



APPENDIX



MEMORANDUM

TO: Ramona Burns

District Department of Transportation

CC: Mike Tyler

Charles E. Smith Commercial Realty

Whayne Quin

Holland & Knight LLP

Carolyn Brown

Holland & Knight LLP

FROM: Adrienne Losh

Dan VanPelt

DATE: August 9, 2005

SUBJECT: Scoping for 1000 Connecticut Avenue PUD Traffic Impact Analysis

Pursuant to our meeting on Wednesday, July 27, 2005, this letter summarizes the analysis parameters for a traffic impact study for 1000 Connecticut Avenue. This study is in conjunction with a Planned Unit Development (PUD) application. 1000 Connecticut LLC is planning to redevelop the building located on the northwest quadrant of the Connecticut Avenue/K Street intersection.

The following summarizes our understanding of the study parameters. Please review and comment on these assumptions.

Existing Traffic Counts: Weekday AM and PM peak hour traffic, pedestrian, and bicycle counts will be obtained at the following three intersections (see attached figure):

1. K Street/Connecticut Avenue NW
2. K Street/18th Street NW
3. L Street/Connecticut Avenue NW

All counts will be conducted on an average weekday (Tuesday, Wednesday, or Thursday) from 6:00 AM to 9:00 AM and from 4:00 PM to 7:00 PM. In addition we will make observations of these intersections, including taking signal timings and lane configurations.

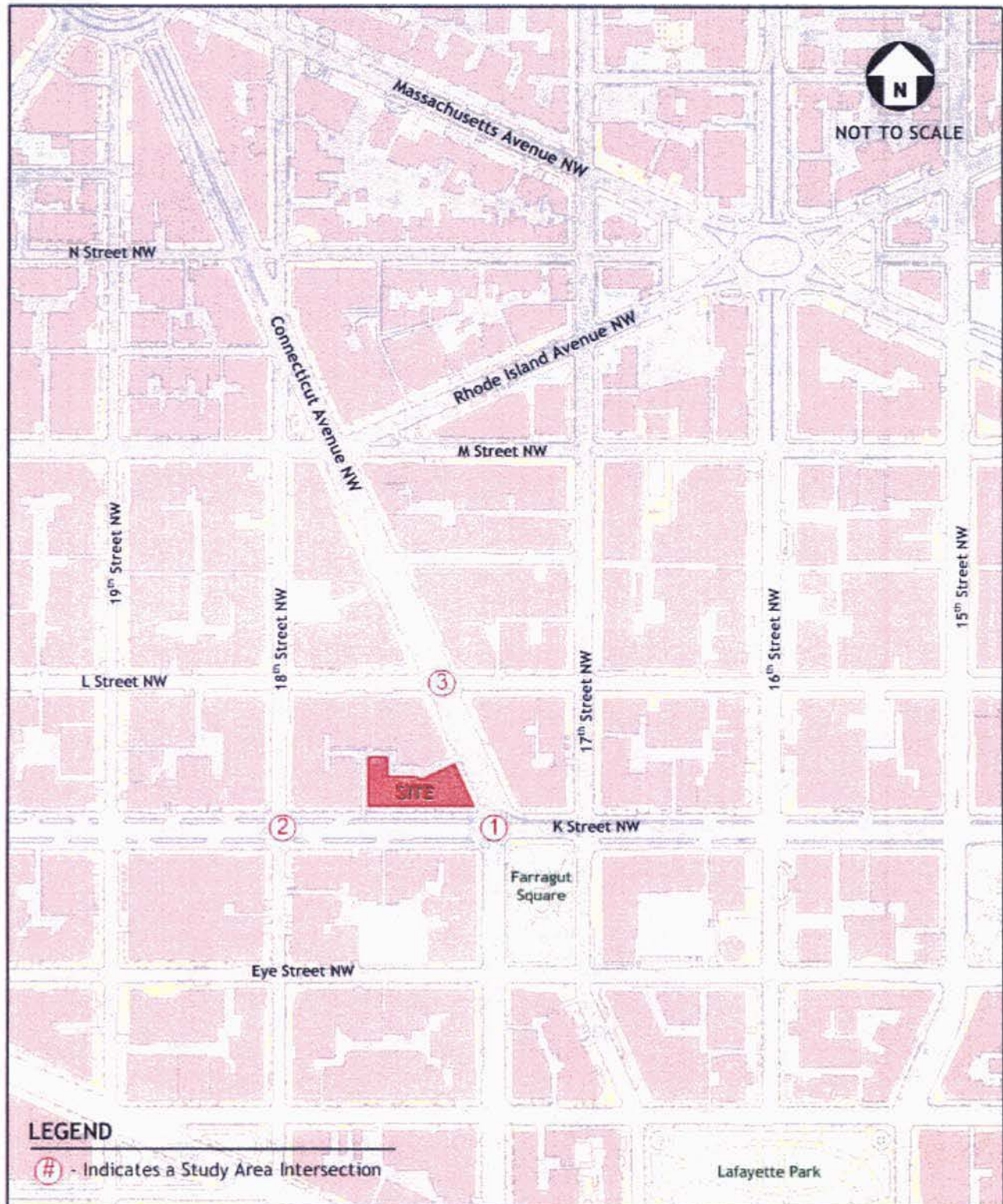
Trip Generation: We will estimate the amount of traffic that will be generated by the proposed development based on the rates and equations published by the Institute of Transportation Engineers (ITE), *Trip Generation*, 7th edition. We will formulate mode split assumptions based on observations of similar developments in the District and WMATA's Development Related Ridership Survey.

Future Road Improvements: Based on discussions held in our meeting, plans for K Street are still

undetermined. For this reason, we will assume for purposes of analysis that K Street will be as it is today and will consider the alternatives presented in the June 2004 DMJM Harris report, *K Street Transitway*.

Capacity Analyses: We will analyze the key study intersections for existing, background, and total future conditions and report any mitigation measures that may be necessary to maintain acceptable levels of service at the these intersections. We will use the *Highway Capacity Manual* (HCM) 2000 methodology and/or Synchro version 6.0 for all analysis.

Thank you for your assistance in preparing this scope.



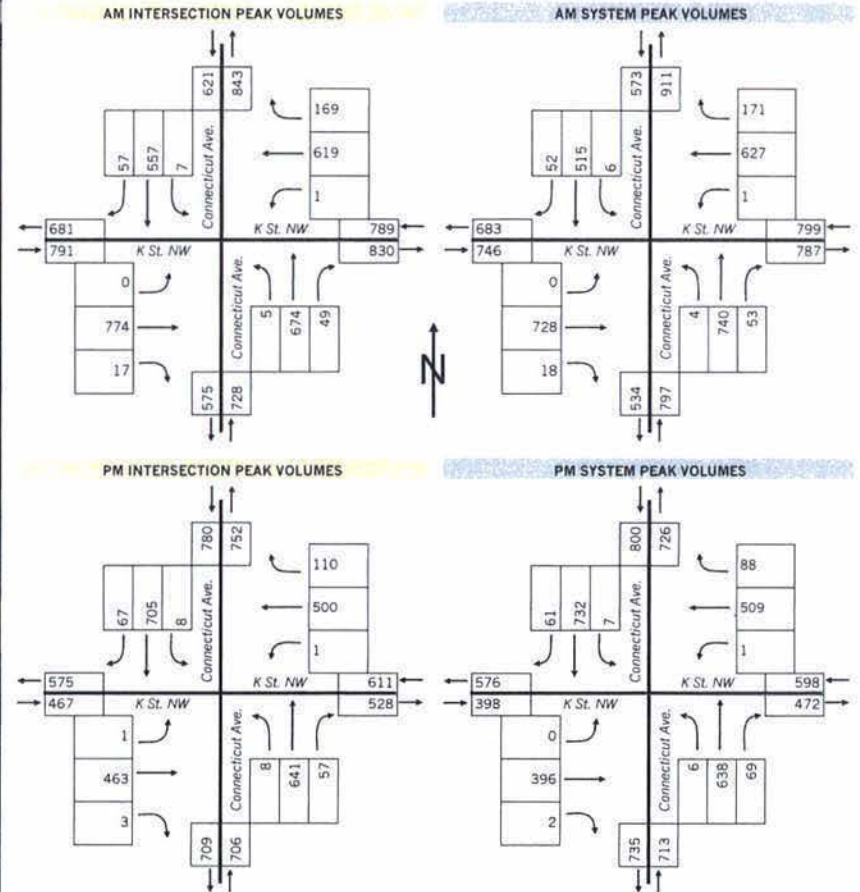
Site Map and Count Location

Gerove/Slade Associates

Project Name : 1000 CT Avenue Redevelopment
 Project # : 1407-034
 Location : 1000 CT Ave, Washington D.C.
 Data Source : GSA

