APPENDIX A

Appendix A - Traffic Counts / Field Data

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Highland Ave. & Haycock Rd.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Geraldin & Demo
INPUTED BY: agan

SOUTHBOUND ROAD: 0
NORTHBOUND ROAD: Highland Avenue
WESTBOUND ROAD: Haycock Road - 703
EASTBOUND ROAD: Haycock Road - 703

Time	Southbound 0					Westbound Haycock Road - 703					Northbound Highland Avenue					Eastbound Haycock Road - 703					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	0	0	0		0	30	0	30		0	0	0	0		4	16	0	20		0	50	50
6:15 AM - 6:30 AM	0	0	0	0		0	30	0	30		1	0	2	3		2	33	0	35		3	65	68
6:30 AM - 6:45 AM	0	0	0	0		0	44	1	45		0	0	0	0		0	38	0	38		0	83	83
6:45 AM - 7:00 AM	0	0	0	0		0	65	4	69		1	0	7	8		4	61	0	65		8	134	142
7:00 AM - 7:15 AM	0	0	0	0		0	77	1	78		2	0	8	10		4	100	0	104		10	182	192
7:15 AM - 7:30 AM	0	0	0	0		0	115	1	116		6	0	6	12		3	112	0	115		12	231	243
7:30 AM - 7:45 AM	0	0	0	0		0	117	6	123		4	0	11	15		6	123	0	129		15	252	267
7:45 AM - 8:00 AM	0	0	0	0		0	131	7	138		7	0	17	24		8	154	0	162		24	300	324
8:00 AM - 8:15 AM	0	0	0	0		0	126	2	128		3	0	12	15		28	110	0	138		15	266	281
8:15 AM - 8:30 AM	0	0	0	0		0	123	3	126		1	0	9	10		20	123	0	143		10	269	279
8:30 AM - 8:45 AM	0	0	0	0		0	118	0	118		6	0	2	8		5	109	0	114		8	232	240
8:45 AM - 9:00 AM	0	0	0	0		0	85	4	89		2	0	6	8		4	89	0	93		8	182	190
Total	0	0	0	0		0	1061	29	1090		33	0	80	113		88	1068	0	1156		113	2246	2359
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	0	0	0	0.00	0	169	5	174	0.63	2	0	9	11	0.34	10	148	0	158	0.61	11	332	343
6:15 AM - 7:15 AM	0	0	0	0	0.00	0	216	6	222	0.71	4	0	17	21	0.53	10	232	0	242	0.58	21	464	485
6:30 AM - 7:30 AM	0	0	0	0	0.00	0	301	7	308	0.66	9	0	21	30	0.63	11	311	0	322	0.70	30	630	660
6:45 AM - 7:45 AM	0	0	0	0	0.00	0	374	12	386	0.78	13	0	32	45	0.75	17	396	0	413	0.80	45	799	844
7:00 AM - 8:00 AM	0	0	0	0	0.00	0	440	15	455	0.82	19	0	42	61	0.64	21	489	0	510	0.79	61	965	1026
7:15 AM - 8:15 AM	0	0	0	0	0.00	0	489	16	505	0.91	20	0	46	66	0.69	45	499	0	544	0.84	66	1049	1115
7:30 AM - 8:30 AM	0	0	0	0	0.00	0	497	18	515	0.93	15	0	49	64	0.67	62	510	0	572	0.88	64	1087	1151
7:45 AM - 8:45 AM	0	0	0	0	0.00	0	498	12	510	0.92	17	0	40	57	0.59	61	496	0	557	0.86	57	1067	1124
8:00 AM - 9:00 AM	0	0	0	0	0.00	0	452	9	461	0.90	12	0	29	41	0.68	57	431	0	488	0.85	41	949	990
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	0	0	0	0		0	66	3	69		3	0	3	6		5	74	0	79		6	148	154
2:15 PM - 2:30 PM	0	0	0	0		0	77	0	77		1	0	3	4		2	66	0	68		4	145	149
2:30 PM - 2:45 PM	0	0	0	0		0	76	0	76		1	0	2	3		2	68	0	70		3	146	149
2:45 PM - 3:00 PM	0	0	0	0		0	82	0	82		2	0	1	3		1	70	0	71		3	153	156
3:00 PM - 3:15 PM	0	0	0	0		0	93	2	95		1	0	5	6		8	81	0	89		6	184	190
3:15 PM - 3:30 PM	0	0	0	0		0	79	3	82		2	0	2	4		6	96	0	102		4	184	188
3:30 PM - 3:45 PM	0	0	0	0		0	81	1	82		0	0	3	3		7	100	0	107		3	189	192
3:45 PM - 4:00 PM	0	0	0	0		0	78	4	82		0	0	2	2		12	115	0	127		2	209	211
4:00 PM - 4:15 PM	0	0	0	0		0	100	3	103		2	0	1	3		10	127	0	137		3	240	243
4:15 PM - 4:30 PM	0	0	0	0		0	113	6	119		2	0	7	9		15	94	0	109		9	228	237
4:30 PM - 4:45 PM	0	0	0	0		0	127	1	128		3	0	11	14		23	147	0	170		14	298	312
4:45 PM - 5:00 PM	0	0	0	0		0	136	5	141		0	0	2	2		41	149	0	190		2	331	333
5:00 PM - 5:15 PM	0	0	0	0		0	127	3	130		1	0	5	6		70	131	0	201		6	331	337
5:15 PM - 5:30 PM	0	0	0	0		0	131	5	136		3	0	5	8		93	197	0	290		8	426	434
5:30 PM - 5:45 PM	0	0	0	0		0	141	2	143		1	0	7	8		96	166	0	262		8	405	413
5:45 PM - 6:00 PM	0	0	0	0		0	137	1	138		3	0	5	8		63	181	0	244		8	382	390
6:00 PM - 6:15 PM	0	0	0	0		0	136	4	140		6	0	5	11		59	172	0	231		11	371	382
6:15 PM - 6:30 PM	0	0	0	0		0	124	6	130		1	0	5	6		60	146	0	206		6	336	342
6:30 PM - 6:45 PM	0	0	0	0		0	130	4	134		1	0	6	7		48	159	0	207		7	341	348
6:45 PM - 7:00 PM	0	0	0	0		0	97	4	101		3	0	12	15		32	178	0	210		15	311	326
Total	0	0	0	0		0	1499	44	1543		26	0	71	97		610	1847	0	2457		97	4000	4097
PM One Hour Volumes																							
2:00 PM - 3:00 PM	0	0	0	0	0.00	0	301	3	304	0.93	7	0	9	16	0.67	10	278	0	288	0.91	16	592	608
2:15 PM - 3:15 PM	0	0	0	0	0.00	0	328	2	330	0.87	5	0	11	16	0.67	13	285	0	298	0.84	16	628	644
2:30 PM - 3:30 PM	0	0	0	0	0.00	0	330	5	335	0.88	6	0	10	16	0.67	17	315	0	332	0.81	16	667	683
2:45 PM - 3:45 PM	0	0	0	0	0.00	0	335	6	341	0.90	5	0	11	16	0.67	22	347	0	369	0.86	16	710	726
3:00 PM - 4:00 PM	0	0	0	0	0.00	0	331	10	341	0.90	3	0	12	15	0.63	33	392	0	425	0.84	15	766	781
3:15 PM - 4:15 PM	0	0	0	0	0.00	0	338	11	349	0.85	4	0	8	12	0.75	35	438	0	473	0.86	12	822	834
3:30 PM - 4:30 PM	0	0	0	0	0.00	0	372	14	386	0.81	4	0	13	17	0.47	44	436	0	480	0.88	17	866	883
3:45 PM - 4:45 PM	0	0	0	0	0.00	0	418	14	432	0.84	7	0	21	28	0.50	60	483	0	543	0.80	28	975	1003
4:00 PM - 5:00 PM	0	0	0	0	0.00	0	476	15	491	0.87	7	0	21	28	0.50	89	517	0	606	0.80	28	1097	1125
4:15 PM - 5:15 PM	0	0	0	0	0.00	0	503	15	518	0.92	6	0	25	31	0.55	149	521	0	670	0.83	31	1188	1219
4:30 PM - 5:30 PM	0	0	0	0	0.00	0	521	14	535	0.95	7	0	23	30	0.54	227	624	0	851	0.73	30	1386	1416
4:45 PM - 5:45 PM	0	0	0	0	0.00	0	535	15	550	0.96	5	0	19	24	0.75	300	643	0	943	0.81	24	1493	1517
5:00 PM - 6:00 PM	0	0	0	0	0.00	0	536	11	547	0.96	8	0	22	30	0.94	322	675	0	997	0.86	30	1544	1574
5:15 PM - 6:15 PM	0	0	0	0	0.00	0	545	12	557	0.97	13	0	22	35	0.80	311	716	0	1027	0.89	35	1584	1619
5:30 PM - 6:30 PM	0	0	0	0	0.00	0	538	13	551	0.96	11	0	22	33	0.75	278	665	0	943	0.90	33	1494	1527
5:45 PM - 6:45 PM	0	0	0	0	0.00	0	527	15	542	0.97	11	0	21	32	0.73	230	658	0	888	0.91	32	1430	1462
6:00 PM - 7:00 PM	0	0	0	0	0.00	0	487	18	505	0.90	11	0	28	39	0.65	199	655	0	854	0.92	39	1359	1398

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015	**SOUTHBOUND ROAD:**	0
W+A JOB NO:	6640	**DAY:**	Thursday	**NORTHBOUND ROAD:**	Highland Avenue
INTERSECTION:	Highland Ave. & Haycock Rd.	**WEATHER:**	clear	**WESTBOUND ROAD:**	Haycock Road - 703
LOCATION:	Falls Church,VA	**COUNTED BY:**	Demo	**EASTBOUND ROAD:**	Haycock Road - 703
		INPUTED BY:	agan		

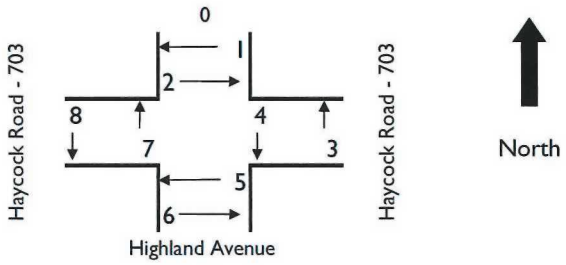
Time	Southbound 0				Westbound Haycock Road - 703				Northbound Highland Avenue				Eastbound Haycock Road - 703				North & South	East & West	Total
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:15 AM - 7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:30 AM - 7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:45 AM - 7:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	3	3
7:00 AM - 8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
7:15 AM - 8:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
7:30 AM - 8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
7:45 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
2:15 PM - 3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
2:30 PM - 3:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
3:30 PM - 4:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	2	2
3:45 PM - 4:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	3	3
4:00 PM - 5:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	0	5	5
4:15 PM - 5:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	0	5	5
4:30 PM - 5:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	0	5	5
4:45 PM - 5:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	0	5	5
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	3	3
5:15 PM - 6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2
5:30 PM - 6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Highland Ave. & Haycock Rd.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Geraldin
INPUTED BY: agan



Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	4	1	0	0	2	0	0	0	5	0	2	0	7
6:15 AM - 7:15 AM	5	1	0	0	2	0	0	0	6	0	2	0	8
6:30 AM - 7:30 AM	10	1	2	0	5	0	0	0	11	2	5	0	18
6:45 AM - 7:45 AM	10	1	3	0	4	1	0	0	11	3	5	0	19
7:00 AM - 8:00 AM	15	0	4	0	5	1	0	0	15	4	6	0	25
7:15 AM - 8:15 AM	17	0	4	0	7	1	0	0	17	4	8	0	29
7:30 AM - 8:30 AM	13	3	2	0	3	1	0	0	16	2	4	0	22
7:45 AM - 8:45 AM	13	11	1	0	3	0	0	0	24	1	3	0	28
8:00 AM - 9:00 AM	8	11	0	0	2	0	0	0	19	0	2	0	21
PM One Hour Volumes													
2:00 PM - 3:00 PM	2	6	1	0	1	4	0	0	8	1	5	0	14
2:15 PM - 3:15 PM	3	6	1	0	1	6	0	0	9	1	7	0	17
2:30 PM - 3:30 PM	4	7	1	0	1	6	0	0	11	1	7	0	19
2:45 PM - 3:45 PM	3	3	0	0	1	3	0	0	6	0	4	0	10
3:00 PM - 4:00 PM	3	5	0	0	0	3	0	1	8	0	3	1	12
3:15 PM - 4:15 PM	4	8	0	0	0	3	0	1	12	0	3	1	16
3:30 PM - 4:30 PM	11	56	0	0	0	3	0	1	67	0	3	1	71
3:45 PM - 4:45 PM	30	75	0	0	1	3	0	1	105	0	4	1	110
4:00 PM - 5:00 PM	58	72	0	0	1	2	0	0	130	0	3	0	133
4:15 PM - 5:15 PM	57	74	0	0	1	1	0	0	131	0	2	0	133
4:30 PM - 5:30 PM	51	27	0	0	1	1	0	0	78	0	2	0	80
4:45 PM - 5:45 PM	32	10	0	0	0	4	0	0	42	0	4	0	46
5:00 PM - 6:00 PM	5	14	0	0	2	4	0	0	19	0	6	0	25
5:15 PM - 6:15 PM	5	13	0	0	2	4	0	0	18	0	6	0	24
5:30 PM - 6:30 PM	3	11	0	0	3	4	0	0	14	0	7	0	21
5:45 PM - 6:45 PM	3	10	0	0	5	1	0	0	13	0	6	0	19
6:00 PM - 7:00 PM	4	13	0	0	3	5	0	0	17	0	8	0	25

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Highland Ave. & McDaniel Dr.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Yasenia
INPUTED BY: agan

SOUTHBOUND ROAD: Highland Avenue
NORTHBOUND ROAD: Highland Avenue
WESTBOUND ROAD: 0
EASTBOUND ROAD: McDaniel Drive

Time	Southbound Highland Avenue					Westbound 0					Northbound Highland Avenue					Eastbound McDaniel Drive					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	5	0	5		0	0	0	0		0	0	1	1		0	0	0	0		6	0	6
6:15 AM - 6:30 AM	0	1	0	1		0	0	0	0		0	3	1	4		2	0	0	2		5	2	7
6:30 AM - 6:45 AM	0	0	0	0		0	0	0	0		0	0	1	1		2	0	0	2		1	2	3
6:45 AM - 7:00 AM	1	4	0	5		0	0	0	0		0	4	0	4		2	0	1	3		9	3	12
7:00 AM - 7:15 AM	0	6	0	6		0	0	0	0		0	9	2	11		4	0	1	5		17	5	22
7:15 AM - 7:30 AM	1	4	0	5		0	0	0	0		0	10	3	13		2	0	0	2		18	2	20
7:30 AM - 7:45 AM	0	11	0	11		0	0	0	0		0	13	2	15		4	0	0	4		26	4	30
7:45 AM - 8:00 AM	0	13	0	13		0	0	0	0		0	20	9	29		6	0	1	7		42	7	49
8:00 AM - 8:15 AM	2	27	0	29		0	0	0	0		0	18	0	18		6	0	0	6		47	6	53
8:15 AM - 8:30 AM	3	20	0	23		0	0	0	0		0	11	4	15		2	0	0	2		38	2	40
8:30 AM - 8:45 AM	0	7	0	7		0	0	0	0		0	7	2	9		3	0	0	3		16	3	19
8:45 AM - 9:00 AM	1	8	0	9		0	0	0	0		0	5	3	8		2	0	0	2		17	2	19
Total	8	106	0	114		0	0	0	0		0	100	28	128		35	0	3	38		242	38	280
AM One Hour Volumes																							
6:00 AM - 7:00 AM	1	10	0	11	0.55	0	0	0	0	0.00	0	7	3	10	0.63	6	0	1	7	0.58	21	7	28
6:15 AM - 7:15 AM	1	11	0	12	0.50	0	0	0	0	0.00	0	16	4	20	0.45	10	0	2	12	0.60	32	12	44
6:30 AM - 7:30 AM	2	14	0	16	0.67	0	0	0	0	0.00	0	23	6	29	0.56	10	0	2	12	0.60	45	12	57
6:45 AM - 7:45 AM	2	25	0	27	0.61	0	0	0	0	0.00	0	36	7	43	0.72	12	0	2	14	0.70	70	14	84
7:00 AM - 8:00 AM	1	34	0	35	0.67	0	0	0	0	0.00	0	52	16	68	0.59	16	0	2	18	0.64	103	18	121
7:15 AM - 8:15 AM	3	55	0	58	0.50	0	0	0	0	0.00	0	61	14	75	0.65	18	0	1	19	0.68	133	19	152
7:30 AM - 8:30 AM	5	71	0	76	0.66	0	0	0	0	0.00	0	62	15	77	0.66	18	0	1	19	0.68	153	19	172
7:45 AM - 8:45 AM	5	67	0	72	0.62	0	0	0	0	0.00	0	56	15	71	0.61	17	0	1	18	0.64	143	18	161
8:00 AM - 9:00 AM	6	62	0	68	0.59	0	0	0	0	0.00	0	41	9	50	0.69	13	0	0	13	0.54	118	13	131
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	0	6	0	6		0	0	0	0		0	5	0	5		3	0	0	3		11	3	14
2:15 PM - 2:30 PM	0	2	0	2		0	0	0	0		0	4	1	5		5	0	0	5		7	5	12
2:30 PM - 2:45 PM	0	3	0	3		0	0	0	0		0	3	3	6		4	0	0	4		9	4	13
2:45 PM - 3:00 PM	0	2	0	2		0	0	0	0		0	5	1	6		4	0	0	4		8	4	12
3:00 PM - 3:15 PM	0	10	0	10		0	0	0	0		0	4	0	4		5	0	1	6		14	6	20
3:15 PM - 3:30 PM	1	8	0	9		0	0	0	0		0	5	0	5		9	0	1	10		14	10	24
3:30 PM - 3:45 PM	1	6	0	7		0	0	0	0		0	3	1	4		5	0	0	5		11	5	16
3:45 PM - 4:00 PM	2	11	0	13		0	0	0	0		0	1	1	2		3	0	0	3		15	3	18
4:00 PM - 4:15 PM	0	11	0	11		0	0	0	0		0	5	1	6		5	0	1	6		17	6	23
4:15 PM - 4:30 PM	2	14	0	16		0	0	0	0		0	7	2	9		9	0	2	11		25	11	36
4:30 PM - 4:45 PM	1	19	0	20		0	0	0	0		0	8	4	12		7	0	2	9		32	9	41
4:45 PM - 5:00 PM	1	41	0	42		0	0	0	0		0	2	4	6		7	0	0	7		48	7	55
5:00 PM - 5:15 PM	1	65	0	66		0	0	0	0		0	6	3	9		10	0	1	11		75	11	86
5:15 PM - 5:30 PM	2	94	0	96		0	0	0	0		0	7	3	10		8	0	0	8		106	8	114
5:30 PM - 5:45 PM	0	93	0	93		0	0	0	0		0	9	5	14		13	0	0	13		107	13	120
5:45 PM - 6:00 PM	3	59	0	62		0	0	0	0		0	9	3	12		12	0	2	14		74	14	88
6:00 PM - 6:15 PM	2	55	0	57		0	0	0	0		0	7	3	10		14	0	0	14		67	14	81
6:15 PM - 6:30 PM	0	60	0	60		0	0	0	0		0	5	6	11		12	0	1	13		71	13	84
6:30 PM - 6:45 PM	1	42	0	43		0	0	0	0		0	8	3	11		11	0	0	11		54	11	65
6:45 PM - 7:00 PM	0	34	0	34		0	0	0	0		0	6	1	7		5	0	2	7		41	7	48
Total	13	587	0	600		0	0	0	0		0	79	38	117		113	0	11	124		717	124	841
PM One Hour Volumes																							
2:00 PM - 3:00 PM	0	13	0	13	0.54	0	0	0	0	0.00	0	17	5	22	0.92	16	0	0	16	0.80	35	16	51
2:15 PM - 3:15 PM	0	17	0	17	0.43	0	0	0	0	0.00	0	16	5	21	0.88	18	0	1	19	0.79	38	19	57
2:30 PM - 3:30 PM	1	23	0	24	0.60	0	0	0	0	0.00	0	17	4	21	0.88	22	0	2	24	0.60	45	24	69
2:45 PM - 3:45 PM	2	26	0	28	0.70	0	0	0	0	0.00	0	17	2	19	0.79	23	0	2	25	0.63	47	25	72
3:00 PM - 4:00 PM	4	35	0	39	0.75	0	0	0	0	0.00	0	13	2	15	0.75	22	0	2	24	0.60	54	24	78
3:15 PM - 4:15 PM	4	36	0	40	0.77	0	0	0	0	0.00	0	14	3	17	0.71	22	0	2	24	0.60	57	24	81
3:30 PM - 4:30 PM	5	42	0	47	0.73	0	0	0	0	0.00	0	16	5	21	0.58	22	0	3	25	0.57	68	25	93
3:45 PM - 4:45 PM	5	55	0	60	0.75	0	0	0	0	0.00	0	21	8	29	0.60	24	0	5	29	0.66	89	29	118
4:00 PM - 5:00 PM	4	85	0	89	0.53	0	0	0	0	0.00	0	22	11	33	0.69	28	0	5	33	0.75	122	33	155
4:15 PM - 5:15 PM	5	139	0	144	0.55	0	0	0	0	0.00	0	23	13	36	0.75	33	0	5	38	0.86	180	38	218
4:30 PM - 5:30 PM	5	219	0	224	0.58	0	0	0	0	0.00	0	23	14	37	0.77	32	0	3	35	0.80	261	35	296
4:45 PM - 5:45 PM	4	293	0	297	0.77	0	0	0	0	0.00	0	24	15	39	0.70	38	0	1	39	0.75	336	39	375
5:00 PM - 6:00 PM	6	311	0	317	0.83	0	0	0	0	0.00	0	31	14	45	0.80	43	0	3	46	0.82	362	46	408
5:15 PM - 6:15 PM	7	301	0	308	0.80	0	0	0	0	0.00	0	32	14	46	0.82	47	0	2	49	0.88	354	49	403
5:30 PM - 6:30 PM	5	267	0	272	0.73	0	0	0	0	0.00	0	30	17	47	0.84	51	0	3	54	0.96	319	54	373
5:45 PM - 6:45 PM	6	216	0	222	0.90	0	0	0	0	0.00	0	29	15	44	0.92	49	0	3	52	0.93	266	52	318
6:00 PM - 7:00 PM	3	191	0	194	0.81	0	0	0	0	0.00	0	26	13	39	0.89	42	0	3	45	0.80	233	45	278

