61.4	29.9		9.5	12.9	2.6	3.4	4.9	
Queue Length 50th (ft)		11		60	36		3	254	1	2	147	
Queue Length 95th (ft)		37		109	92		m5	m359	m2	m2	292	
Internal Link Dist (ft)		457			200			600			440	
Turn Bay Length (ft)							50		50	50		
Base Capacity (vph)		363		317	407		153	2853	1277	147	2837	
Starvation Cap Reductn		0		0	0		0	100	0	0	69	
Spillback Cap Reductn		0		0	0		0	53	0	0	0	
Storage Cap Reductn		0		0	0		0	0	0	0	0	
Reduced v/c Ratio		0.06		0.21	0.23		0.22	0.89	0.01	0.16	0.82	

Intersection Summary

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

Queues

7: Slaters Lane & US Route 1

3/29/2006



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	0	421	1995	379	376	2850
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	0	443	2100	399	396	3000
v/c Ratio		0.49	0.66	0.36	0.70	1.16
Control Delay		38.4	18.7	4.3	46.4	94.9
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		38.4	18.7	4.3	46.4	94.9
Queue Length 50th (ft)		181	424	34	314	~1738
Queue Length 95th (ft)		221	547	96	m363m#1840	
Internal Link Dist (ft)	326		186			891
Turn Bay Length (ft)						
Base Capacity (vph)		1099	3172	1101	695	2579
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.40	0.66	0.36	0.57	1.16

Intersection Summary

~ 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.

Queues

8: Potomac Ave & US Route 1

3/29/2006



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	1303	310	1503	913	7	1836
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	1372	326	1582	961	7	1933
v/c Ratio	0.96	0.43	0.96	0.63	0.06	0.72
Control Delay	53.5	24.4	40.4	5.4	15.9	22.8
Queue Delay	127.5	5.3	0.0	1.8	0.1	0.6
Total Delay	181.0	29.7	40.4	7.2	16.0	23.4
Queue Length 50th (ft)	556	171	745	514	2	315
Queue Length 95th (ft)	#776	m246	#902	212	m3	385
Internal Link Dist (ft)	209		891			600
Turn Bay Length (ft)						
Base Capacity (vph)	1422	763	1643	1525	116	2688
Starvation Cap Reductn	362	366	0	230	0	355
Spillback Cap Reductn	0	0	0	380	22	16
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.29	0.82	0.96	0.84	0.07	0.83

Intersection Summary

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

Queues

9: Potomac Ave & Main

3/29/2006



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	529	427	164	780	0	565	49	156	0	74	272
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	0	1006	0	173	821	0	411	400	0	0	78	286
v/c Ratio		0.85		0.82	0.49		0.88	0.85			0.26	0.89
Control Delay		38.5		77.7	28.7		61.8	55.7			51.9	56.2
Queue Delay		67.7		0.0	3.8		0.0	0.5			0.0	9.7
Total Delay		106.2		77.7	32.5		61.8	56.2			51.9	65.9
Queue Length 50th (ft)		426		130	331		290	248			62	184
Queue Length 95th (ft)		#527		#281	371		#565	#521			111	#319
Internal Link Dist (ft)		209			131			102			587	
Turn Bay Length (ft)												
Base Capacity (vph)		1185		213	1684		470	473			346	362
Starvation Cap Reductn		307		0	0		0	0			0	0
Spillback Cap Reductn		0		0	755		0	6			0	53
Storage Cap Reductn		0		0	0		0	0			0	0
Reduced v/c Ratio		1.15		0.81	0.88		0.87	0.86			0.23	0.93

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

14: E. Glebe Road & Potomac Ave

3/29/2006



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Volume (vph)	77	239	170	476	799	51
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	81	252	179	501	895	0
v/c Ratio	0.34	0.59	0.44	0.19	0.45	
Control Delay	27.1	5.4	12.3	3.3	10.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	27.1	5.4	12.3	3.3	10.7	
Queue Length 50th (ft)	32	0	35	11	102	
Queue Length 95th (ft)	66	56	106	110	193	
Internal Link Dist (ft)	437			962	246	
Turn Bay Length (ft)						
Base Capacity (vph)	708	784	405	2660	1976	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.11	0.32	0.44	0.19	0.45	
Intersection Summary						

Queues

17: Howell Ave. & Potomac Ave

3/29/2006



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Volume (vph)	63	3	97	587	929	89
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	69	0	102	618	1072	0
v/c Ratio	0.31		0.28	0.21	0.43	
Control Delay	26.8		6.1	0.9	7.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	26.8		6.1	0.9	7.6	
Queue Length 50th (ft)	26		5	19	94	
Queue Length 95th (ft)	59		m16	m37	146	
Internal Link Dist (ft)	295			539	435	
Turn Bay Length (ft)						
Base Capacity (vph)	708		362	2998	2483	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.10		0.28	0.21	0.43	

Intersection Summary

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