Intersection:		Connecticut Avenue at K Street Northwest															
AM PEAK	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	Connecticut Ave.				K St. NW				Connecticut Ave.				K St. NW			
	Movement:	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left	
6:00 AM to 6:15 AM		6	27	1		21	72	5		3	44	0		3	99	0	
6:15 AM to 6:30 AM		5	51	3		29	83	0		4	60	3		2	112	1	
6:30 AM to 6:45 AM		7	52	5		23	101	7		6	65	3		1	125	2	
6:45 AM to 7:00 AM		12	48	0		28	160	1		11	57	0		4	181	0	
7:00 AM to 7:15 AM		17	76	6		45	128	0		11	74	0		7	162	1	
7:15 AM to 7:30 AM		20	111	1		57	140	0		13	95	1		1	186	0	
7:30 AM to 7:45 AM		6	114	2		53	147	0		17	122	1		2	186	0	
7:45 AM to 8:00 AM		15	175	3		42	142	0		13	136	2		2	243	0	
8:00 AM to 8:15 AM		14	135	0		37	140	0		13	182	1		6	177	0	
8:15 AM to 8:30 AM		12	128	3		51	164	1		15	191	2		5	168	0	
8:30 AM to 8:45 AM		16	119	1		39	173	0		8	165	0		4	186	0	
8:45 AM to 9:00 AM		10	133	2		44	150	0		17	202	1		3	197	0	
PM PEAK	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	Connecticut Ave.				K St. NW				Connecticut Ave.				K St. NW			
	Movement:	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left	
4:00 PM to 4:15 PM		23	145	6		29	103	0		4	82	2		2	73	2	
4:15 PM to 4:30 PM		11	188	2		26	124	0		17	103	0		1	125	0	
4:30 PM to 4:45 PM		18	151	2		25	164	0		18	117	1		9	137	0	
4:45 PM to 5:00 PM		23	143	3		22	141	0		17	125	2		1	150	0	
5:00 PM to 5:15 PM		19	145	2		40	150	0		25	171	2		13	108	0	
5:15 PM to 5:30 PM		20	188	4		19	142	0		17	133	1		0	102	0	
5:30 PM to 5:45 PM		12	168	2		30	138	0		15	159	1		1	93	0	
5:45 PM to 6:00 PM		17	195	1		15	123	1		24	176	2		0	92	0	
6:00 PM to 6:15 PM		12	181	0		24	106	0		13	170	2		1	109	0	
6:15 PM to 6:30 PM		24	177	4		36	137	0		10	154	0		1	111	0	
6:30 PM to 6:45 PM		14	152	3		35	134	0		10	141	4		1	151	1	
6:45 PM to 7:00 PM		17	138	2		20	158	0		16	145	0		1	163	0	
PEAK HOURS	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	Connecticut Ave.				K St. NW				Connecticut Ave.				K St. NW			
	Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																	
7:45 AM to 8:45 AM		57	557	7	0	169	619	1	0	49	674	5	0	17	774	0	0
PM INTERSECTION PEAK HOUR																	
6:00 PM to 7:00 PM		67	705	8	0	110	500	1	0	57	641	8	0	3	463	1	0
AM SYSTEM PEAK HOUR																	
8:00 AM to 9:00 AM		52	515	6	0	171	627	1	0	53	740	4	0	18	728	0	0
PM SYSTEM PEAK HOUR																	
5:15 PM to 6:15 PM		61	732	7	0	88	509	1	0	69	638	6	0	2	396	0	0
PEAK HOUR FACTORS	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	Connecticut Ave.				K St. NW				Connecticut Ave.				K St. NW			
	Movement:	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM PEAK HOUR		0.81	0.95	0.50	N/A	0.84	0.91	0.25	N/A	0.78	0.92	0.50	N/A	0.75	0.92	0.00	N/A
PM PEAK HOUR		0.76	0.94	0.44	N/A	0.73	0.90	0.25	N/A	0.72	0.91	0.75	N/A	0.50	0.91	0.00	N/A
Overall AM PEAK HOUR FACTOR																	
Total AM Intersection Volume:		7023															
Total PM Intersection Volume:		7451															
Overall PM PEAK HOUR FACTOR																	
		= 0.96												= 0.97			

Date of Counts: Wednesday, September 07, 2005
 AM Weather Conditions: Clear PM Weather Conditions: Clear

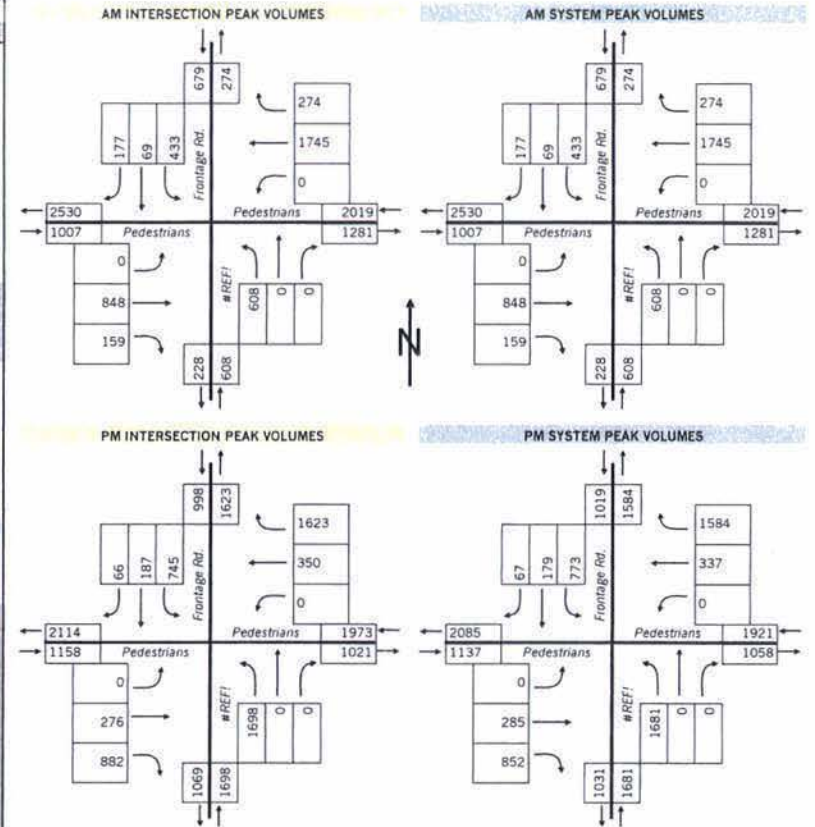


Gorove/Slade Associates

Project Name	1000 CT Avenue Redevelopment
Project #	1407-034
Location	1000 CT Ave, Washington D C
Data Source	Petra

Intersection:		Connecticut Avenue at K Street Northwest -- Pedestrian and Frontage Road Activity															
AM PEAK		Direction: Roadway: Movement:		West Approach				North Approach				East Approach				South Approach	
				Frontage Rd.		Pedestrians		Pedestrians		Pedestrians		Pedestrians		Pedestrians			
		E'bound	W'bound	N'bound	S'bound	E'bound	W'bound			N'bound	S'bound	E'bound	W'bound				
6:00 AM	to 6:15 AM	17	2	18	11	6	23			13	46	2	14				
6:15 AM	to 6:30 AM	19	6	18	17	12	32			14	51	5	31				
6:30 AM	to 6:45 AM	23	8	7	37	11	69			23	94	4	39				
6:45 AM	to 7:00 AM	36	24	21	52	17	93			29	135	16	61				
7:00 AM	to 7:15 AM	50	24	28	68	31	86			42	174	21	70				
7:15 AM	to 7:30 AM	43	22	54	77	35	148			46	175	12	69				
7:30 AM	to 7:45 AM	56	31	57	119	23	211			72	248	22	116				
7:45 AM	to 8:00 AM	61	16	62	158	40	262			79	266	24	127				
8:00 AM	to 8:15 AM	63	18	82	168	41	241			150	310	22	150				
8:15 AM	to 8:30 AM	52	16	86	248	50	410			116	425	30	180				
8:30 AM	to 8:45 AM	34	8	143	304	62	620			156	534	57	242				
8:45 AM	to 9:00 AM	28	27	122	335	58	474			186	491	50	276				
PM PEAK		Direction: Roadway: Movement:		West Approach				North Approach				East Approach				South Approach	
				Frontage Rd.		Pedestrians		Pedestrians		Pedestrians		Pedestrians		Pedestrians			
		E'bound	W'bound	N'bound	S'bound	E'bound	W'bound			N'bound	S'bound	E'bound	W'bound				
4:00 PM	to 4:15 PM	13	35	94	49	190	74			205	58	69	29				
4:15 PM	to 4:30 PM	10	61	92	70	169	84			248	110	144	53				
4:30 PM	to 4:45 PM	14	40	108	79	212	64			276	94	122	49				
4:45 PM	to 5:00 PM	21	62	106	91	232	60			276	134	141	46				
5:00 PM	to 5:15 PM	14	43	197	109	422	81			417	190	224	53				
5:15 PM	to 5:30 PM	15	52	158	98	353	94			361	200	197	79				
5:30 PM	to 5:45 PM	22	52	205	115	462	85			462	192	239	71				
5:45 PM	to 6:00 PM	15	40	185	95	386	90			458	168	222	73				
6:00 PM	to 6:15 PM	15	35	225	90	383	68			400	231	194	62				
6:15 PM	to 6:30 PM	19	48	183	83	331	70			350	142	175	45				
6:30 PM	to 6:45 PM	13	65	127	70	290	53			278	119	136	36				
6:45 PM	to 7:00 PM	24	75	123	48	209	40			223	71	112	35				
PEAK HOURS		Direction: Roadway: Movement:		Southbound				Westbound				Northbound				Eastbound	
				Frontage Rd.		Pedestrians		Pedestrians		Pedestrians		Pedestrians		Pedestrians			
		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																	
8:00 AM	to 9:00 AM	177	69	433	1055	274	1745	0	0	0	0	608	1760	159	848	0	0
PM INTERSECTION PEAK HOUR																	
5:00 PM	to 6:00 PM	66	187	745	417	1623	350	0	0	0	0	1698	750	882	276	0	0
AM SYSTEM PEAK HOUR																	
8:00 AM	to 9:00 AM	177	69	433	1055	274	1745	0	0	0	0	608	1760	159	848	0	0
PM SYSTEM PEAK HOUR																	
5:15 PM	to 6:15 PM	67	179	773	398	1584	337	0	0	0	0	1681	791	852	285	0	0
PEAK HOUR		Southbound				Westbound				Northbound				Eastbound			
FACTORS		Frontage Rd.		Pedestrians		Pedestrians		Pedestrians		Pedestrians		Pedestrians		Pedestrians		Pedestrians	
		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM PEAK HOUR		0.70	0.64	0.76	N/A	1.10	0.70	0.00	N/A	0.00	0.00	0.82	N/A	0.70	0.77	0.00	N/A
PM PEAK HOUR		0.76	0.86	0.86	N/A	0.86	0.90	0.00	N/A	0.00	0.00	0.91	N/A	0.89	0.90	0.00	N/A
Overall AM PEAK HOUR FACTOR		= 0.80								Overall PM PEAK HOUR FACTOR				= 0.90			
Total AM Intersection Volume:		11546				Total PM Intersection Volume:				16374							

Date of Counts: Wednesday, September 07, 2005
 AM Weather Conditions: Clear PM Weather Conditions: Clear