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015	**SOUTHBOUND ROAD:**	Highland Avenue
W+A JOB NO:	6640	**DAY:**	Thursday	**NORTHBOUND ROAD:**	Highland Avenue
INTERSECTION:	Highland Ave. & McDaniel Dr.	**WEATHER:**	clear	**WESTBOUND ROAD:**	0
LOCATION:	Falls Church,VA	**COUNTED BY:**	Yasenia	**EASTBOUND ROAD:**	McDaniel Drive
		INPUTED BY:	agan		

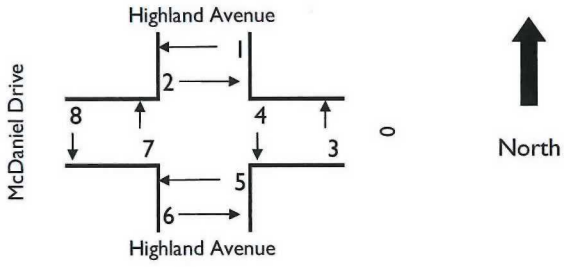
Time	Southbound Highland Avenue				Westbound 0				Northbound Highland Avenue				Eastbound McDaniel Drive				North & South	East & West	Total
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
4:15 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
4:30 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
4:45 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	2
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	2
5:15 PM - 6:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	3	0	3
5:30 PM - 6:30 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	3	0	3
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Highland Ave. & McDaniel Dr.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Yasenia
INPUTED BY: agan



Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	1	0	1	0	0	2	0	0	1	1	2	0	4
6:15 AM - 7:15 AM	2	0	2	0	0	3	0	0	2	2	3	0	7
6:30 AM - 7:30 AM	3	1	4	0	1	3	2	0	4	4	4	2	14
6:45 AM - 7:45 AM	4	1	4	0	3	3	2	0	5	4	6	2	17
7:00 AM - 8:00 AM	3	1	4	1	3	1	2	0	4	5	4	2	15
7:15 AM - 8:15 AM	2	1	3	1	3	0	2	0	3	4	3	2	12
7:30 AM - 8:30 AM	1	0	1	1	2	0	0	0	1	2	2	0	5
7:45 AM - 8:45 AM	0	0	1	1	0	1	0	0	0	2	1	0	3
8:00 AM - 9:00 AM	0	0	0	0	0	1	0	0	0	0	1	0	1
PM One Hour Volumes													
2:00 PM - 3:00 PM	0	0	0	4	0	0	0	1	0	4	0	1	5
2:15 PM - 3:15 PM	0	0	0	4	0	0	0	1	0	4	0	1	5
2:30 PM - 3:30 PM	0	0	0	9	0	0	0	3	0	9	0	3	12
2:45 PM - 3:45 PM	0	0	0	6	0	0	0	3	0	6	0	3	9
3:00 PM - 4:00 PM	0	0	0	5	0	0	0	2	0	5	0	2	7
3:15 PM - 4:15 PM	0	0	0	5	0	0	0	2	0	5	0	2	7
3:30 PM - 4:30 PM	6	19	0	16	0	0	0	0	25	16	0	0	41
3:45 PM - 4:45 PM	6	19	0	16	0	0	0	0	25	16	0	0	41
4:00 PM - 5:00 PM	6	19	0	18	0	0	0	0	25	18	0	0	43
4:15 PM - 5:15 PM	6	19	0	18	0	0	0	0	25	18	0	0	43
4:30 PM - 5:30 PM	0	0	0	2	0	3	0	1	0	2	3	1	6
4:45 PM - 5:45 PM	3	0	3	3	3	3	0	1	3	6	6	1	16
5:00 PM - 6:00 PM	3	0	3	3	3	3	0	1	3	6	6	1	16
5:15 PM - 6:15 PM	3	0	3	5	3	3	0	1	3	8	6	1	18
5:30 PM - 6:30 PM	3	1	4	5	3	0	0	0	4	9	3	0	16
5:45 PM - 6:45 PM	0	1	3	4	0	3	0	0	1	7	3	0	11
6:00 PM - 7:00 PM	0	1	3	2	0	3	0	0	1	5	3	0	9

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: N. West St. & Highland Ave.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Austin
INPUTED BY: agan

SOUTHBOUND ROAD: Highland Avenue
NORTHBOUND ROAD: 0
WESTBOUND ROAD: North West Street - 1799
EASTBOUND ROAD: North West Street - 1799

Time	Southbound Highland Avenue					Westbound North West Street - 1799					Northbound 0					Eastbound North West Street - 1799					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	1	0	3	4		0	5	0	5		0	0	0	0		0	4	0	4		4	9	13
6:15 AM - 6:30 AM	1	0	4	5		2	6	0	8		0	0	0	0		0	7	1	8		5	16	21
6:30 AM - 6:45 AM	0	0	2	2		1	4	0	5		0	0	0	0		0	29	0	29		2	34	36
6:45 AM - 7:00 AM	0	0	5	5		5	21	0	26		0	0	0	0		0	33	0	33		5	59	64
7:00 AM - 7:15 AM	3	0	11	14		8	8	0	16		0	0	0	0		0	55	0	55		14	71	85
7:15 AM - 7:30 AM	2	0	7	9		7	22	0	29		0	0	0	0		0	79	1	80		9	109	118
7:30 AM - 7:45 AM	2	0	12	14		7	24	0	31		0	0	0	0		0	65	1	66		14	97	111
7:45 AM - 8:00 AM	5	0	10	15		13	36	0	49		0	0	0	0		0	61	5	66		15	115	130
8:00 AM - 8:15 AM	6	0	23	29		11	24	0	35		0	0	0	0		0	62	4	66		29	101	130
8:15 AM - 8:30 AM	3	0	24	27		6	40	0	46		0	0	0	0		0	55	3	58		27	104	131
8:30 AM - 8:45 AM	6	0	7	13		2	25	0	27		0	0	0	0		0	45	2	47		13	74	87
8:45 AM - 9:00 AM	2	0	13	15		5	44	0	49		0	0	0	0		0	60	1	61		15	110	125
Total	31	0	121	152		67	259	0	326		0	0	0	0		0	555	18	573		152	899	1051
AM One Hour Volumes																							
6:00 AM - 7:00 AM	2	0	14	16	0.80	8	36	0	44	0.42	0	0	0	0	0.00	0	73	1	74	0.56	16	118	134
6:15 AM - 7:15 AM	4	0	22	26	0.46	16	39	0	55	0.53	0	0	0	0	0.00	0	124	1	125	0.57	26	180	206
6:30 AM - 7:30 AM	5	0	25	30	0.54	21	55	0	76	0.66	0	0	0	0	0.00	0	196	1	197	0.62	30	273	303
6:45 AM - 7:45 AM	7	0	35	42	0.75	27	75	0	102	0.82	0	0	0	0	0.00	0	232	2	234	0.73	42	336	378
7:00 AM - 8:00 AM	12	0	40	52	0.87	35	90	0	125	0.64	0	0	0	0	0.00	0	260	7	267	0.83	52	392	444
7:15 AM - 8:15 AM	15	0	52	67	0.58	38	106	0	144	0.73	0	0	0	0	0.00	0	267	11	278	0.87	67	422	489
7:30 AM - 8:30 AM	16	0	69	85	0.73	37	124	0	161	0.82	0	0	0	0	0.00	0	243	13	256	0.97	85	417	502
7:45 AM - 8:45 AM	20	0	64	84	0.72	32	125	0	157	0.80	0	0	0	0	0.00	0	223	14	237	0.90	84	394	478
8:00 AM - 9:00 AM	17	0	67	84	0.72	24	133	0	157	0.80	0	0	0	0	0.00	0	222	10	232	0.88	84	389	473
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	3	0	3	6		4	35	0	39		0	0	0	0		0	36	1	37		6	76	82
2:15 PM - 2:30 PM	2	0	7	9		4	32	0	36		0	0	0	0		0	26	1	27		9	63	72
2:30 PM - 2:45 PM	0	0	8	8		3	34	0	37		0	0	0	0		0	25	1	26		8	63	71
2:45 PM - 3:00 PM	2	0	4	6		5	27	0	32		0	0	0	0		0	31	0	31		6	63	69
3:00 PM - 3:15 PM	3	0	8	11		4	32	0	36		0	0	0	0		0	27	2	29		11	65	76
3:15 PM - 3:30 PM	5	0	11	16		4	34	0	38		0	0	0	0		0	30	3	33		16	71	87
3:30 PM - 3:45 PM	1	0	11	12		2	46	0	48		0	0	0	0		0	34	2	36		12	84	96
3:45 PM - 4:00 PM	3	0	9	12		6	54	0	60		0	0	0	0		0	39	2	41		12	101	113
4:00 PM - 4:15 PM	3	0	11	14		4	56	0	60		0	0	0	0		0	47	3	50		14	110	124
4:15 PM - 4:30 PM	3	0	13	16		10	65	0	75		0	0	0	0		0	36	1	37		16	112	128
4:30 PM - 4:45 PM	3	0	23	26		6	67	0	73		0	0	0	0		0	29	3	32		26	105	131
4:45 PM - 5:00 PM	7	0	28	35		4	75	0	79		0	0	0	0		0	40	3	43		35	122	157
5:00 PM - 5:15 PM	2	0	73	75		5	65	0	70		0	0	0	0		0	43	2	45		75	115	190
5:15 PM - 5:30 PM	4	0	85	89		5	85	0	90		0	0	0	0		0	50	1	51		89	141	230
5:30 PM - 5:45 PM	14	0	86	100		10	69	0	79		0	0	0	0		0	57	4	61		100	140	240
5:45 PM - 6:00 PM	9	0	67	76		7	64	0	71		0	0	0	0		0	50	1	51		76	122	198
6:00 PM - 6:15 PM	4	0	59	63		9	67	0	76		0	0	0	0		0	42	1	43		63	119	182
6:15 PM - 6:30 PM	2	0	70	72		7	90	0	97		0	0	0	0		0	48	0	48		72	145	217
6:30 PM - 6:45 PM	6	0	40	46		9	83	0	92		0	0	0	0		0	28	2	30		46	122	168
6:45 PM - 7:00 PM	7	0	34	41		2	50	0	52		0	0	0	0		0	31	0	31		41	83	124
Total	64	0	589	653		78	836	0	914		0	0	0	0		0	501	21	522		653	1436	2089
PM One Hour Volumes																							
2:00 PM - 3:00 PM	7	0	22	29	0.81	16	128	0	144	0.92	0	0	0	0	0.00	0	118	3	121	0.82	29	265	294
2:15 PM - 3:15 PM	7	0	27	34	0.77	16	125	0	141	0.95	0	0	0	0	0.00	0	109	4	113	0.91	34	254	288
2:30 PM - 3:30 PM	10	0	31	41	0.64	16	127	0	143	0.94	0	0	0	0	0.00	0	113	6	119	0.90	41	262	303
2:45 PM - 3:45 PM	11	0	34	45	0.70	15	139	0	154	0.80	0	0	0	0	0.00	0	122	7	129	0.90	45	283	328
3:00 PM - 4:00 PM	12	0	39	51	0.80	16	166	0	182	0.76	0	0	0	0	0.00	0	130	9	139	0.85	51	321	372
3:15 PM - 4:15 PM	12	0	42	54	0.84	16	190	0	206	0.86	0	0	0	0	0.00	0	150	10	160	0.80	54	366	420
3:30 PM - 4:30 PM	10	0	44	54	0.84	22	221	0	243	0.81	0	0	0	0	0.00	0	156	8	164	0.82	54	407	461
3:45 PM - 4:45 PM	12	0	56	68	0.65	26	242	0	268	0.89	0	0	0	0	0.00	0	151	9	160	0.80	68	428	496
4:00 PM - 5:00 PM	16	0	75	91	0.65	24	263	0	287	0.91	0	0	0	0	0.00	0	152	10	162	0.81	91	449	540
4:15 PM - 5:15 PM	15	0	137	152	0.51	25	272	0	297	0.94	0	0	0	0	0.00	0	148	9	157	0.87	152	454	606
4:30 PM - 5:30 PM	16	0	209	225	0.63	20	292	0	312	0.87	0	0	0	0	0.00	0	162	9	171	0.84	225	483	708
4:45 PM - 5:45 PM	27	0	272	299	0.75	24	294	0	318	0.88	0	0	0	0	0.00	0	190	10	200	0.82	299	518	817
5:00 PM - 6:00 PM	29	0	311	340	0.85	27	283	0	310	0.86	0	0	0	0	0.00	0	200	8	208	0.85	340	518	858
5:15 PM - 6:15 PM	31	0	297	328	0.82	31	285	0	316	0.88	0	0	0	0	0.00	0	199	7	206	0.84	328	522	850
5:30 PM - 6:30 PM	29	0	282	311	0.78	33	290	0	323	0.83	0	0	0	0	0.00	0	197	6	203	0.83	311	526	837
5:45 PM - 6:45 PM	21	0	236	257	0.85	32	304	0	336	0.87	0	0	0	0	0.00	0	168	4	172	0.84	257	508	765
6:00 PM - 7:00 PM	19	0	203	222	0.77	27	290	0	317	0.82	0	0	0	0	0.00	0	149	3	152	0.79	222	469	691

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015	**SOUTHBOUND ROAD:**	Highland Avenue
W+A JOB NO:	6640	**DAY:**	Thursday	**NORTHBOUND ROAD:**	0
INTERSECTION:	N. West St. & Highland Ave.	**WEATHER:**	clear	**WESTBOUND ROAD:**	North West Street - 1799
LOCATION:	Falls Church,VA	**COUNTED BY:**	Austin	**EASTBOUND ROAD:**	North West Street - 1799
		INPUTED BY:	agan		

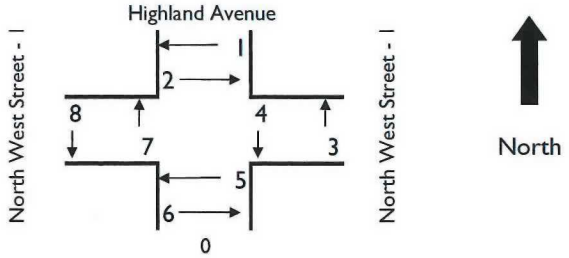
Time	Southbound				Westbound				Northbound				Eastbound				North &	East &	Total
	Highland Avenue				North West Street - 1799				0				North West Street - 1799						
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	South	West	
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
6:15 AM - 7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:30 AM - 7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:45 AM - 7:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	0	4	4
7:00 AM - 8:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	0	6	6
7:15 AM - 8:15 AM	1	0	0	1	0	4	0	4	0	0	0	0	0	1	0	1	1	5	6
7:30 AM - 8:30 AM	1	0	0	1	0	5	0	5	0	0	0	0	0	2	0	2	1	7	8
7:45 AM - 8:45 AM	1	0	0	1	0	3	0	3	0	0	0	0	0	2	0	2	1	5	6
8:00 AM - 9:00 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	2	0	2	1	4	5
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	1	0	1	1	2	3
2:15 PM - 3:15 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	2	0	2	1	3	4
2:30 PM - 3:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	2	2
2:45 PM - 3:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0	3	0	4	4
3:00 PM - 4:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	0	5	5
3:15 PM - 4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	0	4	4
3:30 PM - 4:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	5	0	5	1	6	7
3:45 PM - 4:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	3	0	3	1	4	5
4:00 PM - 5:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2	2	2	4
4:15 PM - 5:15 PM	2	0	0	2	2	0	0	2	0	0	0	0	0	2	0	2	2	4	6
4:30 PM - 5:30 PM	1	0	0	1	2	0	0	2	0	0	0	0	0	2	0	2	1	4	5
4:45 PM - 5:45 PM	1	0	0	1	2	0	0	2	0	0	0	0	0	3	0	3	1	5	6
5:00 PM - 6:00 PM	0	0	0	0	2	1	0	3	0	0	0	0	0	3	0	3	0	6	6
5:15 PM - 6:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	0	5	5
5:30 PM - 6:30 PM	0	0	0	0	1	2	0	3	0	0	0	0	0	3	0	3	0	6	6
5:45 PM - 6:45 PM	1	0	0	1	1	2	0	3	0	0	0	0	0	2	0	2	1	5	6
6:00 PM - 7:00 PM	1	0	0	1	1	2	0	3	0	0	0	0	0	2	0	2	1	5	6