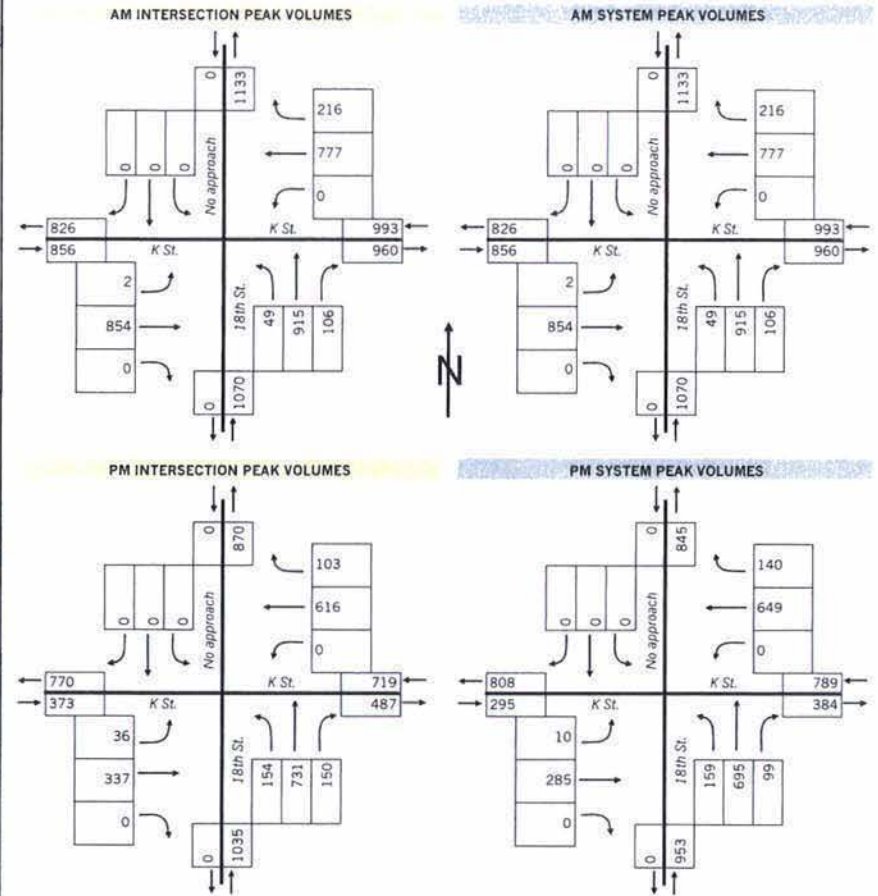


Goroye/Slade Associates

Project Name: 1000 CT Avenue Redevelopment
 Project Number: 1407-034
 Location: 1000 CT Ave, Washington D.C.
 Data Source: GSA

Intersection:		18th Street at K Street Northwest															
AM PEAK	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	No approach				K St.				18th St.				K St.			
	Movement:		Right	Thru		Right	Thru	Left		Right	Thru	Left		Thru	Left		
6:00 AM	to 6:15 AM		11	95					10	78	6			83	6		
6:15 AM	to 6:30 AM		23	91					11	78	5			111	11		
6:30 AM	to 6:45 AM		18	102					20	103	10			120	17		
6:45 AM	to 7:00 AM		34	171					23	145	20			178	12		
7:00 AM	to 7:15 AM		45	159					28	132	18			172	2		
7:15 AM	to 7:30 AM		34	170					38	173	12			198	0		
7:30 AM	to 7:45 AM		61	140					27	195	18			209	0		
7:45 AM	to 8:00 AM		59	169					25	217	19			241	2		
8:00 AM	to 8:15 AM		54	180					27	260	10			217	0		
8:15 AM	to 8:30 AM		54	203					35	189	18			184	0		
8:30 AM	to 8:45 AM		52	217					24	223	7			224	0		
8:45 AM	to 9:00 AM		56	177					20	243	14			229	2		
PM PEAK	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	No approach				K St.				18th St.				K St.			
	Movement:		Right	Thru		Right	Thru	Left		Right	Thru	Left		Thru	Left		
4:00 PM	to 4:15 PM		17	107					15	138	19			58	2		
4:15 PM	to 4:30 PM		31	144					29	169	40			99	4		
4:30 PM	to 4:45 PM		40	141					30	147	34			118	4		
4:45 PM	to 5:00 PM		29	169					40	182	35			65	3		
5:00 PM	to 5:15 PM		45	161					32	173	29			91	1		
5:15 PM	to 5:30 PM		41	164					15	142	51			78	2		
5:30 PM	to 5:45 PM		47	178					16	153	31			68	4		
5:45 PM	to 6:00 PM		26	137					33	177	42			66	3		
6:00 PM	to 6:15 PM		26	170					35	223	35			73	1		
6:15 PM	to 6:30 PM		27	145					44	182	45			87	17		
6:30 PM	to 6:45 PM		24	164					38	149	32			111	15		
6:45 PM	to 7:00 PM		25	178					35	144	45			167	19		
PEAK HOURS		Southbound				Westbound				Northbound				Eastbound			
		No approach				K St.				18th St.				K St.			
		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																	
8:00 AM to 9:00 AM		0	0	0	0	216	777	0	0	106	915	49	0	0	854	2	0
PM INTERSECTION PEAK HOUR																	
6:00 PM to 7:00 PM		0	0	0	0	103	616	0	0	150	731	154	0	0	337	36	0
AM SYSTEM PEAK HOUR																	
8:00 AM to 9:00 AM		0	0	0	0	216	777	0	0	106	915	49	0	0	854	2	0
PM SYSTEM PEAK HOUR																	
5:15 PM to 6:15 PM		0	0	0	0	140	649	0	0	99	695	159	0	0	285	10	0
PEAK HOUR FACTORS		Southbound				Westbound				Northbound				Eastbound			
		No approach				K St.				18th St.				K St.			
		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM PEAK HOUR		0.00	0.00	0.00	N/A	0.96	0.90	0.00	N/A	0.76	0.88	0.68	N/A	0.00	0.93	0.25	N/A
PM PEAK HOUR		0.00	0.00	0.00	N/A	0.74	0.91	0.00	N/A	0.71	0.78	0.78	N/A	0.00	0.91	0.63	N/A
Overall AM PEAK HOUR FACTOR						= 0.98				Overall PM PEAK HOUR FACTOR				= 0.90			
Total AM Intersection Volume:		2074								Total PM Intersection Volume:				6171			

Date of Counts: Wednesday, September 07, 2005
 AM Weather Conditions: Clear PM Weather Conditions: Clear



Project Name :	1000 CT Avenue Redevelopment
Project Number:	1407-034
Location:	1000 CT Ave, Washington D.C
Data Source:	GSA

Date of Counts: Wednesday, September 07, 2005

AM Weather Conditions: Clear

PM Weather Conditions: Clear

AM INTERSECTION PEAK VOLUMES

Frontage Rd. Pedestrians

AM SYSTEM PEAK VOLUMES

Frontage Rd. Pedestrians

PM INTERSECTION PEAK VOLUMES

Frontage Rd. Pedestrians

PM SYSTEM PEAK VOLUMES

Frontage Rd. Pedestrians

Goroye/Slade Associates

Project Name: 1000 CT Avenue Redevelopment
 Project Number: 1407-034
 Location: 1000 CT Ave, Washington D.C.
 Data Source: GSA

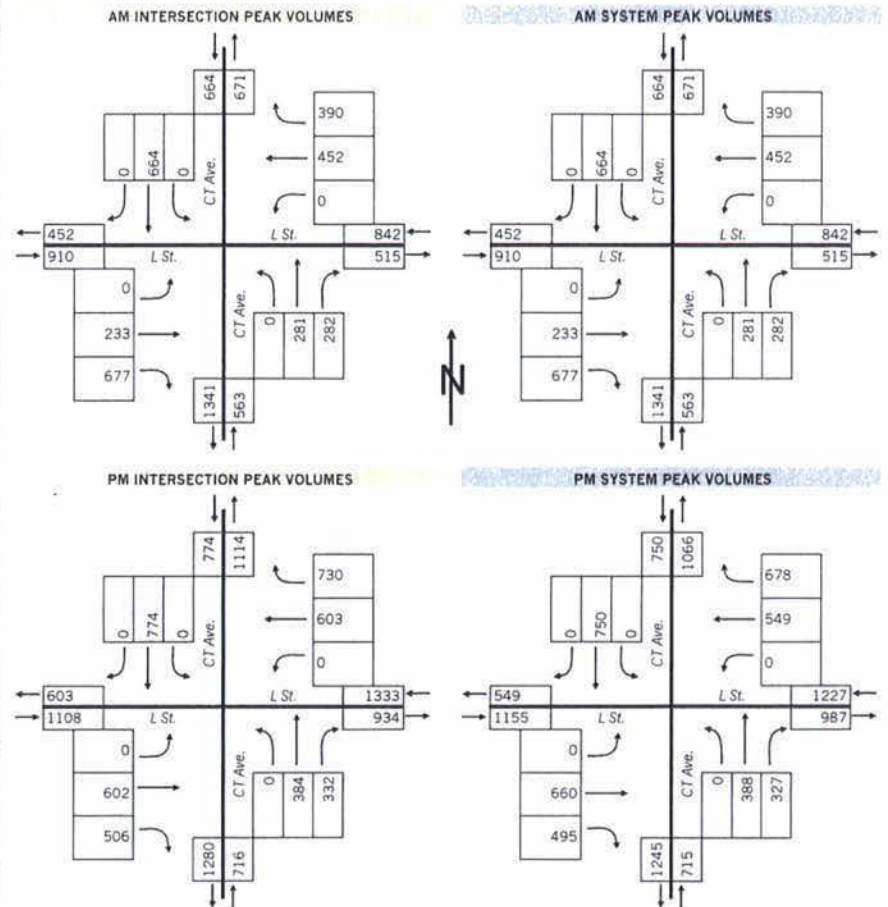
Intersection:		Connecticut Avenue at L Street Northwest															
AM PEAK		Southbound				Westbound				Northbound				Eastbound			
Direction:		CT Ave.				No Approach				CT Ave.				L St.			
Roadway:		CT Ave.				No Approach				CT Ave.				L St.			
Movement:		Thru Left				No Approach				Right Thru Peds				Right Thru Left			
6:00 AM	to 6:15 AM	30	0							14	53	9	8	75	10		
6:15 AM	to 6:30 AM	55	3							17	64	13	5	104	7		
6:30 AM	to 6:45 AM	61	1							19	63	14	9	103	8		
6:45 AM	to 7:00 AM	95	2							15	91	30	12	153	31		
7:00 AM	to 7:15 AM	71	1							32	116	26	13	151	24		
7:15 AM	to 7:30 AM	127	4							61	110	47	10	191	27		
7:30 AM	to 7:45 AM	168	0							49	161	36	5	213	44		
7:45 AM	to 8:00 AM	194	3							40	167	55	7	213	43		
8:00 AM	to 8:15 AM	204	2							47	155	96	12	210	50		
8:15 AM	to 8:30 AM	201	2							57	164	90	24	227	53		
8:30 AM	to 8:45 AM	207	1							82	160	176	14	205	60		
8:45 AM	to 9:00 AM	219	1							72	184	231	16	170	49		
PM PEAK		Southbound				Westbound				Northbound				Eastbound			
Direction:		CT Ave.				No Approach				CT Ave.				L St.			
Roadway:		CT Ave.				No Approach				CT Ave.				L St.			
Movement:		Thru Left				No Approach				Right Thru Peds				Right Thru Left			
4:00 PM	to 4:15 PM	169	4							32	146	132	20	233	27		
4:15 PM	to 4:30 PM	186	2							35	142	130	37	243	54		
4:30 PM	to 4:45 PM	177	0							22	148	198	27	256	55		
4:45 PM	to 5:00 PM	150	1							36	125	182	35	266	42		
5:00 PM	to 5:15 PM	200	1							38	178	188	24	267	47		
5:15 PM	to 5:30 PM	191	1							36	203	200	47	311	49		
5:30 PM	to 5:45 PM	188	0							34	208	209	42	273	44		
5:45 PM	to 6:00 PM	183	0							36	207	178	31	218	44		
6:00 PM	to 6:15 PM	196	3							39	195	157	35	268	60		
6:15 PM	to 6:30 PM	207	2							23	154	163	60	221	43		
6:30 PM	to 6:45 PM	170	1							28	184	130	55	161	51		
6:45 PM	to 7:00 PM	134	0							17	214	117	32	162	55		
PEAK HOURS		Southbound				Westbound				Northbound				Eastbound			
Direction:		CT Ave.				No Approach				CT Ave.				L St.			
Roadway:		CT Ave.				No Approach				CT Ave.				L St.			
Movement:		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM INTERSECTION PEAK HOUR																	
8:00 AM	to 9:00 AM	0	831	6	0	0	0	0	0	258	663	0	593	66	812	212	0
PM INTERSECTION PEAK HOUR																	
5:15 PM	to 6:15 PM	0	758	4	0	0	0	0	0	145	813	0	744	155	1070	197	0
AM SYSTEM PEAK HOUR																	
8:00 AM	to 9:00 AM	0	831	6	0	0	0	0	0	258	663	0	593	66	812	212	0
PM SYSTEM PEAK HOUR																	
5:15 PM	to 6:15 PM	0	758	4	0	0	0	0	0	145	813	0	744	155	1070	197	0
PEAK HOUR FACTORS		Southbound				Westbound				Northbound				Eastbound			
		CT Ave.				No Approach				CT Ave.				L St.			
		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
AM PEAK HOUR		0.00	0.95	0.75	N/A	0.00	0.00	0.00	N/A	0.79	0.90	0.00	N/A	0.69	0.89	0.88	N/A
PM PEAK HOUR		0.00	0.97	0.33	N/A	0.00	0.00	0.00	N/A	0.93	0.98	0.00	N/A	0.82	0.86	0.82	N/A
Overall AM PEAK HOUR FACTOR						= 0.98				Overall PM PEAK HOUR FACTOR				= 0.94			
Total AM Intersection Volume:		7024				Total PM Intersection Volume:				10525							

Gorove/Slade Associates

Project Name : 1000 CT Avenue Redevelopment
 Project Number: 1407-034
 Location: 1000 CT Ave, Washington D.C.
 Data Source: GSA

Intersection:		Connecticut Avenue at L Street Northwest -- Pedestrian Volumes																			
AM PEAK		North Approach				East Approach				South Approach				West Approach							
		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.					
		E'bound	W'bound	N'bound	S'bound	E'bound	W'bound	N'bound	S'bound	E'bound	W'bound	N'bound	S'bound	E'bound	W'bound	N'bound	S'bound				
6:00 AM	to 6:15 AM	7		1		10		4		9		6		2							
6:15 AM	to 6:30 AM	19		8		9		8		2		14		3							
6:30 AM	to 6:45 AM	10		18		6		8		7		15		13							
6:45 AM	to 7:00 AM	32		22		9		19		13		36		16							
7:00 AM	to 7:15 AM	27		17		17		18		10		42		16							
7:15 AM	to 7:30 AM	38		29		24		28		17		45		21							
7:30 AM	to 7:45 AM	51		25		46		40		11		67		19							
7:45 AM	to 8:00 AM	94		55		80		55		33		129		30							
8:00 AM	to 8:15 AM	103		80		112		57		57		123		49							
8:15 AM	to 8:30 AM	120		45		83		53		55		136		43							
8:30 AM	to 8:45 AM	178		98		136		84		84		217		54							
8:45 AM	to 9:00 AM	263		167		121		88		85		201		87							
PM PEAK		North Approach				East Approach				South Approach				West Approach							
		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.					
		E'bound	W'bound	N'bound	S'bound	E'bound	W'bound	N'bound	S'bound	E'bound	W'bound	N'bound	S'bound	E'bound	W'bound	N'bound	S'bound				
4:00 PM	to 4:15 PM	55		49		72		69		71		76		71							
4:15 PM	to 4:30 PM	87		83		53		86		54		93		95							
4:30 PM	to 4:45 PM	67		76		71		92		97		68		86							
4:45 PM	to 5:00 PM	49		91		77		80		100		78		124							
5:00 PM	to 5:15 PM	88		88		136		92		66		87		208							
5:15 PM	to 5:30 PM	115		122		102		95		97		110		185							
5:30 PM	to 5:45 PM	284		166		201		77		99		140		182							
5:45 PM	to 6:00 PM	224		208		92		58		114		126		131							
6:00 PM	to 6:15 PM	127		182		154		97		78		119		162							
6:15 PM	to 6:30 PM	139		174		156		100		93		121		127							
6:30 PM	to 6:45 PM	85		188		102		55		71		109		122							
6:45 PM	to 7:00 PM	89		170		119		51		72		88		89							
PEAK HOURS		Southbound				Westbound				Northbound				Eastbound							
		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.					
		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds				
AM INTERSECTION PEAK HOUR		8:00 AM	to 9:00 AM	0	664	0	0	390	452	0	0	282	281	0	0	677	233	0	0		
PM INTERSECTION PEAK HOUR		5:30 PM	to 6:30 PM	0	774	0	0	730	603	0	0	332	384	0	0	506	602	0	0		
AM SYSTEM PEAK HOUR		8:00 AM	to 9:00 AM	0	664	0	0	390	452	0	0	282	281	0	0	677	233	0	0		
PM SYSTEM PEAK HOUR		5:15 PM	to 6:15 PM	0	750	0	0	678	549	0	0	327	388	0	0	495	660	0	0		
PEAK HOUR FACTORS		Southbound				Westbound				Northbound				Eastbound							
		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.		CT Ave.		L St.					
		Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds				
AM PEAK HOUR		0.00	0.63	0.00	N/A	0.58	0.83	0.00	N/A	0.80	0.83	0.00	N/A	0.78	0.67	##	##	N/A	N/A		
PM PEAK HOUR		0.00	0.66	0.00	N/A	0.81	0.68	0.00	N/A	0.84	0.85	0.00	N/A	0.88	0.89	##	##	N/A	N/A		
Overall AM PEAK HOUR FACTOR		= 0.74				Overall PM PEAK HOUR FACTOR				= ##											
Total AM Intersection Volume:		4389				Total PM Intersection Volume:				5102											

Date of Counts: Thursday, September 08, 2005
 AM Weather Conditions: Clear PM Weather Conditions: Clear



HCM Signalized Intersection Capacity Analysis
1: K Street & Connecticut Ave.

Existing AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑		↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0			4.0	
Lane Util. Factor		0.95	1.00		0.95	1.00		0.91			0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.46		0.96			0.95	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.99	
Flt Protected		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (prot)		3539	1583		3539	726		4851			4764	
Flt Permitted		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (perm)		3539	1583		3539	726		4851			4764	
Volume (vph)	0	728	18	0	627	171	0	740	53	0	515	52
Peak-hour factor, PHF	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	791	20	0	682	186	0	804	58	0	560	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	791	20	0	682	186	0	861	0	0	617	0
Confl. Peds. (#/hr)	1700		1007	1007		1700	1488		1700	1700		1488
Turn Type		Prot			Perm							
Protected Phases		4	4		8			2			6	
Permitted Phases					8							
Actuated Green, G (s)		55.0	55.0		55.0	55.0		33.0			33.0	
Effective Green, g (s)		57.0	57.0		57.0	57.0		35.0			35.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.35			0.35	
Clearance Time (s)		6.0	6.0		6.0	6.0		6.0			6.0	
Lane Grp Cap (vph)		2017	902		2017	414		1698			1667	
v/s Ratio Prot		0.22	0.01		0.19			c0.18			0.13	
v/s Ratio Perm					c0.26							
v/c Ratio		0.39	0.02		0.34	0.45		0.51			0.37	
Uniform Delay, d1		11.9	9.4		11.5	12.4		25.7			24.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00			0.60	
Incremental Delay, d2		0.6	0.0		0.5	3.5		1.1			0.6	
Delay (s)		12.5	9.4		11.9	15.9		26.8			15.1	
Level of Service		B	A		B	B		C			B	
Approach Delay (s)		12.4			12.8			26.8			15.1	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay		16.9			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.47										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		48.5%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
2: K Street & 18th Street

Existing AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0				
Lane Util. Factor		0.95			0.95	1.00		0.86				
Frpb, ped/bikes		1.00			1.00	0.46		0.95				
Flpb, ped/bikes		1.00			1.00	1.00		0.98				
Frt		1.00			1.00	0.85		0.99				
Flt Protected		1.00			1.00	1.00		1.00				
Satd. Flow (prot)		3539			3539	725		5825				
Flt Permitted		1.00			1.00	1.00		1.00				
Satd. Flow (perm)		3539			3539	725		5825				
Volume (vph)	0	854	0	0	777	216	49	915	106	0	0	0
Peak-hour factor, PHF	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	928	0	0	845	235	53	995	115	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	0	0
Lane Group Flow (vph)	0	928	0	0	845	234	0	1163	0	0	0	0
Confl. Peds. (#/hr)	930		729	729		930	1586		781	781		1586
Confl. Bikes (#/hr)			3			13			32			1
Turn Type						Perm	Perm					
Protected Phases		4			8			2				
Permitted Phases						8	2					
Actuated Green, G (s)		39.0			39.0	39.0		45.0				
Effective Green, g (s)		41.0			41.0	41.0		47.0				
Actuated g/C Ratio		0.43			0.43	0.43		0.49				
Clearance Time (s)		6.0			6.0	6.0		6.0				
Lane Grp Cap (vph)		1511			1511	310		2852				
v/s Ratio Prot		0.26			0.24							
v/s Ratio Perm						c0.32		0.20				
v/c Ratio		0.61			0.56	0.76		0.41				
Uniform Delay, d1		21.4			20.7	23.3		15.6				
Progression Factor		1.00			1.00	1.00		1.00				
Incremental Delay, d2		1.9			1.5	15.8		0.4				
Delay (s)		23.2			22.2	39.0		16.1				
Level of Service		C			C	D		B				
Approach Delay (s)		23.2			25.9			16.1			0.0	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay		21.5			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.57										
Actuated Cycle Length (s)		96.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		49.0%			ICU Level of Service			A				
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: L Street & Connecticut Ave.