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: N. West St. & Highland Ave.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Austin
INPUTED BY: agan



Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	0	0	0	2	2	3	0	0	0	2	5	0	7
6:15 AM - 7:15 AM	0	0	0	2	2	3	0	0	0	2	5	0	7
6:30 AM - 7:30 AM	0	0	0	2	3	4	0	0	0	2	7	0	9
6:45 AM - 7:45 AM	0	0	0	0	4	4	0	0	0	0	8	0	8
7:00 AM - 8:00 AM	0	0	2	0	2	1	0	0	0	2	3	0	5
7:15 AM - 8:15 AM	0	0	2	0	2	1	0	0	0	2	3	0	5
7:30 AM - 8:30 AM	0	0	4	0	2	0	0	0	0	4	2	0	6
7:45 AM - 8:45 AM	0	0	4	0	1	0	0	0	0	4	1	0	5
8:00 AM - 9:00 AM	0	0	2	0	1	0	0	0	0	2	1	0	3
PM One Hour Volumes													
2:00 PM - 3:00 PM	0	0	0	0	2	3	3	0	0	0	5	3	8
2:15 PM - 3:15 PM	0	0	0	0	2	1	3	0	0	0	3	3	6
2:30 PM - 3:30 PM	0	0	0	0	2	1	3	0	0	0	3	3	6
2:45 PM - 3:45 PM	0	0	5	0	0	0	3	0	0	5	0	3	8
3:00 PM - 4:00 PM	0	0	9	0	0	0	1	0	0	9	0	1	10
3:15 PM - 4:15 PM	0	0	9	0	0	0	1	0	0	9	0	1	10
3:30 PM - 4:30 PM	0	0	9	0	0	0	2	0	0	9	0	2	11
3:45 PM - 4:45 PM	0	0	4	0	2	0	2	0	0	4	2	2	8
4:00 PM - 5:00 PM	0	0	0	0	2	0	1	0	0	0	2	1	3
4:15 PM - 5:15 PM	1	0	0	0	2	0	1	0	1	0	2	1	4
4:30 PM - 5:30 PM	1	0	1	0	2	0	0	0	1	1	2	0	4
4:45 PM - 5:45 PM	1	0	1	0	0	0	0	0	1	1	0	0	2
5:00 PM - 6:00 PM	1	0	1	0	0	0	0	0	1	1	0	0	2
5:15 PM - 6:15 PM	0	0	1	1	0	0	1	0	0	2	0	1	3
5:30 PM - 6:30 PM	0	0	0	3	0	0	1	0	0	3	0	1	4
5:45 PM - 6:45 PM	0	0	0	3	0	0	1	0	0	3	0	1	4
6:00 PM - 7:00 PM	0	0	0	3	0	0	1	0	0	3	0	1	4

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: N. Oak St. & Walnut St.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Eduvina
INPUTED BY: agan

SOUTHBOUND ROAD: North Oak Street - 1746
NORTHBOUND ROAD: North Oak Street - 1746
WESTBOUND ROAD: Walnut Street - m1748
EASTBOUND ROAD: 0

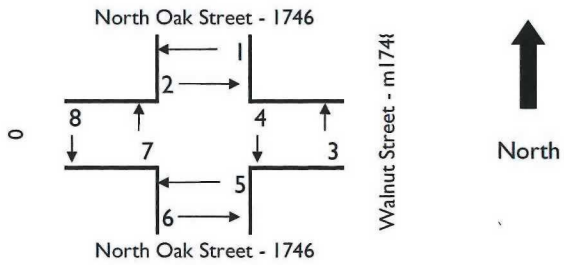
Time	Southbound North Oak Street - 1746					Westbound Walnut Street - m1748					Northbound North Oak Street - 1746					Eastbound 0					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	0	1	1		0	0	0	0		0	2	0	2		0	0	0	0		3	0	3
6:15 AM - 6:30 AM	0	1	0	1		0	0	0	0		0	0	0	0		0	0	0	0		1	0	1
6:30 AM - 6:45 AM	0	2	1	3		0	0	0	0		0	1	0	1		0	0	0	0		4	0	4
6:45 AM - 7:00 AM	0	0	1	1		1	0	0	1		1	1	0	2		0	0	0	0		3	1	4
7:00 AM - 7:15 AM	0	4	1	5		0	0	2	2		0	7	0	7		0	0	0	0		12	2	14
7:15 AM - 7:30 AM	0	5	0	5		2	0	1	3		2	5	0	7		0	0	0	0		12	3	15
7:30 AM - 7:45 AM	0	2	1	3		0	0	0	0		0	7	0	7		0	0	0	0		10	0	10
7:45 AM - 8:00 AM	0	7	0	7		0	0	0	0		1	9	0	10		0	0	0	0		17	0	17
8:00 AM - 8:15 AM	0	4	0	4		1	0	0	1		3	18	0	21		0	0	0	0		25	1	26
8:15 AM - 8:30 AM	0	5	2	7		2	0	0	2		4	19	0	23		0	0	0	0		30	2	32
8:30 AM - 8:45 AM	0	5	5	10		4	0	3	7		0	25	0	25		0	0	0	0		35	7	42
8:45 AM - 9:00 AM	0	23	5	28		0	0	0	0		1	23	0	24		0	0	0	0		52	0	52
Total	0	58	17	75		10	0	6	16		12	117	0	129		0	0	0	0		204	16	220
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	3	3	6	0.50	1	0	0	1	0.25	1	4	0	5	0.63	0	0	0	0	0.00	11	1	12
6:15 AM - 7:15 AM	0	7	3	10	0.50	1	0	2	3	0.38	1	9	0	10	0.36	0	0	0	0	0.00	20	3	23
6:30 AM - 7:30 AM	0	11	3	14	0.70	3	0	3	6	0.50	3	14	0	17	0.61	0	0	0	0	0.00	31	6	37
6:45 AM - 7:45 AM	0	11	3	14	0.70	3	0	3	6	0.50	3	20	0	23	0.82	0	0	0	0	0.00	37	6	43
7:00 AM - 8:00 AM	0	18	2	20	0.71	2	0	3	5	0.42	3	28	0	31	0.78	0	0	0	0	0.00	51	5	56
7:15 AM - 8:15 AM	0	18	1	19	0.68	3	0	1	4	0.33	6	39	0	45	0.54	0	0	0	0	0.00	64	4	68
7:30 AM - 8:30 AM	0	18	3	21	0.75	3	0	0	3	0.38	8	53	0	61	0.66	0	0	0	0	0.00	82	3	85
7:45 AM - 8:45 AM	0	21	7	28	0.70	7	0	3	10	0.36	8	71	0	79	0.79	0	0	0	0	0.00	107	10	117
8:00 AM - 9:00 AM	0	37	12	49	0.44	7	0	3	10	0.36	8	85	0	93	0.93	0	0	0	0	0.00	142	10	152
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	0	6	0	6		1	0	0	1		0	2	0	2		0	0	0	0		8	1	9
2:15 PM - 2:30 PM	0	1	0	1		0	0	1	1		0	2	0	2		0	0	0	0		3	1	4
2:30 PM - 2:45 PM	0	0	1	1		0	0	1	1		0	4	0	4		0	0	0	0		5	1	6
2:45 PM - 3:00 PM	0	1	1	2		1	0	0	1		0	7	0	7		0	0	0	0		9	1	10
3:00 PM - 3:15 PM	0	0	1	1		0	0	2	2		1	2	0	3		0	0	0	0		4	2	6
3:15 PM - 3:30 PM	0	1	1	2		1	0	2	3		4	1	0	5		0	0	0	0		7	3	10
3:30 PM - 3:45 PM	0	3	3	6		0	0	0	0		0	12	0	12		0	0	0	0		18	0	18
3:45 PM - 4:00 PM	0	8	1	9		1	0	0	1		2	6	0	8		0	0	0	0		17	1	18
4:00 PM - 4:15 PM	0	18	0	18		2	0	3	5		2	9	0	11		0	0	0	0		29	5	34
4:15 PM - 4:30 PM	0	14	2	16		1	0	0	1		2	4	0	6		0	0	0	0		22	1	23
4:30 PM - 4:45 PM	0	7	1	8		2	0	0	2		1	4	0	5		0	0	0	0		13	2	15
4:45 PM - 5:00 PM	0	12	0	12		1	0	4	5		0	9	0	9		0	0	0	0		21	5	26
5:00 PM - 5:15 PM	0	12	1	13		0	0	3	3		2	6	0	8		0	0	0	0		21	3	24
5:15 PM - 5:30 PM	0	8	2	10		0	0	2	2		3	14	0	17		0	0	0	0		27	2	29
5:30 PM - 5:45 PM	0	9	0	9		2	0	2	4		2	17	0	19		0	0	0	0		28	4	32
5:45 PM - 6:00 PM	0	18	2	20		3	0	0	3		0	14	0	14		0	0	0	0		34	3	37
6:00 PM - 6:15 PM	0	7	1	8		0	0	1	1		1	8	0	9		0	0	0	0		17	1	18
6:15 PM - 6:30 PM	0	12	4	16		7	0	2	9		1	7	0	8		0	0	0	0		24	9	33
6:30 PM - 6:45 PM	0	4	2	6		0	0	0	0		0	1	0	1		0	0	0	0		7	0	7
6:45 PM - 7:00 PM	0	4	0	4		0	0	1	1		3	1	0	4		0	0	0	0		8	1	9
Total	0	125	15	140		18	0	18	36		17	94	0	111		0	0	0	0		251	36	287
PM One Hour Volumes																							
2:00 PM - 3:00 PM	0	8	2	10	0.42	2	0	2	4	1.00	0	15	0	15	0.54	0	0	0	0	0.00	25	4	29
2:15 PM - 3:15 PM	0	2	3	5	0.63	1	0	4	5	0.63	1	15	0	16	0.57	0	0	0	0	0.00	21	5	26
2:30 PM - 3:30 PM	0	2	4	6	0.75	2	0	5	7	0.58	5	14	0	19	0.68	0	0	0	0	0.00	25	7	32
2:45 PM - 3:45 PM	0	5	6	11	0.46	2	0	4	6	0.50	5	22	0	27	0.56	0	0	0	0	0.00	38	6	44
3:00 PM - 4:00 PM	0	12	6	18	0.50	2	0	4	6	0.50	7	21	0	28	0.58	0	0	0	0	0.00	46	6	52
3:15 PM - 4:15 PM	0	30	5	35	0.49	4	0	5	9	0.45	8	28	0	36	0.75	0	0	0	0	0.00	71	9	80
3:30 PM - 4:30 PM	0	43	6	49	0.68	4	0	3	7	0.35	6	31	0	37	0.77	0	0	0	0	0.00	86	7	93
3:45 PM - 4:45 PM	0	47	4	51	0.71	6	0	3	9	0.45	7	23	0	30	0.68	0	0	0	0	0.00	81	9	90
4:00 PM - 5:00 PM	0	51	3	54	0.75	6	0	7	13	0.65	5	26	0	31	0.70	0	0	0	0	0.00	85	13	98
4:15 PM - 5:15 PM	0	45	4	49	0.77	4	0	7	11	0.55	5	23	0	28	0.78	0	0	0	0	0.00	77	11	88
4:30 PM - 5:30 PM	0	39	4	43	0.83	3	0	9	12	0.60	6	33	0	39	0.57	0	0	0	0	0.00	82	12	94
4:45 PM - 5:45 PM	0	41	3	44	0.85	3	0	11	14	0.70	7	46	0	53	0.70	0	0	0	0	0.00	97	14	111
5:00 PM - 6:00 PM	0	47	5	52	0.65	5	0	7	12	0.75	7	51	0	58	0.76	0	0	0	0	0.00	110	12	122
5:15 PM - 6:15 PM	0	42	5	47	0.59	5	0	5	10	0.63	6	53	0	59	0.78	0	0	0	0	0.00	106	10	116
5:30 PM - 6:30 PM	0	46	7	53	0.66	12	0	5	17	0.47	4	46	0	50	0.66	0	0	0	0	0.00	103	17	120
5:45 PM - 6:45 PM	0	41	9	50	0.63	10	0	3	13	0.36	2	30	0	32	0.57	0	0	0	0	0.00	82	13	95
6:00 PM - 7:00 PM	0	27	7	34	0.53	7	0	4	11	0.31	5	17	0	22	0.61	0	0	0	0	0.00	56	11	67

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: N. Oak St. & Walnut St.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Eduvina
INPUTED BY: agan



Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	0	0	3	1	0	0	0	0	0	4	0	0	4
6:15 AM - 7:15 AM	0	0	2	2	0	0	0	0	0	4	0	0	4
6:30 AM - 7:30 AM	0	0	3	2	0	0	0	0	0	5	0	0	5
6:45 AM - 7:45 AM	0	0	3	2	0	0	0	0	0	5	0	0	5
7:00 AM - 8:00 AM	0	0	2	1	0	0	0	0	0	3	0	0	3
7:15 AM - 8:15 AM	0	0	1	0	0	0	0	0	0	1	0	0	1
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	1	0	0	0	0	0	1	0	0	1
PM One Hour Volumes													
2:00 PM - 3:00 PM	0	1	3	1	0	0	0	0	1	4	0	0	5
2:15 PM - 3:15 PM	0	1	2	1	0	0	0	0	1	3	0	0	4
2:30 PM - 3:30 PM	0	1	2	1	0	0	0	0	1	3	0	0	4
2:45 PM - 3:45 PM	0	1	3	3	0	0	0	0	1	6	0	0	7
3:00 PM - 4:00 PM	0	1	2	3	0	0	0	0	1	5	0	0	6
3:15 PM - 4:15 PM	0	4	6	6	0	0	0	0	4	12	0	0	16
3:30 PM - 4:30 PM	0	4	8	8	0	0	0	0	4	16	0	0	20
3:45 PM - 4:45 PM	0	4	6	5	0	0	0	0	4	11	0	0	15
4:00 PM - 5:00 PM	0	3	6	5	0	0	0	0	3	11	0	0	14
4:15 PM - 5:15 PM	0	0	4	3	0	0	0	0	0	7	0	0	7
4:30 PM - 5:30 PM	0	0	2	1	0	0	0	0	0	3	0	0	3
4:45 PM - 5:45 PM	0	0	2	1	0	0	0	0	0	3	0	0	3
5:00 PM - 6:00 PM	0	0	4	4	0	0	0	0	0	8	0	0	8
5:15 PM - 6:15 PM	0	0	3	5	0	0	0	0	0	8	0	0	8
5:30 PM - 6:30 PM	0	0	5	9	0	0	0	0	0	14	0	0	14
5:45 PM - 6:45 PM	0	0	5	10	0	0	0	0	0	15	0	0	15
6:00 PM - 7:00 PM	0	0	3	8	0	0	0	0	0	11	0	0	11

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: N. West St. & N. Oak St.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Jerome
INPUTED BY: agan

SOUTHBOUND ROAD: North Oak Street - 1746
NORTHBOUND ROAD: 0
WESTBOUND ROAD: North West Street - 1799
EASTBOUND ROAD: North West Street - 1799