Existing AM
11/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑						↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.91			0.91	
Frbp, ped/bikes		0.97						0.87			1.00	
Flpb, ped/bikes		0.90						1.00			1.00	
Frt		0.99						0.96			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4320						4249			5085	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		4320						4249			5085	
Volume (vph)	212	812	66	0	0	0	0	663	258	0	831	0
Peak-hour factor, PHF	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)	230	883	72	0	0	0	0	721	280	0	903	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1184	0	0	0	0	0	1001	0	0	903	0
Confl. Peds. (#/hr)	842		910	910		842	664		563	563		664
Confl. Bikes (#/hr)			22			3			25			14
Turn Type	Perm											
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		42.0						47.0			47.0	
Effective Green, g (s)		42.0						50.0			50.0	
Actuated g/C Ratio		0.42						0.50			0.50	
Clearance Time (s)		4.0						7.0			7.0	
Lane Grp Cap (vph)		1814						2125			2543	
v/s Ratio Prot								c0.24			0.18	
v/s Ratio Perm		0.27										
v/c Ratio		0.65						0.47			0.36	
Uniform Delay, d1		23.2						16.4			15.2	
Progression Factor		1.00						0.39			1.00	
Incremental Delay, d2		1.8						0.7			0.4	
Delay (s)		25.0						7.1			15.6	
Level of Service		C						A			B	
Approach Delay (s)		25.0			0.0			7.1			15.6	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay		16.4						HCM Level of Service			B	
HCM Volume to Capacity ratio		0.55										
Actuated Cycle Length (s)		100.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		52.5%						ICU Level of Service		A		
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: K Street & Connecticut Ave.

Existing PM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑		↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0			4.0	
Lane Util. Factor		0.95	1.00		0.95	1.00		0.91			0.91	
Flpb, ped/bikes		1.00	1.00		1.00	0.46		0.95			0.96	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.99	
Flt Protected		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (prot)		3539	1583		3539	725		4745			4818	
Flt Permitted		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (perm)		3539	1583		3539	725		4745			4818	
Volume (vph)	0	396	2	0	509	88	0	638	69	0	732	61
Peak-hour factor, PHF	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	430	2	0	553	96	0	693	75	0	796	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	430	2	0	553	96	0	767	0	0	862	0
Confl. Peds. (#/hr)	1700		1137	1137		1700	1171		1700	1700		1171
Confl. Bikes (#/hr)			18			20			34			14
Turn Type		Prot			Perm							
Protected Phases		4	4		8			2			6	
Permitted Phases					8							
Actuated Green, G (s)		55.0	55.0		55.0	55.0		33.0			33.0	
Effective Green, g (s)		57.0	57.0		57.0	57.0		35.0			35.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.35			0.35	
Clearance Time (s)		6.0	6.0		6.0	6.0		6.0			6.0	
Lane Grp Cap (vph)		2017	902		2017	413		1661			1686	
v/s Ratio Prot		0.12	0.00		c0.16			0.16			c0.18	
v/s Ratio Perm					0.13							
v/c Ratio		0.21	0.00		0.27	0.23		0.46			0.51	
Uniform Delay, d1		10.5	9.3		11.0	10.7		25.2			25.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00			0.59	
Incremental Delay, d2		0.2	0.0		0.3	1.3		0.9			1.0	
Delay (s)		10.8	9.3		11.3	12.0		26.1			16.3	
Level of Service		B	A		B	B		C			B	
Approach Delay (s)		10.8			11.4			26.1			16.3	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			17.0				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.36									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			42.2%				ICU Level of Service			A		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: K Street & 18th Street

Existing PM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0				
Lane Util. Factor		0.95			0.95	1.00		0.86				
Frbp, ped/bikes		1.00			1.00	0.46		0.95				
Flpb, ped/bikes		1.00			1.00	1.00		0.91				
Frt		1.00			1.00	0.85		0.98				
Flt Protected		1.00			1.00	1.00		0.99				
Satd. Flow (prot)		3539			3539	725		5413				
Flt Permitted		1.00			1.00	1.00		0.99				
Satd. Flow (perm)		3539			3539	725		5413				
Volume (vph)	0	285	0	0	649	140	159	695	99	0	0	0
Peak-hour factor, PHF	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	310	0	0	705	152	173	755	108	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	2	0	5	0	0	0	0
Lane Group Flow (vph)	0	310	0	0	705	150	0	1031	0	0	0	0
Confl. Peds. (#/hr)	996		543	543		996	1518		620	620		1518
Confl. Bikes (#/hr)			3			13			32			1
Turn Type						Perm	Perm					
Protected Phases		4			8			2				
Permitted Phases						8	2					
Actuated Green, G (s)		39.0			39.0	39.0		45.0				
Effective Green, g (s)		41.0			41.0	41.0		47.0				
Actuated g/C Ratio		0.43			0.43	0.43		0.49				
Clearance Time (s)		6.0			6.0	6.0		6.0				
Lane Grp Cap (vph)		1511			1511	310		2650				
v/s Ratio Prot		0.09			0.20							
v/s Ratio Perm						0.21		0.19				
v/c Ratio		0.21			0.47	0.48		0.39				
Uniform Delay, d1		17.3			19.7	19.9		15.4				
Progression Factor		1.00			1.00	1.00		1.00				
Incremental Delay, d2		0.3			1.0	5.3		0.4				
Delay (s)		17.6			20.7	25.2		15.9				
Level of Service		B			C	C		B				
Approach Delay (s)		17.6			21.5			15.9			0.0	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM Average Control Delay		18.3			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.43										
Actuated Cycle Length (s)		96.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		42.9%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
3: L Street & Connecticut Ave.

Existing PM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑						↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.91			0.91	
Frpb, ped/bikes		0.94						0.92			1.00	
Flpb, ped/bikes		0.93						1.00			1.00	
Frt		0.98						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4325						4584			5085	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		4325						4584			5085	
Volume (vph)	197	1070	155	0	0	0	0	813	145	0	758	0
Peak-hour factor, PHF	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)	214	1163	168	0	0	0	0	884	158	0	824	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1544	0	0	0	0	0	1042	0	0	824	0
Confl. Peds. (#/hr)	1333		1108	1108			1333	774		716	716	774
Confl. Bikes (#/hr)			22				3			25		14
Turn Type	Perm											
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		42.0						47.0			47.0	
Effective Green, g (s)		42.0						50.0			50.0	
Actuated g/C Ratio		0.42						0.50			0.50	
Clearance Time (s)		4.0						7.0			7.0	
Lane Grp Cap (vph)		1817						2292			2543	
v/s Ratio Prot								0.23			0.16	
v/s Ratio Perm		0.36										
v/c Ratio		0.85						0.45			0.32	
Uniform Delay, d1		26.2						16.2			14.9	
Progression Factor		1.00						0.40			1.00	
Incremental Delay, d2		5.2						0.6			0.3	
Delay (s)		31.4						7.0			15.3	
Level of Service		C						A			B	
Approach Delay (s)		31.4			0.0			7.0			15.3	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay		20.0						HCM Level of Service		C		
HCM Volume to Capacity ratio		0.64										
Actuated Cycle Length (s)		100.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		59.0%						ICU Level of Service		B		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
1: K Street & Connecticut Ave.

Background AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑		↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0			4.0	
Lane Util. Factor		0.95	1.00		0.95	1.00		0.91			0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.46		0.96			0.95	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.99	
Flt Protected		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (prot)		3539	1583		3539	726		4849			4772	
Flt Permitted		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (perm)		3539	1583		3539	726		4849			4772	
Volume (vph)	0	756	25	0	646	176	0	762	55	0	550	54
Peak-hour factor, PHF	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	822	27	0	702	191	0	828	60	0	598	59
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	822	27	0	702	191	0	887	0	0	657	0
Confl. Peds. (#/hr)	1700		1007	1007		1700	1488		1700	1700		1488
Confl. Bikes (#/hr)			9			15			10			18
Turn Type			Prot			Perm						
Protected Phases		4	4		8			2			6	
Permitted Phases						8						
Actuated Green, G (s)		55.0	55.0		55.0	55.0		33.0			33.0	
Effective Green, g (s)		57.0	57.0		57.0	57.0		35.0			35.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.35			0.35	
Clearance Time (s)		6.0	6.0		6.0	6.0		6.0			6.0	
Lane Grp Cap (vph)		2017	902		2017	414		1697			1670	
v/s Ratio Prot		0.23	0.02		0.20			c0.18			0.14	
v/s Ratio Perm						c0.26						
v/c Ratio		0.41	0.03		0.35	0.46		0.52			0.39	
Uniform Delay, d1		12.0	9.4		11.5	12.5		25.9			24.5	
Progression Factor		1.00	1.00		1.00	1.00		1.00			0.59	
Incremental Delay, d2		0.6	0.1		0.5	3.7		1.2			0.7	
Delay (s)		12.7	9.5		12.0	16.2		27.0			15.1	
Level of Service		B	A		B	B		C			B	
Approach Delay (s)		12.6			12.9			27.0			15.1	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay		17.1					HCM Level of Service		B			
HCM Volume to Capacity ratio		0.48										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)		8.0			
Intersection Capacity Utilization		49.3%					ICU Level of Service		A			
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: K Street & 18th Street

Background AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0				
Lane Util. Factor		0.95			0.95	1.00		0.86				
Frpb, ped/bikes		1.00			1.00	0.46		0.93				
Flpb, ped/bikes		1.00			1.00	1.00		0.98				
Frft		1.00			1.00	0.85		0.98				
Flt Protected		1.00			1.00	1.00		1.00				
Satd. Flow (prot)		3539			3539	726		5661				
Flt Permitted		1.00			1.00	1.00		1.00				
Satd. Flow (perm)		3539			3539	726		5661				
Volume (vph)	0	923	0	0	801	216	49	915	158	0	0	0
Peak-hour factor, PHF	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	1003	0	0	871	235	53	995	172	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	0	0
Lane Group Flow (vph)	0	1003	0	0	871	234	0	1220	0	0	0	0
Confl. Peds. (#/hr)	930		729	729		930	1586		781	781		1586
Confl. Bikes (#/hr)			4			8			11			2
Turn Type						Perm	Perm					
Protected Phases		4			8			2				
Permitted Phases						8	2					
Actuated Green, G (s)		39.0			39.0	39.0		45.0				
Effective Green, g (s)		41.0			41.0	41.0		47.0				
Actuated g/C Ratio		0.43			0.43	0.43		0.49				
Clearance Time (s)		6.0			6.0	6.0		6.0				
Lane Grp Cap (vph)		1511			1511	310		2772				
v/s Ratio Prot		0.28			0.25							
v/s Ratio Perm						c0.32		0.22				
v/c Ratio		0.66			0.58	0.76		0.44				
Uniform Delay, d1		22.0			20.9	23.3		15.9				
Progression Factor		1.00			1.00	1.00		1.00				
Incremental Delay, d2		2.3			1.6	15.8		0.5				
Delay (s)		24.3			22.5	39.0		16.4				
Level of Service		C			C	D		B				
Approach Delay (s)		24.3			26.0			16.4			0.0	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay		22.0			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.59										
Actuated Cycle Length (s)		96.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		52.1%			ICU Level of Service			A				
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: L Street & Connecticut Ave.

Background AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑						↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.91			0.91	
Frpb, ped/bikes		0.97						0.88			1.00	
Flpb, ped/bikes		0.90						1.00			1.00	
Frft		0.99						0.96			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4326						4269			5085	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		4326						4269			5085	
Volume (vph)	212	822	66	0	0	0	0	683	258	0	875	0
Peak-hour factor, PHF	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)	230	893	72	0	0	0	0	742	280	0	951	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1194	0	0	0	0	0	1022	0	0	951	0
Confl. Peds. (#/hr)	842		910	910		842	664		563	563		664
Confl. Bikes (#/hr)			18						5			19
Turn Type	Perm											
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		42.0						47.0			47.0	
Effective Green, g (s)		42.0						50.0			50.0	
Actuated g/C Ratio		0.42						0.50			0.50	
Clearance Time (s)		4.0						7.0			7.0	
Lane Grp Cap (vph)		1817						2135			2543	
v/s Ratio Prot								c0.24			0.19	
v/s Ratio Perm		0.28										
v/c Ratio		0.66						0.48			0.37	
Uniform Delay, d1		23.2						16.4			15.4	
Progression Factor		1.00						0.38			1.00	
Incremental Delay, d2		1.9						0.7			0.4	
Delay (s)		25.1						6.9			15.8	
Level of Service		C						A			B	
Approach Delay (s)		25.1			0.0			6.9			15.8	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay		16.4						HCM Level of Service		B		
HCM Volume to Capacity ratio		0.56										
Actuated Cycle Length (s)		100.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		53.0%						ICU Level of Service		A		
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: K Street & Connecticut Ave.

Background PM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑		↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0			4.0	
Lane Util. Factor		0.95	1.00		0.95	1.00		0.91			0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.46		0.95			0.96	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.99	
Flt Protected		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (prot)		3539	1583		3539	725		4746			4826	
Flt Permitted		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (perm)		3539	1583		3539	725		4746			4826	
Volume (vph)	0	449	43	0	510	91	0	657	71	0	757	61
Peak-hour factor, PHF	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	488	47	0	554	99	0	714	77	0	823	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	488	47	0	554	99	0	790	0	0	889	0
Confl. Peds. (#/hr)	1700		1137	1137		1700	1171		1700	1700		1171
Confl. Bikes (#/hr)			18			20			34			14
Turn Type		Prot			Perm							
Protected Phases		4	4		8			2			6	
Permitted Phases						8						
Actuated Green, G (s)		55.0	55.0		55.0	55.0		33.0			33.0	
Effective Green, g (s)		57.0	57.0		57.0	57.0		35.0			35.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.35			0.35	
Clearance Time (s)		6.0	6.0		6.0	6.0		6.0			6.0	
Lane Grp Cap (vph)		2017	902		2017	413		1661			1689	
v/s Ratio Prot		0.14	0.03		c0.16			0.17			c0.18	
v/s Ratio Perm						0.14						
v/c Ratio		0.24	0.05		0.27	0.24		0.48			0.53	
Uniform Delay, d1		10.7	9.5		11.0	10.7		25.3			25.9	
Progression Factor		1.00	1.00		1.00	1.00		1.00			0.59	
Incremental Delay, d2		0.3	0.1		0.3	1.4		1.0			1.1	
Delay (s)		11.0	9.6		11.3	12.1		26.3			16.3	
Level of Service		B	A		B	B		C			B	
Approach Delay (s)		10.9			11.4			26.3			16.3	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay		17.0					HCM Level of Service		B			
HCM Volume to Capacity ratio		0.37										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)		8.0			
Intersection Capacity Utilization		42.8%					ICU Level of Service		A			
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis 2: K Street & 18th Street

Background PM
11/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0				
Lane Util. Factor		0.95			0.95	1.00		0.86				
Frpb, ped/bikes		1.00			1.00	0.46		0.95				
Flpb, ped/bikes		1.00			1.00	1.00		0.91				
Frt		1.00			1.00	0.85		0.98				
Flt Protected		1.00			1.00	1.00		0.99				
Satd. Flow (prot)		3539			3539	725		5391				
Flt Permitted		1.00			1.00	1.00		0.99				
Satd. Flow (perm)		3539			3539	725		5391				
Volume (vph)	0	302	0	0	670	140	159	695	108	0	0	0
Peak-hour factor, PHF	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	328	0	0	728	152	173	755	117	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	2	0	5	0	0	0	0
Lane Group Flow (vph)	0	328	0	0	728	150	0	1040	0	0	0	0
Confl. Peds. (#/hr)	996		543	543		996	1518		620	620		1518
Confl. Bikes (#/hr)			3			13			32			1
Turn Type					Perm	Perm						
Protected Phases		4			8			2				
Permitted Phases						8	2					
Actuated Green, G (s)		39.0			39.0	39.0		45.0				
Effective Green, g (s)		41.0			41.0	41.0		47.0				
Actuated g/C Ratio		0.43			0.43	0.43		0.49				
Clearance Time (s)		6.0			6.0	6.0		6.0				
Lane Grp Cap (vph)		1511			1511	310		2639				
v/s Ratio Prot		0.09			0.21							
v/s Ratio Perm						c0.21		0.19				
v/c Ratio		0.22			0.48	0.48		0.39				
Uniform Delay, d1		17.4			19.8	19.9		15.5				
Progression Factor		1.00			1.00	1.00		1.00				
Incremental Delay, d2		0.3			1.1	5.3		0.4				
Delay (s)		17.7			20.9	25.2		15.9				
Level of Service		B			C	C		B				
Approach Delay (s)		17.7			21.7			15.9			0.0	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM Average Control Delay		18.4			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.44										
Actuated Cycle Length (s)		96.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		43.2%			ICU Level of Service			A				
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: L Street & Connecticut Ave.

Background PM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑						↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.91			0.91	
Frpb, ped/bikes		0.94						0.92			1.00	
Flpb, ped/bikes		0.93						1.00			1.00	
Frt		0.98						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4326						4596			5085	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		4326						4596			5085	
Volume (vph)	197	1072	155	0	0	0	0	838	145	0	784	0
Peak-hour factor, PHF	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)	214	1165	168	0	0	0	0	911	158	0	852	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1546	0	0	0	0	0	1069	0	0	852	0
Confl. Peds. (#/hr)	1333		1108	1108			1333	774		716	716	774
Confl. Bikes (#/hr)			22				3			25		14
Turn Type	Perm											
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		42.0						47.0			47.0	
Effective Green, g (s)		42.0						50.0			50.0	
Actuated g/C Ratio		0.42						0.50			0.50	
Clearance Time (s)		4.0						7.0			7.0	
Lane Grp Cap (vph)		1817						2298			2543	
v/s Ratio Prot								c0.23			0.17	
v/s Ratio Perm		0.36										
v/c Ratio		0.85						0.47			0.34	
Uniform Delay, d1		26.2						16.3			15.0	
Progression Factor		1.00						0.39			1.00	
Incremental Delay, d2		5.3						0.7			0.4	
Delay (s)		31.4						7.0			15.4	
Level of Service		C						A			B	
Approach Delay (s)		31.4			0.0			7.0			15.4	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay		20.0						HCM Level of Service			B	
HCM Volume to Capacity ratio		0.64										
Actuated Cycle Length (s)		100.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		59.5%						ICU Level of Service		B		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
1: K Street & Connecticut Ave.

Total Future AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑		↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0			4.0	
Lane Util. Factor		0.95	1.00		0.95	1.00		0.91			0.91	
Frbp, ped/bikes		1.00	1.00		1.00	0.46		0.96			0.86	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.96	
Flt Protected		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (prot)		3539	1583		3539	726		4849			4207	
Flt Permitted		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (perm)		3539	1583		3539	726		4849			4207	
Volume (vph)	0	756	25	0	691	176	0	762	55	0	550	190
Peak-hour factor, PHF	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	822	27	0	751	191	0	828	60	0	598	207
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	822	27	0	751	191	0	888	0	0	805	0
Confl. Peds. (#/hr)	1700		1007	1007		1700	1488		1700	1700		1488
Confl. Bikes (#/hr)			15			9			10			18
Turn Type		Prot			Perm							
Protected Phases		4	4		8			2			6	
Permitted Phases						8						
Actuated Green, G (s)		55.0	55.0		55.0	55.0		33.0			33.0	
Effective Green, g (s)		57.0	57.0		57.0	57.0		35.0			35.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.35			0.35	
Clearance Time (s)		6.0	6.0		6.0	6.0		6.0			6.0	
Lane Grp Cap (vph)		2017	902		2017	414		1697			1472	
v/s Ratio Prot		0.23	0.02		0.21			0.18			c0.19	
v/s Ratio Perm						c0.26						
v/c Ratio		0.41	0.03		0.37	0.46		0.52			0.55	
Uniform Delay, d1		12.0	9.4		11.7	12.5		25.9			26.1	
Progression Factor		1.00	1.00		1.00	1.00		1.00			0.59	
Incremental Delay, d2		0.6	0.1		0.5	3.7		1.2			1.3	
Delay (s)		12.7	9.5		12.3	16.2		27.0			16.8	
Level of Service		B	A		B	B		C			B	
Approach Delay (s)		12.6			13.1			27.0			16.8	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			17.4				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			49.3%				ICU Level of Service			A		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis 2: K Street & 18th Street