Time	Southbound North Oak Street - 1746					Westbound North West Street - 1799					Northbound 0					Eastbound North West Street - 1799					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	0	1	1		0	5	0	5		0	0	0	0		0	4	2	6		1	11	12
6:15 AM - 6:30 AM	3	0	0	3		0	4	0	4		0	0	0	0		0	11	0	11		3	15	18
6:30 AM - 6:45 AM	2	0	0	2		0	3	0	3		0	0	0	0		0	28	1	29		2	32	34
6:45 AM - 7:00 AM	2	0	0	2		1	24	0	25		0	0	0	0		0	34	1	35		2	60	62
7:00 AM - 7:15 AM	6	0	4	10		3	9	0	12		0	0	0	0		0	58	6	64		10	76	86
7:15 AM - 7:30 AM	2	0	5	7		2	25	0	27		0	0	0	0		0	79	5	84		7	111	118
7:30 AM - 7:45 AM	4	0	2	6		3	26	0	29		0	0	0	0		0	62	9	71		6	100	106
7:45 AM - 8:00 AM	6	0	3	9		6	36	0	42		0	0	0	0		0	58	7	65		9	107	116
8:00 AM - 8:15 AM	4	0	4	8		8	28	0	36		0	0	0	0		0	59	14	73		8	109	117
8:15 AM - 8:30 AM	4	0	2	6		13	39	0	52		0	0	0	0		0	55	9	64		6	116	122
8:30 AM - 8:45 AM	6	0	3	9		18	22	0	40		0	0	0	0		0	41	8	49		9	89	98
8:45 AM - 9:00 AM	15	0	10	25		11	31	0	42		0	0	0	0		0	55	10	65		25	107	132
Total	54	0	34	88		65	252	0	317		0	0	0	0		0	544	72	616		88	933	1021
AM One Hour Volumes																							
6:00 AM - 7:00 AM	7	0	1	8	0.67	1	36	0	37	0.37	0	0	0	0	0.00	0	77	4	81	0.58	8	118	126
6:15 AM - 7:15 AM	13	0	4	17	0.43	4	40	0	44	0.44	0	0	0	0	0.00	0	131	8	139	0.54	17	183	200
6:30 AM - 7:30 AM	12	0	9	21	0.53	6	61	0	67	0.62	0	0	0	0	0.00	0	199	13	212	0.63	21	279	300
6:45 AM - 7:45 AM	14	0	11	25	0.63	9	84	0	93	0.80	0	0	0	0	0.00	0	233	21	254	0.76	25	347	372
7:00 AM - 8:00 AM	18	0	14	32	0.80	14	96	0	110	0.65	0	0	0	0	0.00	0	257	27	284	0.85	32	394	426
7:15 AM - 8:15 AM	16	0	14	30	0.83	19	115	0	134	0.80	0	0	0	0	0.00	0	258	35	293	0.87	30	427	457
7:30 AM - 8:30 AM	18	0	11	29	0.81	30	129	0	159	0.76	0	0	0	0	0.00	0	234	39	273	0.93	29	432	461
7:45 AM - 8:45 AM	20	0	12	32	0.89	45	125	0	170	0.82	0	0	0	0	0.00	0	213	38	251	0.86	32	421	453
8:00 AM - 9:00 AM	29	0	19	48	0.48	50	120	0	170	0.82	0	0	0	0	0.00	0	210	41	251	0.86	48	421	469
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	6	0	2	8		2	32	0	34		0	0	0	0		0	35	3	38		8	72	80
2:15 PM - 2:30 PM	2	0	1	3		0	32	0	32		0	0	0	0		0	30	1	31		3	63	66
2:30 PM - 2:45 PM	1	0	1	2		2	35	0	37		0	0	0	0		0	29	1	30		2	67	69
2:45 PM - 3:00 PM	2	0	0	2		6	26	0	32		0	0	0	0		0	32	1	33		2	65	67
3:00 PM - 3:15 PM	1	0	2	3		1	32	0	33		0	0	0	0		0	29	3	32		3	65	68
3:15 PM - 3:30 PM	3	0	1	4		4	38	0	42		0	0	0	0		0	29	3	32		4	74	78
3:30 PM - 3:45 PM	2	0	2	4		5	42	0	47		0	0	0	0		0	39	5	44		4	91	95
3:45 PM - 4:00 PM	8	0	1	9		5	52	0	57		0	0	0	0		0	40	5	45		9	102	111
4:00 PM - 4:15 PM	11	0	14	25		4	51	0	55		0	0	0	0		0	46	7	53		25	108	133
4:15 PM - 4:30 PM	10	0	7	17		4	63	0	67		0	0	0	0		0	42	5	47		17	114	131
4:30 PM - 4:45 PM	8	0	4	12		5	66	0	71		0	0	0	0		0	39	3	42		12	113	125
4:45 PM - 5:00 PM	16	0	0	16		8	65	0	73		0	0	0	0		0	53	6	59		16	132	148
5:00 PM - 5:15 PM	5	0	11	16		4	63	0	67		0	0	0	0		0	57	7	64		16	131	147
5:15 PM - 5:30 PM	9	0	3	12		12	78	0	90		0	0	0	0		0	66	8	74		12	164	176
5:30 PM - 5:45 PM	8	0	13	21		10	68	0	78		0	0	0	0		0	70	9	79		21	157	178
5:45 PM - 6:00 PM	11	0	11	22		11	59	0	70		0	0	0	0		0	70	7	77		22	147	169
6:00 PM - 6:15 PM	6	0	10	16		7	67	0	74		0	0	0	0		0	60	8	68		16	142	158
6:15 PM - 6:30 PM	11	0	5	16		3	77	0	80		0	0	0	0		0	57	9	66		16	146	162
6:30 PM - 6:45 PM	3	0	4	7		0	83	0	83		0	0	0	0		0	39	1	40		7	123	130
6:45 PM - 7:00 PM	3	0	3	6		2	50	0	52		0	0	0	0		0	42	2	44		6	96	102
Total	101	0	85	186		70	790	0	860		0	0	0	0		0	641	72	713		186	1573	1759
PM One Hour Volumes																							
2:00 PM - 3:00 PM	11	0	4	15	0.47	10	125	0	135	0.91	0	0	0	0	0.00	0	126	6	132	0.87	15	267	282
2:15 PM - 3:15 PM	6	0	4	10	0.83	9	125	0	134	0.91	0	0	0	0	0.00	0	120	6	126	0.95	10	260	270
2:30 PM - 3:30 PM	7	0	4	11	0.69	13	131	0	144	0.86	0	0	0	0	0.00	0	119	8	127	0.96	11	271	282
2:45 PM - 3:45 PM	8	0	5	13	0.81	16	138	0	154	0.82	0	0	0	0	0.00	0	129	12	141	0.80	13	295	308
3:00 PM - 4:00 PM	14	0	6	20	0.56	15	164	0	179	0.79	0	0	0	0	0.00	0	137	16	153	0.85	20	332	352
3:15 PM - 4:15 PM	24	0	18	42	0.42	18	183	0	201	0.88	0	0	0	0	0.00	0	154	20	174	0.82	42	375	417
3:30 PM - 4:30 PM	31	0	24	55	0.55	18	208	0	226	0.84	0	0	0	0	0.00	0	167	22	189	0.89	55	415	470
3:45 PM - 4:45 PM	37	0	26	63	0.63	18	232	0	250	0.88	0	0	0	0	0.00	0	167	20	187	0.88	63	437	500
4:00 PM - 5:00 PM	45	0	25	70	0.70	21	245	0	266	0.91	0	0	0	0	0.00	0	180	21	201	0.85	70	467	537
4:15 PM - 5:15 PM	39	0	22	61	0.90	21	257	0	278	0.95	0	0	0	0	0.00	0	191	21	212	0.83	61	490	551
4:30 PM - 5:30 PM	38	0	18	56	0.88	29	272	0	301	0.84	0	0	0	0	0.00	0	215	24	239	0.81	56	540	596
4:45 PM - 5:45 PM	38	0	27	65	0.77	34	274	0	308	0.86	0	0	0	0	0.00	0	246	30	276	0.87	65	584	649
5:00 PM - 6:00 PM	33	0	38	71	0.81	37	268	0	305	0.85	0	0	0	0	0.00	0	263	31	294	0.93	71	599	670
5:15 PM - 6:15 PM	34	0	37	71	0.81	40	272	0	312	0.87	0	0	0	0	0.00	0	266	32	298	0.94	71	610	681
5:30 PM - 6:30 PM	36	0	39	75	0.85	31	271	0	302	0.94	0	0	0	0	0.00	0	257	33	290	0.92	75	592	667
5:45 PM - 6:45 PM	31	0	30	61	0.69	21	286	0	307	0.92	0	0	0	0	0.00	0	226	25	251	0.81	61	558	619
6:00 PM - 7:00 PM	23	0	22	45	0.70	12	277	0	289	0.87	0	0	0	0	0.00	0	198	20	218	0.80	45	507	552

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015	**SOUTHBOUND ROAD:**	North Oak Street - 1746
W+A JOB NO:	6640	**DAY:**	Thursday	**NORTHBOUND ROAD:**	0
INTERSECTION:	N. West St. & N. Oak St.	**WEATHER:**	clear	**WESTBOUND ROAD:**	North West Street - 1799
LOCATION:	Falls Church,VA	**COUNTED BY:**	Jerome	**EASTBOUND ROAD:**	North West Street - 1799
		INPUTED BY:	agan		

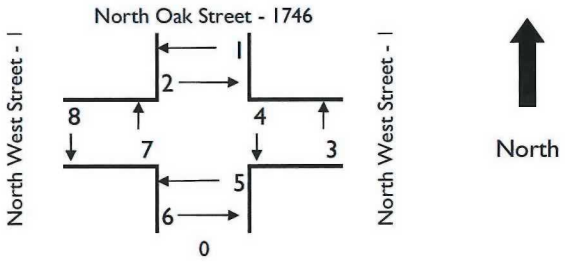
Time	Southbound North Oak Street - 1746				Westbound North West Street - 1799				Northbound 0				Eastbound North West Street - 1799				North & South	East & West	Total
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
6:15 AM - 7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:30 AM - 7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:45 AM - 7:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	0	4	4
7:00 AM - 8:00 AM	0	0	0	0	1	5	0	6	0	1	0	1	0	1	0	1	1	7	8
7:15 AM - 8:15 AM	0	0	0	0	2	4	0	6	0	1	0	1	0	2	0	2	1	8	9
7:30 AM - 8:30 AM	0	0	0	0	2	5	0	7	0	1	0	1	0	2	0	2	1	9	10
7:45 AM - 8:45 AM	0	0	0	0	2	3	1	6	0	1	0	1	0	2	0	2	1	8	9
8:00 AM - 9:00 AM	0	0	0	0	1	2	2	5	0	0	0	0	0	2	0	2	0	7	7
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	2	1	2	3
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	2	1	2	3
2:30 PM - 3:30 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	1	1	2
2:45 PM - 3:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	3	3
3:00 PM - 4:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	1	4	0	6	6
3:15 PM - 4:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	1	5	0	7	7
3:30 PM - 4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	7	1	8	0	9	9
3:45 PM - 4:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	5	1	6	1	7	8
4:00 PM - 5:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	5	0	5	1	5	6
4:15 PM - 5:15 PM	0	1	0	1	1	0	0	1	0	0	0	0	2	4	0	6	1	7	8
4:30 PM - 5:30 PM	0	2	0	2	1	1	0	2	0	0	0	0	2	1	0	3	2	5	7
4:45 PM - 5:45 PM	0	1	0	1	2	2	0	4	0	0	0	0	2	2	0	4	1	8	9
5:00 PM - 6:00 PM	1	1	0	2	2	2	0	4	0	0	0	0	2	1	0	3	2	7	9
5:15 PM - 6:15 PM	1	1	0	2	1	2	0	3	0	0	2	2	0	2	0	2	4	5	9
5:30 PM - 6:30 PM	2	0	0	2	1	1	0	2	0	0	3	3	0	3	0	3	5	5	10
5:45 PM - 6:45 PM	2	0	0	2	0	0	0	0	0	0	3	3	0	2	0	2	5	2	7
6:00 PM - 7:00 PM	1	0	0	1	0	1	0	1	0	0	3	3	0	2	0	2	4	3	7

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: N. West St. & N. Oak St.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Jerome
INPUTED BY: agan



Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	0	0	5	5	4	4	0	0	0	10	8	0	18
6:15 AM - 7:15 AM	0	0	5	5	4	4	0	0	0	10	8	0	18
6:30 AM - 7:30 AM	0	0	2	3	1	6	0	0	0	5	7	0	12
6:45 AM - 7:45 AM	0	0	1	2	0	5	0	0	0	3	5	0	8
7:00 AM - 8:00 AM	0	0	2	2	2	2	0	0	0	4	4	0	8
7:15 AM - 8:15 AM	0	0	3	1	3	2	0	1	0	4	5	1	10
7:30 AM - 8:30 AM	0	0	13	2	3	0	0	1	0	15	3	1	19
7:45 AM - 8:45 AM	0	0	21	5	5	1	0	1	0	26	6	1	33
8:00 AM - 9:00 AM	0	0	19	6	3	1	0	1	0	25	4	1	30
PM One Hour Volumes													
2:00 PM - 3:00 PM	0	0	1	1	0	4	0	0	0	2	4	0	6
2:15 PM - 3:15 PM	0	0	2	0	0	1	0	0	0	2	1	0	3
2:30 PM - 3:30 PM	0	0	2	0	0	2	0	0	0	2	2	0	4
2:45 PM - 3:45 PM	0	0	3	2	0	7	0	0	0	5	7	0	12
3:00 PM - 4:00 PM	0	0	5	4	0	7	0	0	0	9	7	0	16
3:15 PM - 4:15 PM	0	0	8	8	1	7	0	0	0	16	8	0	24
3:30 PM - 4:30 PM	0	0	8	19	3	6	0	0	0	27	9	0	36
3:45 PM - 4:45 PM	0	0	6	17	3	2	0	0	0	23	5	0	28
4:00 PM - 5:00 PM	0	0	6	16	4	3	0	0	0	22	7	0	29
4:15 PM - 5:15 PM	0	0	2	13	4	4	0	0	0	15	8	0	23
4:30 PM - 5:30 PM	0	0	2	2	4	4	0	0	0	4	8	0	12
4:45 PM - 5:45 PM	0	0	3	6	4	3	0	0	0	9	7	0	16
5:00 PM - 6:00 PM	0	0	1	5	4	2	0	0	0	6	6	0	12
5:15 PM - 6:15 PM	0	0	2	7	5	2	0	0	0	9	7	0	16
5:30 PM - 6:30 PM	0	0	6	7	3	5	0	0	0	13	8	0	21
5:45 PM - 6:45 PM	0	0	5	3	3	4	0	0	0	8	7	0	15
6:00 PM - 7:00 PM	0	0	5	3	2	4	0	0	0	8	6	0	14

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & Woodland Dr.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Matt
INPUTED BY: agan

SOUTHBOUND ROAD: Great Falls Street - 694
NORTHBOUND ROAD: Great Falls Street - 694
WESTBOUND ROAD: Driveway
EASTBOUND ROAD: Woodland Drive

Time	Southbound Great Falls Street - 694					Westbound Driveway					Northbound Great Falls Street - 694					Eastbound Woodland Drive					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	12	0	12		0	0	0	0		0	16	0	16		0	0	0	0		28	0	28
6:15 AM - 6:30 AM	0	18	0	18		0	0	0	0		0	13	0	13		0	0	0	0		31	0	31
6:30 AM - 6:45 AM	0	38	0	38		0	0	0	0		0	42	0	42		1	0	0	1		80	1	81
6:45 AM - 7:00 AM	0	63	0	63		0	0	0	0		0	48	1	49		1	0	0	1		112	1	113
7:00 AM - 7:15 AM	0	59	0	59		0	0	0	0		0	56	0	56		0	0	2	2		115	2	117
7:15 AM - 7:30 AM	2	68	0	70		0	0	0	0		0	48	0	48		0	0	0	0		118	0	118
7:30 AM - 7:45 AM	0	91	0	91		0	0	0	0		0	103	0	103		1	0	0	1		194	1	195
7:45 AM - 8:00 AM	0	104	0	104		0	0	0	0		0	126	0	126		2	0	1	3		230	3	233
8:00 AM - 8:15 AM	1	89	0	90		0	0	0	0		0	75	2	77		1	0	0	1		167	1	168
8:15 AM - 8:30 AM	0	101	0	101		0	0	0	0		0	113	0	113		0	0	0	0		214	0	214
8:30 AM - 8:45 AM	0	98	0	98		0	0	0	0		0	56	0	56		0	0	0	0		154	0	154
8:45 AM - 9:00 AM	0	110	0	110		0	0	0	0		0	89	0	89		1	0	3	4		199	4	203
Total	3	851	0	854		0	0	0	0		0	785	3	788		7	0	6	13		1642	13	1655
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	131	0	131	0.52	0	0	0	0	0.00	0	119	1	120	0.61	2	0	0	2	0.50	251	2	253
6:15 AM - 7:15 AM	0	178	0	178	0.71	0	0	0	0	0.00	0	159	1	160	0.71	2	0	2	4	0.50	338	4	342
6:30 AM - 7:30 AM	2	228	0	230	0.82	0	0	0	0	0.00	0	194	1	195	0.87	2	0	2	4	0.50	425	4	429
6:45 AM - 7:45 AM	2	281	0	283	0.78	0	0	0	0	0.00	0	255	1	256	0.62	2	0	2	4	0.50	539	4	543
7:00 AM - 8:00 AM	2	322	0	324	0.78	0	0	0	0	0.00	0	333	0	333	0.66	3	0	3	6	0.50	657	6	663
7:15 AM - 8:15 AM	3	352	0	355	0.85	0	0	0	0	0.00	0	352	2	354	0.70	4	0	1	5	0.42	709	5	714
7:30 AM - 8:30 AM	1	385	0	386	0.93	0	0	0	0	0.00	0	417	2	419	0.83	4	0	1	5	0.42	805	5	810
7:45 AM - 8:45 AM	1	392	0	393	0.94	0	0	0	0	0.00	0	370	2	372	0.74	3	0	1	4	0.33	765	4	769
8:00 AM - 9:00 AM	1	398	0	399	0.91	0	0	0	0	0.00	0	333	2	335	0.74	2	0	3	5	0.31	734	5	739
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	0	35	0	35		0	0	0	0		0	27	0	27		0	0	0	0		62	0	62
2:15 PM - 2:30 PM	0	49	0	49		0	0	0	0		0	52	0	52		0	0	0	0		101	0	101
2:30 PM - 2:45 PM	0	56	0	56		0	0	0	0		0	35	0	35		0	0	1	1		91	1	92
2:45 PM - 3:00 PM	2	47	0	49		0	0	0	0		0	56	0	56		0	0	3	3		105	3	108
3:00 PM - 3:15 PM	1	79	0	80		0	0	0	0		0	73	0	73		1	0	1	2		153	2	155
3:15 PM - 3:30 PM	1	77	0	78		0	0	0	0		0	90	1	91		0	0	1	1		169	1	170
3:30 PM - 3:45 PM	1	72	0	73		0	0	0	0		0	76	0	76		0	0	2	2		149	2	151
3:45 PM - 4:00 PM	0	67	0	67		0	0	0	0		0	41	0	41		0	0	0	0		108	0	108
4:00 PM - 4:15 PM	1	103	0	104		0	0	0	0		0	64	1	65		0	0	1	1		169	1	170
4:15 PM - 4:30 PM	1	60	0	61		0	0	0	0		0	59	0	59		0	1	1	2		120	2	122
4:30 PM - 4:45 PM	0	100	0	100		0	0	0	0		0	114	2	116		0	0	0	0		216	0	216
4:45 PM - 5:00 PM	0	117	0	117		0	0	0	0		0	113	0	113		0	0	0	0		230	0	230
5:00 PM - 5:15 PM	2	136	0	138		0	0	0	0		0	128	0	128		1	0	2	3		266	3	269
5:15 PM - 5:30 PM	2	144	0	146		0	0	0	0		0	97	0	97		0	0	0	0		243	0	243
5:30 PM - 5:45 PM	0	146	0	146		0	0	0	0		0	111	0	111		1	0	2	3		257	3	260
5:45 PM - 6:00 PM	1	129	0	130		0	0	0	0		0	101	1	102		0	0	0	0		232	0	232
6:00 PM - 6:15 PM	0	136	0	136		0	0	0	0		0	101	0	101		0	0	0	0		237	0	237
6:15 PM - 6:30 PM	1	115	0	116		0	0	0	0		0	94	0	94		0	0	4	4		210	4	214
6:30 PM - 6:45 PM	0	126	0	126		0	0	0	0		0	53	0	53		0	0	0	0		179	0	179
6:45 PM - 7:00 PM	0	98	0	98		0	0	0	0		0	62	0	62		0	0	0	0		160	0	160
Total	8	1410	0	1418		0	0	0	0		0	1097	4	1101		2	1	10	13		2519	13	2532
PM One Hour Volumes																							
2:00 PM - 3:00 PM	2	187	0	189	0.84	0	0	0	0	0.00	0	170	0	170	0.76	0	0	4	4	0.33	359	4	363
2:15 PM - 3:15 PM	3	231	0	234	0.73	0	0	0	0	0.00	0	216	0	216	0.74	1	0	5	6	0.50	450	6	456
2:30 PM - 3:30 PM	4	259	0	263	0.82	0	0	0	0	0.00	0	254	1	255	0.70	1	0	6	7	0.58	518	7	525
2:45 PM - 3:45 PM	5	275	0	280	0.88	0	0	0	0	0.00	0	295	1	296	0.81	1	0	7	8	0.67	576	8	584
3:00 PM - 4:00 PM	3	295	0	298	0.93	0	0	0	0	0.00	0	280	1	281	0.77	1	0	4	5	0.63	579	5	584
3:15 PM - 4:15 PM	3	319	0	322	0.77	0	0	0	0	0.00	0	271	2	273	0.75	0	0	4	4	0.50	595	4	599
3:30 PM - 4:30 PM	3	302	0	305	0.73	0	0	0	0	0.00	0	240	1	241	0.79	0	1	4	5	0.63	546	5	551
3:45 PM - 4:45 PM	2	330	0	332	0.80	0	0	0	0	0.00	0	278	3	281	0.61	0	1	2	3	0.38	613	3	616
4:00 PM - 5:00 PM	2	380	0	382	0.82	0	0	0	0	0.00	0	350	3	353	0.76	0	1	2	3	0.38	735	3	738
4:15 PM - 5:15 PM	3	413	0	416	0.75	0	0	0	0	0.00	0	414	2	416	0.81	1	1	3	5	0.42	832	5	837
4:30 PM - 5:30 PM	4	497	0	501	0.86	0	0	0	0	0.00	0	452	2	454	0.89	1	0	2	3	0.25	955	3	958
4:45 PM - 5:45 PM	4	543	0	547	0.94	0	0	0	0	0.00	0	449	0	449	0.88	2	0	4	6	0.50	996	6	1002
5:00 PM - 6:00 PM	5	555	0	560	0.96	0	0	0	0	0.00	0	437	1	438	0.86	2	0	4	6	0.50	998	6	1004
5:15 PM - 6:15 PM	3	555	0	558	0.96	0	0	0	0	0.00	0	410	1	411	0.93	1	0	2	3	0.25	969	3	972
5:30 PM - 6:30 PM	2	526	0	528	0.90	0	0	0	0	0.00	0	407	1	408	0.92	1	0	6	7	0.44	936	7	943
5:45 PM - 6:45 PM	2	506	0	508	0.93	0	0	0	0	0.00	0	349	1	350	0.86	0	0	4	4	0.25	858	4	862
6:00 PM - 7:00 PM	1	475	0	476	0.88	0	0	0	0	0.00	0	310	0	310	0.77	0	0	4	4	0.25	786	4	790

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015	**SOUTHBOUND ROAD:**	Great Falls Street - 694
W+A JOB NO:	6640	**DAY:**	Thursday	**NORTHBOUND ROAD:**	Great Falls Street - 694
INTERSECTION:	Great Falls St. & Woodland Dr.	**WEATHER:**	clear	**WESTBOUND ROAD:**	Driveway
LOCATION:	Falls Church,VA	**COUNTED BY:**	Matt	**EASTBOUND ROAD:**	Woodland Drive
		INPUTED BY:	agan		

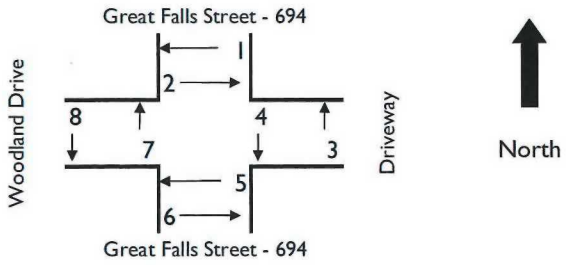
Time	Southbound Great Falls Street - 694				Westbound Driveway				Northbound Great Falls Street - 694				Eastbound Woodland Drive				North & South	East & West	Total
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2	0	2
6:15 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
6:30 AM - 7:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6:45 AM - 7:45 AM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
7:00 AM - 8:00 AM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
7:15 AM - 8:15 AM	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7
7:30 AM - 8:30 AM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
7:45 AM - 8:45 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
8:00 AM - 9:00 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3	0	3
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
3:00 PM - 4:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3	0	3
3:15 PM - 4:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3	0	3
3:30 PM - 4:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4	0	4
3:45 PM - 4:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3	0	3
4:00 PM - 5:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3	0	3
4:15 PM - 5:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4	0	4
4:30 PM - 5:30 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5	0	5
4:45 PM - 5:45 PM	0	3	0	3	0	0	0	0	0	5	0	5	0	0	0	0	8	0	8
5:00 PM - 6:00 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7	0	7
5:15 PM - 6:15 PM	0	2	0	2	0	0	0	0	0	5	0	5	0	0	0	0	7	0	7
5:30 PM - 6:30 PM	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5	0	5
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4	0	4
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3	0	3

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & Woodland Dr.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Matt
INPUTED BY: agan



Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM - 7:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	1
6:30 AM - 7:30 AM	0	0	0	0	1	0	0	1	0	0	1	1	2
6:45 AM - 7:45 AM	0	0	0	0	2	0	0	1	0	0	2	1	3
7:00 AM - 8:00 AM	0	0	0	0	2	0	0	1	0	0	2	1	3
7:15 AM - 8:15 AM	0	0	0	0	2	0	0	0	0	0	2	0	2
7:30 AM - 8:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	1
7:45 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM One Hour Volumes													
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 6:00 PM	0	0	0	0	0	0	1	0	0	0	0	1	1
5:15 PM - 6:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	1
5:30 PM - 6:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	1
5:45 PM - 6:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	1
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & Walnut St.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Tyler
INPUTED BY: agan

SOUTHBOUND ROAD: Great Falls Street - 694
NORTHBOUND ROAD: Great Falls Street - 694
WESTBOUND ROAD: 0
EASTBOUND ROAD: Walnut Street - 1748

Time	Southbound Great Falls Street - 694					Westbound 0					Northbound Great Falls Street - 694					Eastbound Walnut Street - 1748					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	13	0	13		0	0	0	0		0	15	0	15		0	0	0	0		28	0	28
6:15 AM - 6:30 AM	1	17	0	18		0	0	0	0		0	12	0	12		2	0	0	2		30	2	32
6:30 AM - 6:45 AM	0	40	0	40		0	0	0	0		0	41	2	43		1	0	1	2		83	2	85
6:45 AM - 7:00 AM	3	69	0	72		0	0	0	0		0	44	0	44		1	0	2	3		116	3	119
7:00 AM - 7:15 AM	2	77	0	79		0	0	0	0		0	66	0	66		3	0	7	10		145	10	155
7:15 AM - 7:30 AM	4	84	0	88		0	0	0	0		0	56	0	56		1	0	5	6		144	6	150
7:30 AM - 7:45 AM	6	94	0	100		0	0	0	0		0	103	1	104		0	0	10	10		204	10	214
7:45 AM - 8:00 AM	3	108	0	111		0	0	0	0		0	137	0	137		1	0	2	3		248	3	251
8:00 AM - 8:15 AM	3	106	0	109		0	0	0	0		0	87	0	87		3	0	1	4		196	4	200
8:15 AM - 8:30 AM	0	117	0	117		0	0	0	0		0	123	4	127		1	0	2	3		244	3	247
8:30 AM - 8:45 AM	3	137	0	140		0	0	0	0		0	96	2	98		2	0	4	6		238	6	244
8:45 AM - 9:00 AM	0	117	0	117		0	0	0	0		0	99	1	100		3	0	1	4		217	4	221
Total	25	979	0	1004		0	0	0	0		0	879	10	889		18	0	35	53		1893	53	1946
AM One Hour Volumes																							
6:00 AM - 7:00 AM	4	139	0	143	0.50	0	0	0	0	0.00	0	112	2	114	0.65	4	0	3	7	0.58	257	7	264
6:15 AM - 7:15 AM	6	203	0	209	0.66	0	0	0	0	0.00	0	163	2	165	0.63	7	0	10	17	0.43	374	17	391
6:30 AM - 7:30 AM	9	270	0	279	0.79	0	0	0	0	0.00	0	207	2	209	0.79	6	0	15	21	0.53	488	21	509
6:45 AM - 7:45 AM	15	324	0	339	0.85	0	0	0	0	0.00	0	269	1	270	0.65	5	0	24	29	0.73	609	29	638
7:00 AM - 8:00 AM	15	363	0	378	0.85	0	0	0	0	0.00	0	362	1	363	0.66	5	0	24	29	0.73	741	29	770
7:15 AM - 8:15 AM	16	392	0	408	0.92	0	0	0	0	0.00	0	383	1	384	0.70	5	0	18	23	0.58	792	23	815
7:30 AM - 8:30 AM	12	425	0	437	0.93	0	0	0	0	0.00	0	450	5	455	0.83	5	0	15	20	0.50	892	20	912
7:45 AM - 8:45 AM	9	468	0	477	0.85	0	0	0	0	0.00	0	443	6	449	0.82	7	0	9	16	0.67	926	16	942
8:00 AM - 9:00 AM	6	477	0	483	0.86	0	0	0	0	0.00	0	405	7	412	0.81	9	0	8	17	0.71	895	17	912
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	1	54	0	55		0	0	0	0		0	58	0	58		1	0	0	1		113	1	114
2:15 PM - 2:30 PM	2	52	0	54		0	0	0	0		0	50	0	50		0	0	1	1		104	1	105
2:30 PM - 2:45 PM	3	65	0	68		0	0	0	0		0	57	0	57		0	0	2	2		125	2	127
2:45 PM - 3:00 PM	3	57	0	60		0	0	0	0		0	56	1	57		2	0	4	6		117	6	123
3:00 PM - 3:15 PM	3	79	0	82		0	0	0	0		0	66	1	67		0	0	4	4		149	4	153
3:15 PM - 3:30 PM	2	64	0	66		0	0	0	0		0	91	0	91		3	0	5	8		157	8	165
3:30 PM - 3:45 PM	2	72	0	74		0	0	0	0		0	75	0	75		0	0	5	5		149	5	154
3:45 PM - 4:00 PM	1	96	0	97		0	0	0	0		0	55	2	57		1	0	2	3		154	3	157
4:00 PM - 4:15 PM	8	104	0	112		0	0	0	0		0	87	2	89		2	0	1	3		201	3	204
4:15 PM - 4:30 PM	3	112	0	115		0	0	0	0		0	86	2	88		3	0	3	6		203	6	209
4:30 PM - 4:45 PM	3	93	0	96		0	0	0	0		0	116	3	119		1	0	2	3		215	3	218
4:45 PM - 5:00 PM	6	106	0	112		0	0	0	0		0	103	2	105		0	0	5	5		217	5	222
5:00 PM - 5:15 PM	6	135	0	141		0	0	0	0		0	127	1	128		3	0	2	5		269	5	274
5:15 PM - 5:30 PM	4	161	0	165		0	0	0	0		0	114	0	114		3	0	6	9		279	9	288
5:30 PM - 5:45 PM	11	136	0	147		0	0	0	0		0	110	0	110		1	0	4	5		257	5	262
5:45 PM - 6:00 PM	5	134	0	139		0	0	0	0		0	114	1	115		0	0	3	3		254	3	257
6:00 PM - 6:15 PM	4	148	0	152		0	0	0	0		0	104	0	104		1	0	4	5		256	5	261
6:15 PM - 6:30 PM	9	117	0	126		0	0	0	0		0	95	2	97		3	0	4	7		223	7	230
6:30 PM - 6:45 PM	5	124	0	129		0	0	0	0		0	61	1	62		2	0	3	5		191	5	196
6:45 PM - 7:00 PM	4	121	0	125		0	0	0	0		0	60	1	61		1	0	0	1		186	1	187
Total	68	1491	0	1559		0	0	0	0		0	1177	15	1192		20	0	37	57		2751	57	2808
PM One Hour Volumes																							
2:00 PM - 3:00 PM	9	228	0	237	0.87	0	0	0	0	0.00	0	221	1	222	0.96	3	0	7	10	0.42	459	10	469
2:15 PM - 3:15 PM	11	253	0	264	0.80	0	0	0	0	0.00	0	229	2	231	0.86	2	0	11	13	0.54	495	13	508
2:30 PM - 3:30 PM	11	265	0	276	0.84	0	0	0	0	0.00	0	270	2	272	0.75	5	0	15	20	0.63	548	20	568
2:45 PM - 3:45 PM	10	272	0	282	0.86	0	0	0	0	0.00	0	288	2	290	0.80	5	0	18	23	0.72	572	23	595
3:00 PM - 4:00 PM	8	311	0	319	0.82	0	0	0	0	0.00	0	287	3	290	0.80	4	0	16	20	0.63	609	20	629
3:15 PM - 4:15 PM	13	336	0	349	0.78	0	0	0	0	0.00	0	308	4	312	0.86	6	0	13	19	0.59	661	19	680
3:30 PM - 4:30 PM	14	384	0	398	0.87	0	0	0	0	0.00	0	303	6	309	0.87	6	0	11	17	0.71	707	17	724
3:45 PM - 4:45 PM	15	405	0	420	0.91	0	0	0	0	0.00	0	344	9	353	0.74	7	0	8	15	0.63	773	15	788
4:00 PM - 5:00 PM	20	415	0	435	0.95	0	0	0	0	0.00	0	392	9	401	0.84	6	0	11	17	0.71	836	17	853
4:15 PM - 5:15 PM	18	446	0	464	0.82	0	0	0	0	0.00	0	432	8	440	0.86	7	0	12	19	0.79	904	19	923
4:30 PM - 5:30 PM	19	495	0	514	0.78	0	0	0	0	0.00	0	460	6	466	0.91	7	0	15	22	0.61	980	22	1002
4:45 PM - 5:45 PM	27	538	0	565	0.86	0	0	0	0	0.00	0	454	3	457	0.89	7	0	17	24	0.67	1022	24	1046
5:00 PM - 6:00 PM	26	566	0	592	0.90	0	0	0	0	0.00	0	465	2	467	0.91	7	0	15	22	0.61	1059	22	1081
5:15 PM - 6:15 PM	24	579	0	603	0.91	0	0	0	0	0.00	0	442	1	443	0.96	5	0	17	22	0.61	1046	22	1068
5:30 PM - 6:30 PM	29	535	0	564	0.93	0	0	0	0	0.00	0	423	3	426	0.93	5	0	15	20	0.71	990	20	1010
5:45 PM - 6:45 PM	23	523	0	546	0.90	0	0	0	0	0.00	0	374	4	378	0.82	6	0	14	20	0.71	924	20	944
6:00 PM - 7:00 PM	22	510	0	532	0.88	0	0	0	0	0.00	0	320	4	324	0.78	7	0	11	18	0.64	856	18	874

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015	**SOUTHBOUND ROAD:**	Great Falls Street - 694
W+A JOB NO:	6640	**DAY:**	Thursday	**NORTHBOUND ROAD:**	Great Falls Street - 694
INTERSECTION:	Great Falls St. & Walnut St.	**WEATHER:**	clear	**WESTBOUND ROAD:**	0
LOCATION:	Falls Church,VA	**COUNTED BY:**	Tyler	**EASTBOUND ROAD:**	Walnut Street - 1748
		INPUTED BY:	agan		

Time	Southbound				Westbound				Northbound				Eastbound				North	East	Total
	Great Falls Street - 694				0				Great Falls Street - 694				Walnut Street - 1748				&	&	
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	South	West	
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
6:15 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
6:30 AM - 7:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3	0	3
6:45 AM - 7:45 AM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
7:00 AM - 8:00 AM	0	7	1	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8
7:15 AM - 8:15 AM	0	9	1	10	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10
7:30 AM - 8:30 AM	0	7	1	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8
7:45 AM - 8:45 AM	0	4	1	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
8:00 AM - 9:00 AM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	3	1	4
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	1	2
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	2	1	3
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	1	2
3:30 PM - 4:30 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	3	1	4
3:45 PM - 4:45 PM	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5	0	5
4:00 PM - 5:00 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4	0	4
4:15 PM - 5:15 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7	0	7
4:30 PM - 5:30 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5	0	5
4:45 PM - 5:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	1	1	6	1	7
5:00 PM - 6:00 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	1	1	6	1	7
5:15 PM - 6:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	4	1	5
5:30 PM - 6:30 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	4	1	5
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3	0	3
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3	0	3

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & Walnut St.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Tyler
INPUTED BY: agan

SOUTHBOUND ROAD: Great Falls Street - 694
NORTHBOUND ROAD: Great Falls Street - 694
WESTBOUND ROAD: 0
EASTBOUND ROAD: Walnut Street - 1748