Total Future AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0				
Lane Util. Factor		0.95			0.95	1.00		0.86				
Frpb, ped/bikes		1.00			1.00	0.46		0.93				
Flpb, ped/bikes		1.00			1.00	1.00		0.98				
Frt		1.00			1.00	0.85		0.98				
Flt Protected		1.00			1.00	1.00		1.00				
Satd. Flow (prot)		3539			3539	726		5683				
Flt Permitted		1.00			1.00	1.00		1.00				
Satd. Flow (perm)		3539			3539	726		5683				
Volume (vph)	0	923	0	0	810	232	49	951	158	0	0	0
Peak-hour factor, PHF	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	1003	0	0	880	252	53	1034	172	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1003	0	0	880	252	0	1259	0	0	0	0
Confl. Peds. (#/hr)	930		729	729		930	1586		781	781		1586
Confl. Bikes (#/hr)			4			8			11			2
Turn Type						Perm	Perm					
Protected Phases		4			8			2				
Permitted Phases						8	2					
Actuated Green, G (s)		39.0			39.0	39.0		45.0				
Effective Green, g (s)		41.0			41.0	41.0		47.0				
Actuated g/C Ratio		0.43			0.43	0.43		0.49				
Clearance Time (s)		6.0			6.0	6.0		6.0				
Lane Grp Cap (vph)		1511			1511	310		2782				
v/s Ratio Prot		0.28			0.25							
v/s Ratio Perm						c0.35		0.22				
v/c Ratio		0.66			0.58	0.81		0.45				
Uniform Delay, d1		22.0			21.0	24.1		16.1				
Progression Factor		1.00			1.00	1.00		1.00				
Incremental Delay, d2		2.3			1.6	20.3		0.5				
Delay (s)		24.3			22.6	44.5		16.6				
Level of Service		C			C	D		B				
Approach Delay (s)		24.3			27.5			16.6			0.0	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay		22.5			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.62										
Actuated Cycle Length (s)		96.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		52.6%			ICU Level of Service			A				
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: L Street & Connecticut Ave.

Total Future AM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑						↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.91			0.91	
Frpb, ped/bikes		0.93						0.88			1.00	
Flpb, ped/bikes		0.91						1.00			1.00	
Frt		0.98						0.96			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4136						4269			5085	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		4136						4269			5085	
Volume (vph)	212	828	166	0	0	0	0	683	258	0	911	0
Peak-hour factor, PHF	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)	230	900	180	0	0	0	0	742	280	0	990	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1310	0	0	0	0	0	1022	0	0	990	0
Confl. Peds. (#/hr)	842		910	910		842	664		563	563		664
Confl. Bikes (#/hr)			18						5			19
Turn Type	Perm											
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		42.0						47.0			47.0	
Effective Green, g (s)		42.0						50.0			50.0	
Actuated g/C Ratio		0.42						0.50			0.50	
Clearance Time (s)		4.0						7.0			7.0	
Lane Grp Cap (vph)		1737						2135			2543	
v/s Ratio Prot								c0.24			0.19	
v/s Ratio Perm		0.32										
v/c Ratio		0.75						0.48			0.39	
Uniform Delay, d1		24.6						16.4			15.5	
Progression Factor		1.00						0.38			1.00	
Incremental Delay, d2		3.1						0.7			0.5	
Delay (s)		27.7						6.9			16.0	
Level of Service		C						A			B	
Approach Delay (s)		27.7			0.0			6.9			16.0	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay		17.8						HCM Level of Service			B	
HCM Volume to Capacity ratio		0.60										
Actuated Cycle Length (s)		100.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		56.3%						ICU Level of Service		B		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
1: K Street & Connecticut Ave.

Total Future PM
11/17/2005

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑		↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0			4.0	
Lane Util. Factor		0.95	1.00		0.95	1.00		0.91			0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.46		0.95			0.95	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.98	
Flt Protected		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (prot)		3539	1583		3539	725		4746			4736	
Flt Permitted		1.00	1.00		1.00	1.00		1.00			1.00	
Satd. Flow (perm)		3539	1583		3539	725		4746			4736	
Volume (vph)	0	449	43	0	518	91	0	657	71	0	757	85
Peak-hour factor, PHF	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	488	47	0	563	99	0	714	77	0	823	92
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	488	47	0	563	99	0	790	0	0	915	0
Confl. Peds. (#/hr)	1700		1137	1137		1700	1171		1700	1700		1171
Confl. Bikes (#/hr)			18			20			34			14
Turn Type		Prot			Perm							
Protected Phases		4	4		8			2			6	
Permitted Phases					8							
Actuated Green, G (s)		55.0	55.0		55.0	55.0		33.0			33.0	
Effective Green, g (s)		57.0	57.0		57.0	57.0		35.0			35.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.35			0.35	
Clearance Time (s)		6.0	6.0		6.0	6.0		6.0			6.0	
Lane Grp Cap (vph)		2017	902		2017	413		1661			1658	
v/s Ratio Prot		0.14	0.03		c0.16			0.17			c0.19	
v/s Ratio Perm					0.14							
v/c Ratio		0.24	0.05		0.28	0.24		0.48			0.55	
Uniform Delay, d1		10.7	9.5		11.0	10.7		25.3			26.2	
Progression Factor		1.00	1.00		1.00	1.00		1.00			0.59	
Incremental Delay, d2		0.3	0.1		0.3	1.4		1.0			1.2	
Delay (s)		11.0	9.6		11.3	12.1		26.3			16.6	
Level of Service		B	A		B	B		C			B	
Approach Delay (s)		10.9			11.4			26.3			16.6	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay		17.0			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.38										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		42.8%			ICU Level of Service			A				
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis 2: K Street & 18th Street

Total Future PM
11/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0				
Lane Util. Factor		0.95			0.95	1.00		0.86				
Frpb, ped/bikes		1.00			1.00	0.46		0.95				
Flpb, ped/bikes		1.00			1.00	1.00		0.91				
Frt		1.00			1.00	0.85		0.98				
Flt Protected		1.00			1.00	1.00		0.99				
Satd. Flow (prot)		3539			3539	725		5397				
Flt Permitted		1.00			1.00	1.00		0.99				
Satd. Flow (perm)		3539			3539	725		5397				
Volume (vph)	0	302	0	0	725	242	159	701	108	0	0	0
Peak-hour factor, PHF	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	328	0	0	788	263	173	762	117	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	2	0	5	0	0	0	0
Lane Group Flow (vph)	0	328	0	0	788	261	0	1047	0	0	0	0
Confl. Peds. (#/hr)	996		543	543		996	1518		620	620		1518
Confl. Bikes (#/hr)			3			13			32			1
Turn Type						Perm	Perm					
Protected Phases		4			8			2				
Permitted Phases						8	2					
Actuated Green, G (s)		39.0			39.0	39.0		45.0				
Effective Green, g (s)		41.0			41.0	41.0		47.0				
Actuated g/C Ratio		0.43			0.43	0.43		0.49				
Clearance Time (s)		6.0			6.0	6.0		6.0				
Lane Grp Cap (vph)		1511			1511	310		2642				
v/s Ratio Prot		0.09			0.22							
v/s Ratio Perm						c0.36		0.19				
v/c Ratio		0.22			0.52	0.84		0.40				
Uniform Delay, d1		17.4			20.3	24.6		15.5				
Progression Factor		1.00			1.00	1.00		1.00				
Incremental Delay, d2		0.3			1.3	23.4		0.4				
Delay (s)		17.7			21.6	48.0		16.0				
Level of Service		B			C	D		B				
Approach Delay (s)		17.7			28.2			16.0			0.0	
Approach LOS		B			C			B			A	
Intersection Summary												
HCM Average Control Delay		21.5					HCM Level of Service		C			
HCM Volume to Capacity ratio		0.60										
Actuated Cycle Length (s)		96.0					Sum of lost time (s)		8.0			
Intersection Capacity Utilization		49.5%					ICU Level of Service		A			
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
3: L Street & Connecticut Ave.

Total Future PM
11/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑						↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						0.91			0.91	
Frpb, ped/bikes		0.94						0.92			1.00	
Flpb, ped/bikes		0.93						1.00			1.00	
Frt		0.98						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		4315						4596			5085	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		4315						4596			5085	
Volume (vph)	197	1111	173	0	0	0	0	838	145	0	791	0
Peak-hour factor, PHF	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)	214	1208	188	0	0	0	0	911	158	0	860	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1609	0	0	0	0	0	1069	0	0	860	0
Confl. Peds. (#/hr)	1333		1108	1108			1333	774		716	716	
Confl. Bikes (#/hr)			22				3			25		14
Turn Type	Perm											
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		42.0						47.0			47.0	
Effective Green, g (s)		42.0						50.0			50.0	
Actuated g/C Ratio		0.42						0.50			0.50	
Clearance Time (s)		4.0						7.0			7.0	
Lane Grp Cap (vph)		1812						2298			2543	
v/s Ratio Prot								0.23			0.17	
v/s Ratio Perm		0.37										
v/c Ratio		0.89						0.47			0.34	
Uniform Delay, d1		26.8						16.3			15.0	
Progression Factor		1.00						0.39			1.00	
Incremental Delay, d2		6.9						0.7			0.4	
Delay (s)		33.8						7.0			15.4	
Level of Service		C						A			B	
Approach Delay (s)		33.8			0.0			7.0			15.4	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay		21.2						HCM Level of Service		C		
HCM Volume to Capacity ratio		0.66										
Actuated Cycle Length (s)		100.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		60.7%						ICU Level of Service		B		
Analysis Period (min)		15										