Time	Southbound Great Falls Street - 694					Westbound 0					Northbound Great Falls Street - 694					Eastbound Walnut Street - 1748					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	13	0	13		0	0	0	0		0	15	0	15		0	0	0	0		28	0	28
6:15 AM - 6:30 AM	1	17	0	18		0	0	0	0		0	12	0	12		2	0	0	2		30	2	32
6:30 AM - 6:45 AM	0	40	0	40		0	0	0	0		0	41	2	43		1	0	1	2		83	2	85
6:45 AM - 7:00 AM	3	69	0	72		0	0	0	0		0	44	0	44		1	0	2	3		116	3	119
7:00 AM - 7:15 AM	2	77	0	79		0	0	0	0		0	66	0	66		3	0	7	10		145	10	155
7:15 AM - 7:30 AM	4	84	0	88		0	0	0	0		0	56	0	56		1	0	5	6		144	6	150
7:30 AM - 7:45 AM	6	94	0	100		0	0	0	0		0	103	1	104		0	0	10	10		204	10	214
7:45 AM - 8:00 AM	3	108	0	111		0	0	0	0		0	137	0	137		1	0	2	3		248	3	251
8:00 AM - 8:15 AM	3	106	0	109		0	0	0	0		0	87	0	87		3	0	1	4		196	4	200
8:15 AM - 8:30 AM	0	117	0	117		0	0	0	0		0	123	4	127		1	0	2	3		244	3	247
8:30 AM - 8:45 AM	3	137	0	140		0	0	0	0		0	96	2	98		2	0	4	6		238	6	244
8:45 AM - 9:00 AM	0	117	0	117		0	0	0	0		0	99	1	100		3	0	1	4		217	4	221
Total	25	979	0	1004		0	0	0	0		0	879	10	889		18	0	35	53		1893	53	1946
AM One Hour Volumes																							
6:00 AM - 7:00 AM	4	139	0	143	0.50	0	0	0	0	0.00	0	112	2	114	0.65	4	0	3	7	0.58	257	7	264
6:15 AM - 7:15 AM	6	203	0	209	0.66	0	0	0	0	0.00	0	163	2	165	0.63	7	0	10	17	0.43	374	17	391
6:30 AM - 7:30 AM	9	270	0	279	0.79	0	0	0	0	0.00	0	207	2	209	0.79	6	0	15	21	0.53	488	21	509
6:45 AM - 7:45 AM	15	324	0	339	0.85	0	0	0	0	0.00	0	269	1	270	0.65	5	0	24	29	0.73	609	29	638
7:00 AM - 8:00 AM	15	363	0	378	0.85	0	0	0	0	0.00	0	362	1	363	0.66	5	0	24	29	0.73	741	29	770
7:15 AM - 8:15 AM	16	392	0	408	0.92	0	0	0	0	0.00	0	383	1	384	0.70	5	0	18	23	0.58	792	23	815
7:30 AM - 8:30 AM	12	425	0	437	0.93	0	0	0	0	0.00	0	450	5	455	0.83	5	0	15	20	0.50	892	20	912
7:45 AM - 8:45 AM	9	468	0	477	0.85	0	0	0	0	0.00	0	443	6	449	0.82	7	0	9	16	0.67	926	16	942
8:00 AM - 9:00 AM	6	477	0	483	0.86	0	0	0	0	0.00	0	405	7	412	0.81	9	0	8	17	0.71	895	17	912
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	1	54	0	55		0	0	0	0		0	58	0	58		1	0	0	1		113	1	114
2:15 PM - 2:30 PM	2	52	0	54		0	0	0	0		0	50	0	50		0	0	1	1		104	1	105
2:30 PM - 2:45 PM	3	65	0	68		0	0	0	0		0	57	0	57		0	0	2	2		125	2	127
2:45 PM - 3:00 PM	3	57	0	60		0	0	0	0		0	56	1	57		2	0	4	6		117	6	123
3:00 PM - 3:15 PM	3	79	0	82		0	0	0	0		0	66	1	67		0	0	4	4		149	4	153
3:15 PM - 3:30 PM	2	64	0	66		0	0	0	0		0	91	0	91		3	0	5	8		157	8	165
3:30 PM - 3:45 PM	2	72	0	74		0	0	0	0		0	75	0	75		0	0	5	5		149	5	154
3:45 PM - 4:00 PM	1	96	0	97		0	0	0	0		0	55	2	57		1	0	2	3		154	3	157
4:00 PM - 4:15 PM	8	104	0	112		0	0	0	0		0	87	2	89		2	0	1	3		201	3	204
4:15 PM - 4:30 PM	3	112	0	115		0	0	0	0		0	86	2	88		3	0	3	6		203	6	209
4:30 PM - 4:45 PM	3	93	0	96		0	0	0	0		0	116	3	119		1	0	2	3		215	3	218
4:45 PM - 5:00 PM	6	106	0	112		0	0	0	0		0	103	2	105		0	0	5	5		217	5	222
5:00 PM - 5:15 PM	6	135	0	141		0	0	0	0		0	127	1	128		3	0	2	5		269	5	274
5:15 PM - 5:30 PM	4	161	0	165		0	0	0	0		0	114	0	114		3	0	6	9		279	9	288
5:30 PM - 5:45 PM	11	136	0	147		0	0	0	0		0	110	0	110		1	0	4	5		257	5	262
5:45 PM - 6:00 PM	5	134	0	139		0	0	0	0		0	114	1	115		0	0	3	3		254	3	257
6:00 PM - 6:15 PM	4	148	0	152		0	0	0	0		0	104	0	104		1	0	4	5		256	5	261
6:15 PM - 6:30 PM	9	117	0	126		0	0	0	0		0	95	2	97		3	0	4	7		223	7	230
6:30 PM - 6:45 PM	5	124	0	129		0	0	0	0		0	61	1	62		2	0	3	5		191	5	196
6:45 PM - 7:00 PM	4	121	0	125		0	0	0	0		0	60	1	61		1	0	0	1		186	1	187
Total	68	1491	0	1559		0	0	0	0		0	1177	15	1192		20	0	37	57		2751	57	2808
PM One Hour Volumes																							
2:00 PM - 3:00 PM	9	228	0	237	0.87	0	0	0	0	0.00	0	221	1	222	0.96	3	0	7	10	0.42	459	10	469
2:15 PM - 3:15 PM	11	253	0	264	0.80	0	0	0	0	0.00	0	229	2	231	0.86	2	0	11	13	0.54	495	13	508
2:30 PM - 3:30 PM	11	265	0	276	0.84	0	0	0	0	0.00	0	270	2	272	0.75	5	0	15	20	0.63	548	20	568
2:45 PM - 3:45 PM	10	272	0	282	0.86	0	0	0	0	0.00	0	288	2	290	0.80	5	0	18	23	0.72	572	23	595
3:00 PM - 4:00 PM	8	311	0	319	0.82	0	0	0	0	0.00	0	287	3	290	0.80	4	0	16	20	0.63	609	20	629
3:15 PM - 4:15 PM	13	336	0	349	0.78	0	0	0	0	0.00	0	308	4	312	0.86	6	0	13	19	0.59	661	19	680
3:30 PM - 4:30 PM	14	384	0	398	0.87	0	0	0	0	0.00	0	303	6	309	0.87	6	0	11	17	0.71	707	17	724
3:45 PM - 4:45 PM	15	405	0	420	0.91	0	0	0	0	0.00	0	344	9	353	0.74	7	0	8	15	0.63	773	15	788
4:00 PM - 5:00 PM	20	415	0	435	0.95	0	0	0	0	0.00	0	392	9	401	0.84	6	0	11	17	0.71	836	17	853
4:15 PM - 5:15 PM	18	446	0	464	0.82	0	0	0	0	0.00	0	432	8	440	0.86	7	0	12	19	0.79	904	19	923
4:30 PM - 5:30 PM	19	495	0	514	0.78	0	0	0	0	0.00	0	460	6	466	0.91	7	0	15	22	0.61	980	22	1002
4:45 PM - 5:45 PM	27	538	0	565	0.86	0	0	0	0	0.00	0	454	3	457	0.89	7	0	17	24	0.67	1022	24	1046
5:00 PM - 6:00 PM	26	566	0	592	0.90	0	0	0	0	0.00	0	465	2	467	0.91	7	0	15	22	0.61	1059	22	1081
5:15 PM - 6:15 PM	24	579	0	603	0.91	0	0	0	0	0.00	0	442	1	443	0.96	5	0	17	22	0.61	1046	22	1068
5:30 PM - 6:30 PM	29	535	0	564	0.93	0	0	0	0	0.00	0	423	3	426	0.93	5	0	15	20	0.71	990	20	1010
5:45 PM - 6:45 PM	23	523	0	546	0.90	0	0	0	0	0.00	0	374	4	378	0.82	6	0	14	20	0.71	924	20	944
6:00 PM - 7:00 PM	22	510	0	532	0.88	0	0	0	0	0.00	0	320	4	324	0.78	7	0	11	18	0.64	856	18	874

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015	**SOUTHBOUND ROAD:**	Great Falls Street - 694
W+A JOB NO:	6640	**DAY:**	Thursday	**NORTHBOUND ROAD:**	Great Falls Street - 694
INTERSECTION:	Great Falls St. & Walnut St.	**WEATHER:**	clear	**WESTBOUND ROAD:**	0
LOCATION:	Falls Church,VA	**COUNTED BY:**	Tyler	**EASTBOUND ROAD:**	Walnut Street - 1748
		INPUTED BY:	agan		

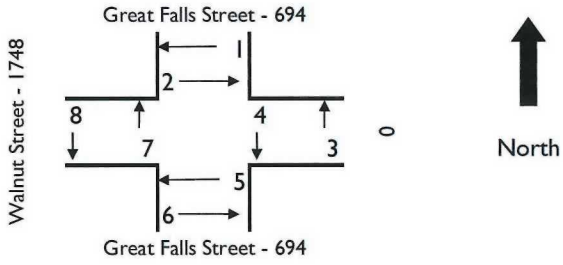
Time	Southbound Great Falls Street - 694				Westbound 0				Northbound Great Falls Street - 694				Eastbound Walnut Street - 1748				North & South	East & West	Total
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
6:15 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
6:30 AM - 7:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3	0	3
6:45 AM - 7:45 AM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
7:00 AM - 8:00 AM	0	7	1	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8
7:15 AM - 8:15 AM	0	9	1	10	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10
7:30 AM - 8:30 AM	0	7	1	8	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8
7:45 AM - 8:45 AM	0	4	1	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
8:00 AM - 9:00 AM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	3	1	4
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	1	2
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	2	1	3
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	1	2
3:30 PM - 4:30 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	3	1	4
3:45 PM - 4:45 PM	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5	0	5
4:00 PM - 5:00 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4	0	4
4:15 PM - 5:15 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7	0	7
4:30 PM - 5:30 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5	0	5
4:45 PM - 5:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	1	1	6	1	7
5:00 PM - 6:00 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	1	1	6	1	7
5:15 PM - 6:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	4	1	5
5:30 PM - 6:30 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	4	1	5
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3	0	3
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3	0	3

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & Walnut St.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Tyler
INPUTED BY: agan



Time Period	Movement 1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	0	0	0	1	0	0	0	1	0	1	0	1	2
6:15 AM - 7:15 AM	0	0	1	2	0	0	0	1	0	3	0	1	4
6:30 AM - 7:30 AM	0	0	1	3	0	0	0	2	0	4	0	2	6
6:45 AM - 7:45 AM	0	0	1	3	0	0	0	2	0	4	0	2	6
7:00 AM - 8:00 AM	0	1	1	2	0	0	0	1	1	3	0	1	5
7:15 AM - 8:15 AM	0	1	0	1	0	0	0	1	1	1	0	1	3
7:30 AM - 8:30 AM	0	1	0	0	0	0	0	0	1	0	0	0	1
7:45 AM - 8:45 AM	0	1	0	0	0	0	0	0	1	0	0	0	1
8:00 AM - 9:00 AM	0	0	0	1	0	0	0	0	0	1	0	0	1
PM One Hour Volumes													
2:00 PM - 3:00 PM	0	1	0	0	0	0	1	1	1	0	0	2	3
2:15 PM - 3:15 PM	0	0	0	1	0	0	1	1	0	1	0	2	3
2:30 PM - 3:30 PM	0	0	0	1	0	0	0	0	0	1	0	0	1
2:45 PM - 3:45 PM	0	0	0	1	0	0	0	0	0	1	0	0	1
3:00 PM - 4:00 PM	0	0	0	1	0	0	0	0	0	1	0	0	1
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 5:15 PM	0	0	0	0	0	1	0	2	0	0	1	2	3
4:30 PM - 5:30 PM	0	0	0	0	0	1	0	2	0	0	1	2	3
4:45 PM - 5:45 PM	0	0	0	0	0	1	2	2	0	0	1	4	5
5:00 PM - 6:00 PM	0	0	0	1	0	2	2	2	0	1	2	4	7
5:15 PM - 6:15 PM	0	0	0	2	0	1	2	0	0	2	1	2	5
5:30 PM - 6:30 PM	0	1	0	2	0	1	2	0	1	2	1	2	6
5:45 PM - 6:45 PM	0	1	0	2	0	1	0	0	1	2	1	0	4
6:00 PM - 7:00 PM	0	1	0	1	0	0	0	0	1	1	0	0	2

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & N. West St.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Irman,Amar Amina
INPUTED BY: agan

SOUTHBOUND ROAD: Great Falls Street - 694
NORTHBOUND ROAD: Great Falls Street - 694
WESTBOUND ROAD: North West Street - 1799
EASTBOUND ROAD: North West Street - 1799

Time	Southbound Great Falls Street - 694					Westbound North West Street - 1799					Northbound Great Falls Street - 694					Eastbound North West Street - 1799					North & South	East & West	Total
Period	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	1	12	0	13		1	3	0	4		0	16	0	16		1	3	1	5		29	9	38
6:15 AM - 6:30 AM	2	13	4	19		1	2	0	3		1	6	0	7		0	9	1	10		26	13	39
6:30 AM - 6:45 AM	1	28	5	34		9	3	1	13		2	28	0	30		1	21	9	31		64	44	108
6:45 AM - 7:00 AM	4	58	6	68		1	12	0	13		3	38	2	43		1	28	6	35		111	48	159
7:00 AM - 7:15 AM	3	61	15	79		3	9	0	12		5	51	1	57		0	55	10	65		136	77	213
7:15 AM - 7:30 AM	5	57	20	82		8	22	3	33		7	37	1	45		3	70	10	83		127	116	243
7:30 AM - 7:45 AM	11	72	13	96		8	37	3	48		8	70	0	78		1	47	19	67		174	115	289
7:45 AM - 8:00 AM	4	93	14	111		8	33	2	43		5	113	2	120		0	66	13	79		231	122	353
8:00 AM - 8:15 AM	5	85	11	101		3	20	5	28		1	76	1	78		3	37	8	48		179	76	255
8:15 AM - 8:30 AM	11	98	12	121		9	36	7	52		3	99	5	107		0	45	16	61		228	113	341
8:30 AM - 8:45 AM	5	112	13	130		8	19	5	32		4	79	4	87		1	43	6	50		217	82	299
8:45 AM - 9:00 AM	8	101	10	119		4	24	1	29		4	75	3	82		4	43	15	62		201	91	292
Total	60	790	123	973		63	220	27	310		43	688	19	750		15	467	114	596		1723	906	2629
AM One Hour Volumes																							
6:00 AM - 7:00 AM	8	111	15	134	0.49	12	20	1	33	0.63	6	88	2	96	0.56	3	61	17	81	0.58	230	114	344
6:15 AM - 7:15 AM	10	160	30	200	0.63	14	26	1	41	0.79	11	123	3	137	0.60	2	113	26	141	0.54	337	182	519
6:30 AM - 7:30 AM	13	204	46	263	0.80	21	46	4	71	0.54	17	154	4	175	0.77	5	174	35	214	0.64	438	285	723
6:45 AM - 7:45 AM	23	248	54	325	0.85	20	80	6	106	0.55	23	196	4	223	0.71	5	200	45	250	0.75	548	356	904
7:00 AM - 8:00 AM	23	283	62	368	0.83	27	101	8	136	0.71	25	271	4	300	0.63	4	238	52	294	0.89	668	430	1098
7:15 AM - 8:15 AM	25	307	58	390	0.88	27	112	13	152	0.79	21	296	4	321	0.67	7	220	50	277	0.83	711	429	1140
7:30 AM - 8:30 AM	31	348	50	429	0.89	28	126	17	171	0.82	17	358	8	383	0.80	4	195	56	255	0.81	812	426	1238
7:45 AM - 8:45 AM	25	388	50	463	0.89	28	108	19	155	0.75	13	367	12	392	0.82	4	191	43	238	0.75	855	393	1248
8:00 AM - 9:00 AM	29	396	46	471	0.91	24	99	18	141	0.68	12	329	13	354	0.83	8	168	45	221	0.89	825	362	1187
PM 15 Minute Volumes																							
2:00 PM - 2:15 PM	10	41	5	56		6	22	5	33		1	42	3	46		1	26	11	38		102	71	173
2:15 PM - 2:30 PM	11	37	3	51		1	25	8	34		5	41	2	48		5	19	9	33		99	67	166
2:30 PM - 2:45 PM	5	52	3	60		7	27	6	40		4	35	2	41		2	15	10	27		101	67	168
2:45 PM - 3:00 PM	10	38	7	55		1	17	4	22		3	45	1	49		1	25	6	32		104	54	158
3:00 PM - 3:15 PM	17	49	3	69		5	27	2	34		6	62	3	71		3	17	6	26		140	60	200
3:15 PM - 3:30 PM	9	51	9	69		15	31	4	50		2	63	3	68		7	17	11	35		137	85	222
3:30 PM - 3:45 PM	12	51	7	70		8	34	3	45		6	53	2	61		4	26	15	45		131	90	221
3:45 PM - 4:00 PM	15	64	9	88		10	46	2	58		2	42	1	45		1	31	5	37		133	95	228
4:00 PM - 4:15 PM	7	100	4	111		9	49	13	71		0	62	6	68		7	21	18	46		179	117	296
4:15 PM - 4:30 PM	17	80	7	104		7	45	6	58		4	75	2	81		3	36	11	50		185	108	293
4:30 PM - 4:45 PM	12	70	5	87		19	50	3	72		3	85	3	91		5	30	4	39		178	111	289
4:45 PM - 5:00 PM	12	83	4	99		14	52	5	71		5	85	2	92		6	38	11	55		191	126	317
5:00 PM - 5:15 PM	11	109	6	126		11	52	8	71		5	97	2	104		7	43	9	59		230	130	360
5:15 PM - 5:30 PM	17	127	14	158		15	68	7	90		4	86	4	94		6	48	11	65		252	155	407
5:30 PM - 5:45 PM	14	104	11	129		16	69	5	90		10	75	1	86		6	47	13	66		215	156	371
5:45 PM - 6:00 PM	11	112	10	133		10	51	9	70		4	85	9	98		8	51	13	72		231	142	373
6:00 PM - 6:15 PM	15	107	13	135		8	56	5	69		5	84	3	92		9	46	10	65		227	134	361
6:15 PM - 6:30 PM	13	90	13	116		12	68	9	89		2	68	1	71		6	36	19	61		187	150	337
6:30 PM - 6:45 PM	18	104	10	132		2	62	4	68		6	40	3	49		4	34	7	45		181	113	294
6:45 PM - 7:00 PM	9	86	7	102		7	42	6	55		1	45	1	47		7	29	5	41		149	96	245
Total	156	1172	104	1432		130	664	80	874		49	887	37	973		74	459	131	664		2405	1538	3943
PM One Hour Volumes																							
2:00 PM - 3:00 PM	36	168	18	222	0.93	15	91	23	129	0.81	13	163	8	184	0.94	9	85	36	130	0.86	406	259	665
2:15 PM - 3:15 PM	43	176	16	235	0.85	14	96	20	130	0.81	18	183	8	209	0.74	11	76	31	118	0.89	444	248	692
2:30 PM - 3:30 PM	41	190	22	253	0.92	28	102	16	146	0.73	15	205	9	229	0.81	13	74	33	120	0.86	482	266	748
2:45 PM - 3:45 PM	48	189	26	263	0.94	29	109	13	151	0.76	17	223	9	249	0.88	15	85	38	138	0.77	512	289	801
3:00 PM - 4:00 PM	53	215	28	296	0.84	38	138	11	187	0.81	16	220	9	245	0.86	15	91	37	143	0.79	541	330	871
3:15 PM - 4:15 PM	43	266	29	338	0.76	42	160	22	224	0.79	10	220	12	242	0.89	19	95	49	163	0.89	580	387	967
3:30 PM - 4:30 PM	51	295	27	373	0.84	34	174	24	232	0.82	12	232	11	255	0.79	15	114	49	178	0.89	628	410	1038
3:45 PM - 4:45 PM	51	314	25	390	0.88	45	190	24	259	0.90	9	264	12	285	0.78	16	118	38	172	0.86	675	431	1106
4:00 PM - 5:00 PM	48	333	20	401	0.90	49	196	27	272	0.94	12	307	13	332	0.90	21	125	44	190	0.86	733	462	1195
4:15 PM - 5:15 PM	52	342	22	416	0.83	51	199	22	272	0.94	17	342	9	368	0.88	21	147	35	203	0.86	784	475	1259
4:30 PM - 5:30 PM	52	389	29	470	0.74	59	222	23	304	0.84	17	353	11	381	0.92	24	159	35	218	0.84	851	522	1373
4:45 PM - 5:45 PM	54	423	35	512	0.81	56	241	25	322	0.89	24	343	9	376	0.90	25	176	44	245	0.93	888	567	1455
5:00 PM - 6:00 PM	53	452	41	546	0.86	52	240	29	321	0.89	23	343	16	382	0.92	27	189	46	262	0.91	928	583	1511
5:15 PM - 6:15 PM	57	450	48	555	0.88	49	244	26	319	0.89	23	330	17	370	0.94	29	192	47	268	0.93	925	587	1512
5:30 PM - 6:30 PM	53	413	47	513	0.95	46	244	28	318	0.88	21	312	14	347	0.89	29	180	55	264	0.92	860	582	1442
5:45 PM - 6:45 PM	57	413	46	516	0.96	32	237	27	296	0.83	17	277	16	310	0.79	27	167	49	243	0.84	826	539	1365
6:00 PM - 7:00 PM	55	387	43	485	0.90	29	228	24	281	0.79	14	237	8	259	0.70	26	145	41	212	0.82	744	493	1237

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & N. West St.
LOCATION: Falls Church,VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Amar
INPUTED BY: agan

SOUTHBOUND ROAD: Great Falls Street - 694
NORTHBOUND ROAD: Great Falls Street - 694
WESTBOUND ROAD: North West Street - 1799
EASTBOUND ROAD: North West Street - 1799

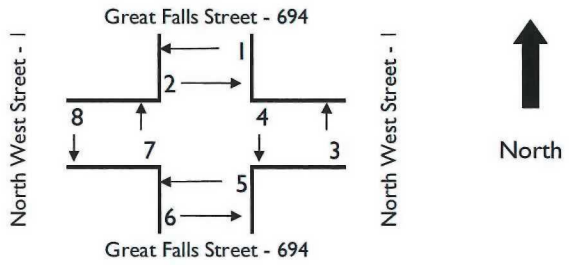
Time	Southbound Great Falls Street - 694				Westbound North West Street - 1799				Northbound Great Falls Street - 694				Eastbound North West Street - 1799				North & South	East & West	Total
Period	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	2	1	3
6:15 AM - 7:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	1	2	3
6:30 AM - 7:30 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	2	1	3
6:45 AM - 7:45 AM	0	7	0	7	0	2	0	2	0	0	0	0	0	0	0	0	7	2	9
7:00 AM - 8:00 AM	0	9	0	9	0	4	1	5	0	0	0	0	0	0	0	0	9	5	14
7:15 AM - 8:15 AM	0	11	0	11	0	3	1	4	0	0	0	0	0	0	0	0	11	4	15
7:30 AM - 8:30 AM	0	9	0	9	0	4	1	5	0	0	0	0	0	2	0	2	9	7	16
7:45 AM - 8:45 AM	0	5	0	5	0	3	1	4	0	0	0	0	0	2	0	2	5	6	11
8:00 AM - 9:00 AM	1	4	0	5	0	2	0	2	0	0	0	0	0	2	0	2	5	4	9
PM One Hour Volumes																			
2:00 PM - 3:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2
2:15 PM - 3:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2
2:30 PM - 3:30 PM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2	0	2
2:45 PM - 3:45 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3	0	3
3:00 PM - 4:00 PM	1	0	1	2	0	0	0	0	0	2	0	2	0	0	0	0	4	0	4
3:15 PM - 4:15 PM	1	1	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4	0	4
3:30 PM - 4:30 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	3	0	3	3	3	6
3:45 PM - 4:45 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	4	0	4	3	4	7
4:00 PM - 5:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	1	4	0	5	4	5	9
4:15 PM - 5:15 PM	0	2	0	2	1	0	0	1	0	3	0	3	1	4	0	5	5	6	11
4:30 PM - 5:30 PM	0	2	0	2	1	1	0	2	0	3	0	3	1	4	0	5	5	7	12
4:45 PM - 5:45 PM	0	1	0	1	1	3	0	4	0	4	0	4	1	4	0	5	5	9	14
5:00 PM - 6:00 PM	0	1	0	1	1	3	0	4	0	3	0	3	0	4	0	4	4	8	12
5:15 PM - 6:15 PM	0	0	0	0	0	3	0	3	0	3	0	3	0	5	0	5	3	8	11
5:30 PM - 6:30 PM	0	0	0	0	0	2	0	2	0	5	0	5	0	3	0	3	5	5	10
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	2	0	2	4	2	6
6:00 PM - 7:00 PM	0	0	0	0	0	1	0	1	0	3	0	3	0	2	0	2	3	3	6

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Great Falls St. & N. West St.
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Irman
INPUTED BY: agan



Time Period	Movement 1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7+ 8	Total
AM One Hour Volumes													
6:00 AM - 7:00 AM	0	0	0	1	1	0	0	1	0	1	1	1	3
6:15 AM - 7:15 AM	0	0	0	1	1	0	0	3	0	1	1	3	5
6:30 AM - 7:30 AM	0	0	0	1	0	1	1	3	0	1	1	4	6
6:45 AM - 7:45 AM	0	0	0	1	0	3	2	3	0	1	3	5	9
7:00 AM - 8:00 AM	0	0	0	1	0	3	3	2	0	1	3	5	9
7:15 AM - 8:15 AM	0	0	0	1	0	3	3	0	0	1	3	3	7
7:30 AM - 8:30 AM	0	0	0	0	0	2	2	0	0	0	2	2	4
7:45 AM - 8:45 AM	0	0	0	0	0	0	1	0	0	0	0	1	1
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM One Hour Volumes													
2:00 PM - 3:00 PM	0	0	0	0	1	1	0	0	0	0	2	0	2
2:15 PM - 3:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	1
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	2	0	0	0	0	1	0	0	2	0	1	0	3
3:15 PM - 4:15 PM	2	0	0	0	0	1	0	0	2	0	1	0	3
3:30 PM - 4:30 PM	2	0	0	0	0	1	0	1	2	0	1	1	4
3:45 PM - 4:45 PM	2	0	0	0	0	2	0	2	2	0	2	2	6
4:00 PM - 5:00 PM	0	0	0	0	0	1	0	3	0	0	1	3	4
4:15 PM - 5:15 PM	0	0	0	2	2	1	0	3	0	2	3	3	8
4:30 PM - 5:30 PM	0	0	0	2	2	1	1	2	0	2	3	3	8
4:45 PM - 5:45 PM	0	0	0	2	2	0	2	1	0	2	2	3	7
5:00 PM - 6:00 PM	0	0	0	2	2	0	2	1	0	2	2	3	7
5:15 PM - 6:15 PM	0	0	0	0	0	0	2	1	0	0	0	3	3
5:30 PM - 6:30 PM	0	1	0	0	0	1	2	2	1	0	1	4	6
5:45 PM - 6:45 PM	0	1	0	0	0	1	1	3	1	0	1	4	6
6:00 PM - 7:00 PM	0	1	0	0	0	1	1	2	1	0	1	3	5

Parking Occupancy Count

Surveyor: Luz

Hours: 6am - 7pm

Date: 8-Oct

6640

Weather: Clear

Lots	Front School						Back School	N. Oak Street		Highland Avenue			
Cars	**Row 1**	**Row 2**	**Row 3**	**Row 4**	**Row 5**	**LD**	**Cars**	**East**	**West**	**East**	**West**	**Cars**	
AM													Total Cars
6:00 AM	0	0	1	0	1	1	0	0	4	0	3		10
7:00 AM	1	0	1	0	1	1	0	0	2	0	3		9
8:00 AM	9	4	3	0	0	1	0	0	2	0	3		22
9:00 AM	20	16	18	4	3	7	0	0	2	2	2		74
10:00 AM	20	17	17	4	3	7	0	0	0	0	1		69
11:00 AM	20	16	17	4	4	7	0	0	1	0	1		70
12:00 PM	20	16	19	4	4	7	0	1	0	3	1		75
PM													0
1:00 PM	19	17	15	4	3	6	0	0	1	3	1		69
2:00 PM	18	17	11	3	1	6	0	0	3	0	3		62
3:00 PM	18	17	11	4	1	4	0	0	3	0	3		61
4:00 PM	14	17	18	3	2	6	0	0	3	0	3		66
5:00 PM	9	6	6	0	3	5	0	0	3	0	3		35
6:00 PM	3	2	4	0	2	3	0	0	3	0	3		20
7:00 PM	0	0	0	0	2	1	0	0	2	0	3		8
Total Spcs.	**21**	**18**	**20**	**5**	**4**	**7**							**75**

est.

Wells + Associates, Inc.

McLean, Virginia

Auto Occupancy Count

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Front School Drop Off
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Alba & Jeniffer
INPUTED BY: agan

Time Period	Front School Number of Passengers 1	2	3	4	5	6	7	8+	Total Vehicles	Total Passengers	Average Vehicle Occupancy
15 Minute Volumes											
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	0	2	8	4
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	0			
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	0			
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	0			
7:00 AM - 7:15 AM	3	0	0	0	0	0	0	0	3	3	1
7:15 AM - 7:30 AM	4	1	0	0	0	0	0	0	5	6	1.2
7:30 AM - 7:45 AM	4	0	0	0	0	0	0	0	4	4	1
7:45 AM - 8:00 AM	3	0	0	0	0	0	0	0	3	3	1
8:00 AM - 8:15 AM	4	1	0	0	0	0	0	0	5	6	1.2
8:15 AM - 8:30 AM	3	0	0	0	0	0	0	0	3	3	1
8:30 AM - 8:45 AM	7	0	0	0	0	0	0	0	7	7	1
8:45 AM - 9:00 AM	18	0	0	0	0	0	0	0	18	18	1
9:00 AM - 9:15 AM	0	0	0	0	0	0	0	0			
9:15 AM - 9:30 AM	0	0	0	0	0	0	0	0			
9:30 AM - 9:45 AM	0	0	0	0	0	0	0	0			
9:45 AM - 10:00 AM	0	0	0	0	0	0	0	0			
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	0			
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	0			
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	0			
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	0			
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	0			
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	0			
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	0			
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	0			
12:00 PM - 12:15 PM	0	0	0	0	0	0	0	0			
12:15 PM - 12:30 PM	0	0	0	0	0	0	0	0			
12:30 PM - 12:45 PM	0	0	0	0	0	0	0	0			
12:45 PM - 1:00 PM	0	0	0	0	0	0	0	0			
1:00 PM - 1:15 PM	0	0	0	0	0	0	0	0			
1:15 PM - 1:30 PM	0	0	0	0	0	0	0	0			
1:30 PM - 1:45 PM	0	0	0	0	0	0	0	0			
1:45 PM - 2:00 PM	0	0	0	0	0	0	0	0			
2:00 PM - 2:15 PM	1	0	0	0	0	0	0	0	1	1	1
2:15 PM - 2:30 PM	0	0	0	0	0	0	0	0			
2:30 PM - 2:45 PM	0	0	0	0	0	0	0	0			
2:45 PM - 3:00 PM	0	0	0	0	0	0	0	0			
3:00 PM - 3:15 PM	0	0	0	0	0	0	0	0			
3:15 PM - 3:30 PM	0	0	0	0	0	0	0	0			
3:30 PM - 3:45 PM	0	0	0	0	0	0	0	0			
3:45 PM - 4:00 PM	1	0	0	0	0	0	0	0	1	1	1
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0			
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0			
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0			
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0			
5:00 PM - 5:15 PM	0	1	1	0	0	0	0	0	2	5	2.5
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0			
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0			
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0			
6:00 PM - 6:15 PM	0	0	0	0	0	0	0	0			
6:15 PM - 6:30 PM	0	0	0	0	0	0	0	0			
6:30 PM - 6:45 PM	0	0	0	0	0	0	0				
6:45 PM - 7:00 PM	0	0	0	0	0	0	0				
Total	49	3	1	0	0	0	1	0	54	65	1.2037037

Wells + Associates, Inc.

McLean, Virginia

Auto Occupancy Count

PROJECT:	Mt. Daniels Elementary School	**DATE:**	10/8/2015
W+A JOB NO:	6640	**DAY:**	Thursday
INTERSECTION:	Front School Drop Off	**WEATHER:**	clear
LOCATION:	Falls Church,VA	**COUNTED BY:**	Alba & Jeniffer
		INPUTED BY:	agan

Time Period	Front School Number of Passengers 1	2	3	4	5	6	7	8+	Total Vehicles	Total Passengers	Average Vehicle Occupancy
One Hour Volumes											
6:00 AM - 7:00 AM	1							1	2	8	4
6:15 AM - 7:15 AM	3								3	3	1
6:30 AM - 7:30 AM	**7**	**1**							**8**	**9**	**1.125**
6:45 AM - 7:45 AM	11	1							12	13	1.08333333
7:00 AM - 8:00 AM	14	1							15	16	1.06666667
7:15 AM - 8:15 AM	15	2							17	19	1.11764706
7:30 AM - 8:30 AM	14	1							15	16	1.06666667
7:45 AM - 8:45 AM	17	1							18	19	1.05555556
8:00 AM - 9:00 AM	32	1							33	34	1.03030303
8:15 AM - 9:15 AM	28								28	28	1
8:30 AM - 9:30 AM	25								25	25	1
8:45 AM - 9:45 AM	18								18	18	1
9:00 AM - 10:00 AM											
9:15 AM - 10:15 AM											
9:30 AM - 10:30 AM											
9:45 AM - 10:45 AM											
10:00 AM - 11:00 AM											
10:15 AM - 11:15 AM											
10:30 AM - 11:30 AM											
10:45 AM - 11:45 AM											
11:00 AM - 12:00 PM											
11:15 AM - 12:15 PM											
11:30 AM - 12:30 PM											
11:45 AM - 12:45 PM											
12:00 PM - 1:00 PM											
12:15 PM - 1:15 PM											
12:30 PM - 1:30 PM											
12:45 PM - 1:45 PM											
1:00 PM - 2:00 PM											
1:15 PM - 2:15 PM	1								1	1	1
1:30 PM - 2:30 PM	1								1	1	1
1:45 PM - 2:45 PM	1								1	1	1
2:00 PM - 3:00 PM	1								1	1	1
2:15 PM - 3:15 PM											
2:30 PM - 3:30 PM											
2:45 PM - 3:45 PM											
3:00 PM - 4:00 PM	1								1	1	1
3:15 PM - 4:15 PM	1								1	1	1
3:30 PM - 4:30 PM	**1**								**1**	**1**	**1**
3:45 PM - 4:45 PM	1								1	1	1
4:00 PM - 5:00 PM											
4:15 PM - 5:15 PM		1	1						2	5	2.5
4:30 PM - 5:30 PM		1	1						2	5	2.5
4:45 PM - 5:45 PM		1	1						2	5	2.5
5:00 PM - 6:00 PM		1	1						2	5	2.5
5:15 PM - 6:15 PM											
5:30 PM - 6:30 PM											
5:45 PM - 6:45 PM											
6:00 PM - 7:00 PM											

Wells + Associates, Inc.

McLean, Virginia

Auto Occupancy Count

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Front School Pick Up
LOCATION: Falls Church,VA
DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Alba & Jeniffer
INPUTED BY: agan

Time Period	Front School Number of Passengers 1	2	3	4	5	6	7	8+	Total Vehicles	Total Passengers	Average Vehicle Occupancy
15 Minute Volumes											
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	0			
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	0			
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	0			
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	0			
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0			
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0			
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0			
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0			
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0			
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0			
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0			
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0			
9:00 AM - 9:15 AM	0	0	0	0	0	0	0	0			
9:15 AM - 9:30 AM	0	0	0	0	0	0	0	0			
9:30 AM - 9:45 AM	0	0	0	0	0	0	0	0			
9:45 AM - 10:00 AM	0	0	0	0	0	0	0	0			
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	0			
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	0			
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	0			
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	0			
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	0			
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	0			
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	0			
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	0			
12:00 PM - 12:15 PM	0	0	0	0	0	0	0	0			
12:15 PM - 12:30 PM	0	0	0	0	0	0	0	0			
12:30 PM - 12:45 PM	0	0	0	0	0	0	0	0			
12:45 PM - 1:00 PM	0	0	0	0	0	0	0	0			
1:00 PM - 1:15 PM	0	0	0	0	0	0	0	0			
1:15 PM - 1:30 PM	0	0	0	0	0	0	0	0			
1:30 PM - 1:45 PM	0	0	0	0	0	0	0	0			
1:45 PM - 2:00 PM	0	0	0	0	0	0	0	0			
2:00 PM - 2:15 PM	2	1	0	0	0	0	0	0	3	4	1.33333333
2:15 PM - 2:30 PM	0	0	0	0	0	0	0	0			
2:30 PM - 2:45 PM	0	0	0	0	0	0	0	0			
2:45 PM - 3:00 PM	0	0	0	0	0	0	0	0			
3:00 PM - 3:15 PM	2	0	0	0	0	0	0	0	2	2	1
3:15 PM - 3:30 PM	1	0	0	0	0	0	0	0	1	1	1
3:30 PM - 3:45 PM	2	0	0	0	0	0	0	0	2	2	1
3:45 PM - 4:00 PM	4	0	0	0	0	0	0	0	4	4	1
4:00 PM - 4:15 PM	6	1	0	0	0	0	0	0	7	8	1.14285714
4:15 PM - 4:30 PM	5	0	0	0	0	0	0	0	5	5	1
4:30 PM - 4:45 PM	3	1	0	0	0	0	0	0	4	5	1.25
4:45 PM - 5:00 PM	6	0	0	0	0	0	0	0	6	6	1
5:00 PM - 5:15 PM	8	1	0	0	0	0	0	0	9	10	1.11111111
5:15 PM - 5:30 PM	8	2	0	0	0	0	0	0	10	12	1.2
5:30 PM - 5:45 PM	11	1	0	0	0	0	0	0	12	13	1.08333333
5:45 PM - 6:00 PM	14	1	0	0	0	0	0	0	15	16	1.06666667
6:00 PM - 6:15 PM	13	1	0	0	0	0	0	0	14	15	1.07142857
6:15 PM - 6:30 PM	9	0	0	0	0	0	0	0	9	9	1
6:30 PM - 6:45 PM	2	0	0	0	0	0	0	0	2	2	1
6:45 PM - 7:00 PM	1	0	0	0	0	0	0	0	1	1	1
Total	97	9	0	0	0	0	0	0	106	115	1.08490566

Wells + Associates, Inc.