c Critical Lane Group

Truck Activity

Type	Purpose	Arrival	Departure	Location	Effect on Traffic	KEY
P	Food Svc.	9:00 AM	?	Ct. Ave	None	
B	Contractor	9:00 AM	?	Ct. Ave	None	P= Pick-up
V	Food Svc.	9:00 AM	9:06 AM	1725 K St.	None	V= Van
V	Contractor	9:00 AM	9:20 AM	L St. Lay-by Lane (Verizon)	None	PV= Panel Van
V	Contractor	9:00 AM	9:20 AM	L St. Lay-by Lane (Verizon)	None	B= Box Truck
B	Contractor	9:00 AM	9:22 AM	1735 K St.	None	
P	Delivery	9:00 AM	9:30 AM	Ct. Ave Lay-by Lane (Victoria Secret)	None	
B	Delivery	9:00 AM	9:36 AM	Ct. Ave Lay-by Lane (Victoria Secret)	None	
V	Contractor	9:00 AM	10:51 AM	1775 K St.	None	
P	?	9:20 AM	9:40 AM	L St. Lay-by Lane (Verizon)	None	
V	Livery	9:26 AM	10:51 AM	1715 K St.	None	
P	Delivery	9:26 AM	9:34 AM	1721 K St.	None	
P	Contractor	9:32 AM	1:52 PM	1775 K St.	None	
P	Drop-Off	9:35 AM	9:42 AM	1725 K St.	None	
B	Delivery	9:51 AM	9:57 AM	CT Ave. Lay-by Lane (Victoria's Secret)	None	
B	Delivery	9:57 AM	10:26 AM	1721 K St.	None	
PV	Delivery	9:58 AM	10:10 AM	Ct Ave. (first vehicle to block right lane)	Blocked Right Lane	
B	Delivery	10:05 AM	11:21 AM	CT Ave. (Nine West) (UPS)		
V	Delivery	10:13 AM	10:34 AM	1725 K St.	None	
V	Delivery	10:13 AM	10:45 AM	CT Ave. Lay-by Lane (Victoria's Secret)	None	
V	Delivery	10:14 AM	10:34 AM	1735 K St.	None	
V	Delivery	10:16 AM	10:22 AM	CT Ave. near L St.	Blocked Right Lane	
V	Drop-Off	10:27 AM	10:36 AM	1725 K St.	None	
V	Delivery	10:29 AM	11:39 AM	CT Ave. near L St.	Blocked Right Lane	
B	Delivery	10:30 AM	10:51 AM	Ct Ave.	Blocked Right Lane	
B	Delivery	10:30 AM	10:56 AM	L St, near 18 St.	Blocked Right Lane	
V	Delivery	10:38 AM	11:47 AM	1721 K St.	None	
B	Delivery	10:40 AM	10:56 AM	CT Ave, near K St. (FedEx)	Blocked Right Lane	
B	Delivery	10:57 AM	11:06 AM	CT Ave, Lay-by Lane (Victoria's Secret)	None	
V	Food Svc.	11:00 AM	11:02 AM	1725 & 1735 K, Alleyway blocked, but no queing	None	
B	Delivery	11:05 AM	11:52 AM	18 St. (USPS)	Blocked Right Lane	
B	Delivery	11:05 AM	11:21 AM	18 St. (USPS)	Blocked Right Lane	
V	Contractor	11:05 AM	3:38 PM	18 St. (Verizon)	Blocked Right Lane	
V	Contractor	11:05 AM	11:28 AM	18 St.	Blocked Right Lane	
B	Delivery	11:16 AM	11:18 AM	18th St. (Peapod)	Blocked Right Lane	
V	Sales	11:19 AM	3:57 PM	1725 K St. (Street Vendor)	None	
B	Delivery	11:19 AM	12:10 PM	CT Ave, Colonial Jewelers	Blocked Right Lane	
V	Contractor	11:22 AM	11:30 AM	1715 K St. (Pitney Bowes)	None	
V	Delivery	11:24 AM	11:43 AM	18 St. (Bud Light)	Blocked Right Lane	
B	Delivery	11:25 AM	12:10 PM	L St. (near 18 St.) UPS	Blocked Right Lane	
P	Delivery	11:31 AM	12:11 PM	1717 K St. (USPS)	None	
PV	Delivery	11:31 AM	11:38 AM	L St. (middle)	Blocked Right Lane	
V	Delivery	11:33 AM	11:50 AM	CT Ave. (Men's Warehouse)	Blocked Right Lane	
PV	Delivery	11:37 AM	12:08 PM	CT Ave. (Mont Blanc)	Blocked Right Lane	
V	Delivery	11:48 AM	11:59 AM	18 St. (DHL)	Blocked Right Lane	
V	Delivery	11:55 AM	12:12 PM	18 St.	Blocked Right Lane	

Truck Activity

B	Delivery	11:55 AM	12:39 PM	CT Ave. (Men's Warehouse)	None
P	Contractor	11:57 AM	12:58 PM	1775 K St. (DC Digital Cable)	None
V	Delivery	12:00 PM	12:41 PM	18 St. (DC Gov't)	Blocked Right Lane
V	?	12:03 PM	12:10 PM	CT Ave. (Lay-by Lane at Washington Square)	None
V	Contractor	12:06 PM	12:10 PM	CT Ave. (Washington Square)	Double Parked, Blocking R. Lane
B	Delivery	12:09 PM	12:38 PM	CT Ave. (Mont Blanc)	Blocked Right Lane
B	Delivery	12:12 PM	12:31 PM	CT Ave. (Men's Warehouse)	Blocked Right Lane
V	Sales	12:15 PM	3:58 PM	1721 K St. (Street Vendor)	None
V	Drop-Off	12:16 PM	12:21 PM	1721 K St.	None
V	Sales	12:20 PM	?	1721 K St. (Street Vendor)	None
V	Delivery	12:24 PM	12:31 PM	1719 K St. (White Pass. Van)	None
V	Contractor	12:30 PM	1:03 PM	18 St. (Verizon)	Blocked Right Lane
V	Delivery	12:38 PM	2:15 PM	1719 K St. (Washington Wholesale)	None
V	Delivery	12:38 PM	2:16 PM	1721 K St. (White GMC)	None
PV	Delivery	12:39 PM	12:42 PM	L St. in front of GNC	None
V	Drop-Off	12:40 PM	3:11 PM	18 St.	Blocked Right Lane
B	Delivery	12:42 PM	12:47 PM	CT Ave. (Men's Warehouse)	Blocked Right Lane
V	Delivery	12:46 PM	12:51 PM	CT Ave. (Washington Square)	Blocked Right Lane
B	Delivery	12:46 PM	1:09 PM	L St. (middle)	Blocked Right Lane
V	Delivery	12:56 PM	1:19 PM	18 St. (Global Printing)	Blocked Right Lane
B	?	1:05 PM	1:11 PM	1735 K St.	Blocked Lay-by Lane, 1 min
Semi	Delivery	1:05 PM	1:17 PM	1719 K St. (Miller Lite)	None
PV	Delivery	1:06 PM	1:29 PM	L St. Lay-by Lane (Verizon)	None
V	Delivery	1:06 PM	1:10 PM	L St. Lay-by Lane (Verizon)	None
B	Delivery	1:07 PM	1:09 PM	L St. (near 18 St.) (Staples Delivery)	Blocked Right Lane
V	Contractor	1:10 PM	1:27 PM	L St. Lay-by Lane (Verizon)	None
V	Delivery	1:12 PM	1:13 PM	CT Ave. (Washington Square)	Blocked Right Lane
PV	Del./P.U.	1:18 PM	1:20 PM	CT Ave. near L St. (Armored Truck)	Blocked Right Lane
PV	Del./P.U.	1:20 PM	1:24 PM	L St. (near 18 St.) (Armored Truck)	Blocked Right Lane
PV	Delivery	1:22 PM	2:01 PM	1735 K St. (FedEx)	None
B	Lunch	1:40 PM	2:10 PM	1735 K St. (DC WASA) Illegally Parked	None
V	Delivery	1:42 PM	2:20 PM	18 St. (McCardell Printing)	Blocked Right Lane
B	Delivery	1:49 PM	2:08 PM	18 St. (Chapman's)	Blocked Right Lane
PV	Del./P.U.	1:54 PM	2:01 PM	CT Ave. near L St.	Blocked Right Lane
PV	Delivery	2:13 PM	3:00 PM	CT Ave. (Men's Warehouse)	Blocked Right Lane
PV	Delivery	2:35 PM	2:45 PM	1721 K St.	None
V	Contractor	2:38 PM	2:43 PM	L St. Lay-by Lane (Verizon)	None
PV	Delivery	2:40 PM	2:57 PM	18 St. (USPS)	Blocked Right Lane
PV	Delivery	2:43 PM	2:47 PM	18 St. (USPS)	Blocked Right Lane
B	Delivery	3:00 PM	3:11 PM	K St. Main Road (Loomis Fargo)	Blocked Right Lane
V	Delivery	3:03 PM	3:56 PM	1719 K St.	None
V	Delivery	3:04 PM	3:24 PM	1715 K St. (McCardell Printing)	None
B	?	3:05 PM	3:28 PM	L St. Lay-by Lane (Verizon)	None
V	Delivery	3:10 PM	3:25 PM	L St. (near 18 St.)	Blocked Right Lane
PV	Delivery	3:13 PM	3:31 PM	1719 K St. (USPS)	None
PV	Delivery	3:18 PM	3:26 PM	1721 K St. (FedEx) Main Road	Blocked Right Lane
PV	Delivery	3:28 PM	3:37 PM	Alley, illegal (Budget)	Blocked Alley (K St.)

Truck Activity

B	Delivery	3:28 PM	3:35 PM	L St. (near 18 St.)	Blocked Right Lane
V	Delivery	3:30 PM	3:40 PM	1775 K St. (City Flowers)	None
V	Delivery	3:45 PM	3:53 PM	L St. Lay-by Lane (Verizon)	
PV	Delivery	3:53 PM	?	1725 K St. (FedEx)	None
V	?	4:04 PM	?	CT Ave. (Men's Warehouse Lay-by Lane)	None
B	Delivery	4:08 PM	4:49 PM	CT Ave. near L St.	Blocked Right Lane
V	Delivery	4:11 PM	?	CT Ave. (Men's Warehouse Lay-by Lane)	
V	Pick-Up	4:13 PM	4:31 PM	1725 K St. (Reston Limo)	None
V	Delivery	4:15 PM	4:26 PM	1721 K St. (Royal Cup)	None
V	Delivery	4:24 PM	4:49 PM	1725 K St.	None
PV	Pick-Up	4:25 PM	4:38 PM	18 St. (USPS)	Blocked Right Lane
PV	Pick-Up	4:45 PM	4:55 PM	1717 K St. (UPS)	None
V	Delivery	4:45 PM	?	CT Ave. (Men's Warehouse Lay-by Lane)	None
PV	Pick-Up	4:49 PM	?	1725 K St. (USPS)	None
V	Pick-Up	4:56 PM	?	1725 K St. (DC Metro HC)	None