McLean, Virginia

Auto Occupancy Count

PROJECT: Mt. Daniels Elementary School
W+A JOB NO: 6640
INTERSECTION: Front School Pick Up
LOCATION: Falls Church, VA

DATE: 10/8/2015
DAY: Thursday
WEATHER: clear
COUNTED BY: Alba & Jeniffer
INPUTED BY: agan

Time Period	Front School Number of Passengers 1	2	3	4	5	6	7	8+	Total Vehicles	Total Passengers	Average Vehicle Occupancy
One Hour Volumes											
6:00 AM - 7:00 AM											
6:15 AM - 7:15 AM											
6:30 AM - 7:30 AM											
6:45 AM - 7:45 AM											
7:00 AM - 8:00 AM											
7:15 AM - 8:15 AM											
7:30 AM - 8:30 AM											
7:45 AM - 8:45 AM											
8:00 AM - 9:00 AM											
8:15 AM - 9:15 AM											
8:30 AM - 9:30 AM											
8:45 AM - 9:45 AM											
9:00 AM - 10:00 AM											
9:15 AM - 10:15 AM											
9:30 AM - 10:30 AM											
9:45 AM - 10:45 AM											
10:00 AM - 11:00 AM											
10:15 AM - 11:15 AM											
10:30 AM - 11:30 AM											
10:45 AM - 11:45 AM											
11:00 AM - 12:00 PM											
11:15 AM - 12:15 PM											
11:30 AM - 12:30 PM											
11:45 AM - 12:45 PM											
12:00 PM - 1:00 PM											
12:15 PM - 1:15 PM											
12:30 PM - 1:30 PM											
12:45 PM - 1:45 PM											
1:00 PM - 2:00 PM											
1:15 PM - 2:15 PM	2	1							3	4	1.33333333
1:30 PM - 2:30 PM	2	1							3	4	1.33333333
1:45 PM - 2:45 PM	2	1							3	4	1.33333333
2:00 PM - 3:00 PM	2	1							3	4	1.33333333
2:15 PM - 3:15 PM	2								2	2	1
2:30 PM - 3:30 PM	3								3	3	1
2:45 PM - 3:45 PM	5								5	5	1
3:00 PM - 4:00 PM	9								9	9	1
3:15 PM - 4:15 PM	13	1							14	15	1.07142857
3:30 PM - 4:30 PM	**17**	**1**							**18**	**19**	**1.0555556**
3:45 PM - 4:45 PM	18	2							20	22	1.1
4:00 PM - 5:00 PM	20	2							22	24	1.09090909
4:15 PM - 5:15 PM	22	2							24	26	1.08333333
4:30 PM - 5:30 PM	25	4							29	33	1.13793103
4:45 PM - 5:45 PM	33	4							37	41	1.10810811
5:00 PM - 6:00 PM	41	5							46	51	1.10869565
5:15 PM - 6:15 PM	46	5							51	56	1.09803922
5:30 PM - 6:30 PM	47	3							50	53	1.06
5:45 PM - 6:45 PM	38	2							40	42	1.05
6:00 PM - 7:00 PM	25	1							26	27	1.03846154
-	12								12	12	1
-	3								3	3	1
-	1								1	1	1

INTERSECTION APPROACH STOPPED DELAY

INTERSECTION Mt. Daniel Elementary Schoo
APPROACH: Drop Off Zone
LANE(S): One
DIRECTION: Thru
TIME: 6-9am and 2-7pm **# 6640**
WEATHER: Clear
COUNTER(S): Salih
DATE: 10/8/2015

AM		PM	
Drop Off Zone		Drop Off Zone	
Ti me		Time	Westbound
6:00	0	14:00	0
1	0	1	0
2	0	2	0
3	0	3	0
4	0	4	0
5	0	5	0
6	0	6	0
7	0	7	0
8	0	8	0
9	0	9	0
10	0	10	0
11	0	11	0
12	0	12	0
13	0	13	0
14	0	14	0
15	0	15	0
16	0	16	0
17	0	17	0
18	0	18	0
19	0	19	0
20	0	20	0
21	0	21	0
22	0	22	0
23	0	23	0
24	0	24	0
25	0	25	0
26	0	26	0
27	0	27	0
28	0	28	0
29	0	29	0
6:30	0	14:30	0
31	0	31	0
32	0	32	0
33	0	33	0
34	0	34	0
35	0	35	0
36	0	36	0
37	0	37	0
38	0	38	0
39	0	39	0
40	0	40	0
41	0	41	0
42	0	42	0
43	0	43	0
44	0	44	0
45	0	45	0
46	0	46	1
47	0	47	0
48	0	48	0
49	0	49	0
50	0	50	0
51	0	51	0
52	0	52	0
53	0	53	0
54	0	54	0
55	0	55	0
56	0	56	0
57	0	57	0
58	0	58	0
59	0	59	0

7:00	0	**15:00**	0
1	0	1	0
2	0	2	0
3	0	3	0
4	0	4	0
5	0	5	0
6	0	6	0
7	0	7	0
8	0	8	0
9	0	9	0
10	0	10	0
11	0	11	0
12	0	12	0
13	0	13	0
14	0	14	0
15	0	15	0
16	0	16	0
17	0	17	0
18	0	18	0
19	0	19	0
20	0	20	0
21	0	21	0
22	0	22	0
23	0	23	0
24	0	24	0
25	0	25	0
26	0	26	0
27	0	27	0
28	0	28	0
29	0	29	0
7:30	0	**15:30**	0
31	0	31	0
32	0	32	0
33	1	33	0
34	1	34	0
35	1	35	0
36	1	36	0
37	1	37	0
38	1	38	0
39	1	39	0
40	0	40	0
41	0	41	0
42	0	42	0
43	0	43	0
44	0	44	0
45	1	45	0
46	1	46	0
47	1	47	0
48	1	48	0
49	0	49	0
50	0	50	0
51	0	51	0
52	0	52	0
53	0	53	0
54	0	54	0
55	0	55	0
56	0	56	0
57	0	57	0
58	0	58	1
59	0	59	0

8:00	0	16:00	0
1	0	1	0
2	0	2	0
3	0	3	0
4	0	4	0
5	0	5	0
6	0	6	0
7	0	7	0
8	0	8	0
9	0	9	0
10	0	10	0
11	0	11	0
12	0	12	0
13	0	13	0
14	0	14	0
15	0	15	0
16	0	16	0
17	0	17	0
18	0	18	0
19	0	19	0
20	0	20	0
21	0	21	0
22	0	22	0
23	0	23	0
24	0	24	0
25	0	25	0
26	0	26	0
27	0	27	0
28	0	28	0
29	0	29	0
8:30	0	16:30	0
31	0	31	0
32	0	32	0
33	0	33	0
34	0	34	0
35	4	35	0
36	3	36	0
37	2	37	0
38	0	38	0
39	0	39	0
40	0	40	0
41	1	41	0
42	1	42	0
43	6	43	0
44	4	44	0
45	6	45	0
46	5	46	0
47	2	47	0
48	0	48	0
49	1	49	0
50	0	50	0
51	1	51	0
52	2	52	0
53	2	53	0
54	2	54	0
55	2	55	0
56	0	56	0
57	0	57	0
58	0	58	0
59	0	59	0

9:00	0	**17:00**	0
		1	0
		2	0
		3	0
		4	0
		5	0
		6	0
		7	0
		8	0
		9	0
		10	0
		11	0
		12	0
		13	0
		14	0
		15	0
		16	0
		17	0
		18	0
		19	0
		20	0
		21	0
		22	0
		23	0
		24	0
		25	0
		26	0
		27	0
		28	0
		29	0
		17:30	0
		31	0
		32	0
		33	0
		34	0
		35	0
		36	0
		37	0
		38	0
		39	0
		40	0
		41	0
		42	0
		43	0
		44	0
		45	0
		46	0
		47	0
		48	0
		49	0
		50	0
		51	0
		52	0
		53	0
		54	0
		55	0
		56	0
		57	0
		58	0
		59	0

		18:00	0
		1	0
		2	0
		3	0
		4	0
		5	0
		6	0
		7	0
		8	0
		9	0
		10	0
		11	0
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		23	0
		24	0
		25	0
		26	0
		27	0
		28	0
		29	0
		18:30	0
		31	0
		32	0
		33	0
		34	0
		35	0
		36	0
		37	0
		38	0
		39	0
		40	0
		41	0
		42	0
		43	0
		44	0
		45	0
		46	0
		47	0
		48	0
		49	0
		50	0
		51	0
		52	0
		53	0
		54	0
		55	0
		56	0
		57	0
		58	0
		59	0
		19:00	0
Total	55	Total	2
Maximum	6	Maximum	1
Average	0.303867403	Average	0.011049724

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Falls Church
Street: North Oak Street

A study of vehicle traffic was conducted with the device having serial number 200341. The study was done in the NB 0341 lane at North Oak Street in Falls Church, VA in Fairfax County county. The study began on 10/08/2015 at 12:00 AM and concluded on 10/09/2015 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 523 vehicles passed through the location with a peak volume of 33 on 10/08/2015 at [08:30-08:45] and a minimum volume of 0 on 10/08/2015 at [12:00-12:15]. The AADT count for this study was 523.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 24 MPH range or lower. The average speed for all classifed vehicles was 22 MPH with 51.31% vehicles exceeding the posted speed of 25 MPH. 0.95% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 24MPH and the 85th percentile was 31.30 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >												
205	139	50	14	6	2	1	4												

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 400 which represents 95 percent of the total classified vehicles. The number of Busses & Trucks in the study was 21 which represents 5 percent of the total classified vehicles. The number of Tractor Trailers in the study was 0 which represents 0 percent of the total classified vehicles. The number of Tractor Trailers in the study was 0 which represents 0 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >												
300	88	12	4	5	5	3	4												

CHART 2

HEADWAY

During the peak traffic period, on 10/08/2015 at [08:30-08:45] the average headway between vehicles was 26.471 seconds. During the slowest traffic period, on 10/08/2015 at [12:00-12:15] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 61.00 and 93.00 degrees F.

MH Corbin Traffic Analyzer Study
Computer Generated Summary Report
City: Falls Church
Street: North Oak Street

A study of vehicle traffic was conducted with the device having serial number 134959. The study was done in the SB 4959 lane at North Oak Street in Falls Church, VA in Fairfax County county. The study began on 10/08/2015 at 12:00 AM and concluded on 10/09/2015 at 12:00 AM, lasting a total of 24.00 hours. Traffic statistics were recorded in 15 minute time periods. The total recorded volume showed 214 vehicles passed through the location with a peak volume of 22 on 10/08/2015 at [08:45-09:00] and a minimum volume of 0 on 10/08/2015 at [14:15-14:30]. The AADT count for this study was 214.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin. At least half the vehicles were traveling in the 24 MPH range or lower. The average speed for all classifed vehicles was 20 MPH with 34.43% vehicles exceeding the posted speed of 25 MPH. 6.01% percent of the total vehicles were traveling in excess of 55 MPH. The mode speed for this traffic study was 24MPH and the 85th percentile was 31.94 MPH.

< to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to >												
120	28	18	5	0	0	1	11												

CHART 1

CLASSIFICATION

Chart 2 lists the values of the classification bins and the total traffic volume accumulated for each bin.

Most of the vehicles classified during the study were Passenger Vehicles. The number of Passenger Vehicles in the study was 164 which represents 90 percent of the total classified vehicles. The number of Busses & Trucks in the study was 19 which represents 10 percent of the total classified vehicles. The number of Tractor Trailers in the study was 0 which represents 0 percent of the total classified vehicles. The number of Tractor Trailers in the study was 0 which represents 0 percent of the total classified vehicles.

< to 17	18 to 20	21 to 23	24 to 27	28 to 31	32 to 37	38 to 43	44 to >												
147	13	4	4	1	2	3	9												

CHART 2

HEADWAY

During the peak traffic period, on 10/08/2015 at [08:45-09:00] the average headway between vehicles was 39.13 seconds. During the slowest traffic period, on 10/08/2015 at [14:15-14:30] the average headway between vehicles was 900 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 61.00 and 88.00 degrees F.

APPENDIX B

Appendix B - Existing Capacity Analysis

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	496	61	12	498	40	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	577	71	13	541	47	20
Pedestrians				1	3	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				3.5	3.5	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			651		912	328
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			651		912	328
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		82	97
cM capacity (veh/h)			929		267	665

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	384	263	193	361	67
Volume Left	0	0	13	0	47
Volume Right	0	71	0	0	20
cSH	1700	1700	929	1700	325
Volume to Capacity	0.23	0.15	0.01	0.21	0.21
Queue Length 95th (ft)	0	0	1	0	19
Control Delay (s)	0.0	0.0	0.7	0.0	18.9
Lane LOS			A		C
Approach Delay (s)	0.0		0.3		18.9
Approach LOS					C

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	1	17	15	56	67	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	20	18	66	79	6

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	21	84	85
Volume Left (vph)	1	18	0
Volume Right (vph)	20	0	6
Hadj (s)	-0.52	0.08	-0.01
Departure Headway (s)	3.7	4.1	4.0
Degree Utilization, x	0.02	0.10	0.09
Capacity (veh/h)	917	860	885
Control Delay (s)	6.8	7.5	7.4
Approach Delay (s)	6.8	7.5	7.4
Approach LOS	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	20.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	14	223	125	32	64	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	16	248	147	38	75	24
Pedestrians			4			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	185				449	166
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185				449	166
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				87	97
cM capacity (veh/h)	1390				559	871

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	263	185	99
Volume Left	16	0	75
Volume Right	0	38	24
cSH	1390	1700	611
Volume to Capacity	0.01	0.11	0.16
Queue Length 95th (ft)	1	0	14
Control Delay (s)	0.5	0.0	12.0
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	12.0
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: N. Oak Street & Walnut Street

10/20/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	7	71	8	7	21
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	8	84	9	8	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	129	88			93	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	129	88			93	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	99			99	
cM capacity (veh/h)	860	970			1435	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	93	33
Volume Left	4	0	8
Volume Right	8	9	0
cSH	934	1700	1435
Volume to Capacity	0.01	0.05	0.01
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.9	0.0	1.9
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	1.9
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	38	213	125	45	12	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.85	0.85	0.89	0.89
Hourly flow rate (vph)	44	248	147	53	13	22
Pedestrians		1	26		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	2		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked						
vC, conflicting volume	203				539	178
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	203				539	178
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	97				97	97
cM capacity (veh/h)	1330				474	862

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	292	200	36
Volume Left	44	0	13
Volume Right	0	53	22
cSH	1330	1700	659
Volume to Capacity	0.03	0.12	0.05
Queue Length 95th (ft)	3	0	4
Control Delay (s)	1.4	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	1.4	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	3	2	450	470	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.92	0.92
Hourly flow rate (vph)	1	4	2	529	511	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	781	256	512			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	781	256	512			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	331	743	1050			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	179	353	341	171
Volume Left	1	2	0	0	0
Volume Right	4	0	0	0	1
cSH	567	1050	1700	1700	1700
Volume to Capacity	0.01	0.00	0.21	0.20	0.10
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.4	0.1	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.4	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	9	7	6	443	468	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	11	8	7	521	551	11
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.87					
vC, conflicting volume	1092	556	561			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1033	556	561			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	98	99			
cM capacity (veh/h)	223	531	1010			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	19	528	561
Volume Left	11	7	0
Volume Right	8	0	11
cSH	299	1010	1700
Volume to Capacity	0.06	0.01	0.33
Queue Length 95th (ft)	5	1	0
Control Delay (s)	17.8	0.2	0.0
Lane LOS	C	A	
Approach Delay (s)	17.8	0.2	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	281	182	461	520
v/c Ratio	0.45	0.30	0.47	0.57
Control Delay	17.2	15.2	10.8	12.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.2	15.2	10.8	12.6
Queue Length 50th (ft)	75	45	94	115
Queue Length 95th (ft)	124	82	145	192
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	628	614	972	907
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	0.45	0.30	0.47	0.57

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	191	4	19	108	28	12	367	13	50	388	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			1.00			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		1841			1756			1852			1837	
Flt Permitted		0.92			0.95			0.98			0.92	
Satd. Flow (perm)		1714			1675			1823			1701	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.89	0.89	0.89
Adj. Flow (vph)	51	225	5	22	127	33	14	432	15	56	436	28
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	281	0	0	182	0	0	461	0	0	520	0
Confl. Peds. (#/hr)							1					1
Confl. Bikes (#/hr)			2			3						5
Heavy Vehicles (%)	2%	2%	2%	11%	4%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		628			614			972			907	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.11			0.25			c0.31	
v/c Ratio		0.45			0.30			0.47			0.57	
Uniform Delay, d1		14.4			13.5			8.7			9.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.3			1.2			1.7			2.6	
Delay (s)		16.7			14.7			10.4			12.0	
Level of Service		B			B			B			B	
Approach Delay (s)		16.7			14.7			10.4			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	436	44	14	372	13	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	507	51	15	404	15	5
Pedestrians	1				3	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			561		769	282
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			561		769	282
tC, single (s)			4.2		7.0	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			98		95	99
cM capacity (veh/h)			970		319	713

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	338	220	150	270	20
Volume Left	0	0	15	0	15
Volume Right	0	51	0	0	5
cSH	1700	1700	970	1700	367
Volume to Capacity	0.20	0.13	0.02	0.16	0.05
Queue Length 95th (ft)	0	0	1	0	4
Control Delay (s)	0.0	0.0	1.0	0.0	15.4
Lane LOS			A		C
Approach Delay (s)	0.0		0.4		15.4
Approach LOS					C

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	3	22	5	16	42	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	26	6	19	49	6

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	29	25	55
Volume Left (vph)	4	6	0
Volume Right (vph)	26	0	6
Hadj (s)	-0.47	0.13	0.00
Departure Headway (s)	3.6	4.1	4.0
Degree Utilization, x	0.03	0.03	0.06
Capacity (veh/h)	972	849	891
Control Delay (s)	6.7	7.3	7.2
Approach Delay (s)	6.7	7.3	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.1		
Level of Service	A		
Intersection Capacity Utilization	15.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	156	221	22	44	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	173	260	26	52	12
Pedestrians		2	9			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		0	1			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	286				473	275
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	286				473	275
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				90	98
cM capacity (veh/h)	1276				541	721

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	182	286	64
Volume Left	9	0	52
Volume Right	0	26	12
cSH	1276	1700	567
Volume to Capacity	0.01	0.17	0.11
Queue Length 95th (ft)	1	0	9
Control Delay (s)	0.4	0.0	12.1
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: N. Oak Street & Walnut Street

10/20/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	4	31	6	6	43
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	5	36	7	7	51
Pedestrians	15					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	1					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	120	59			59	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	120	59			59	
tC, single (s)	6.4	6.2			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.4	
p0 queue free %	100	100			100	
cM capacity (veh/h)	859	989			1434	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	44	58
Volume Left	4	0	7
Volume Right	5	7	0
cSH	929	1700	1434
Volume to Capacity	0.01	0.03	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.9	0.0	1.0
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	1.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	22	167	208	18	24	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.85	0.85	0.89	0.89
Hourly flow rate (vph)	26	194	245	21	27	35
Pedestrians			27			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			3			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked						
vC, conflicting volume	266				528	255
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	266				528	255
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	98				94	95
cM capacity (veh/h)	1258				470	774

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	220	266	62
Volume Left	26	0	27
Volume Right	0	21	35
cSH	1258	1700	604
Volume to Capacity	0.02	0.16	0.10
Queue Length 95th (ft)	2	0	9
Control Delay (s)	1.1	0.0	11.6
Lane LOS	A		B
Approach Delay (s)	1.1	0.0	11.6
Approach LOS			B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	4	0	1	310	395	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.92	0.92
Hourly flow rate (vph)	5	0	1	365	429	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	616	216	433			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	616	216	433			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	422	788	1123			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	5	123	243	286	146
Volume Left	5	1	0	0	0
Volume Right	0	0	0	0	3
cSH	422	1123	1700	1700	1700
Volume to Capacity	0.01	0.00	0.14	0.17	0.09
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	13.6	0.1	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	13.6	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	11	6	6	303	384	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	13	7	7	356	452	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.99					
vC, conflicting volume	831	460	468			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	825	460	468			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	99			
cM capacity (veh/h)	337	601	1093			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	20	364	468
Volume Left	13	7	0
Volume Right	7	0	16
cSH	399	1093	1700
Volume to Capacity	0.05	0.01	0.28
Queue Length 95th (ft)	4	0	0
Control Delay (s)	14.5	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	14.5	0.2	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
8: Great Falls Street & N. West Street

10/20/2015

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	210	237	300	418
v/c Ratio	0.36	0.38	0.31	0.44
Control Delay	16.1	16.2	8.9	10.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.1	16.2	8.9	10.5
Queue Length 50th (ft)	54	61	55	84
Queue Length 95th (ft)	95	104	90	140
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	584	628	964	940
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	0.36	0.38	0.31	0.44

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	114	15	24	144	34	11	232	12	27	295	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.98	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1804			1790			1840			1816	
Flt Permitted		0.87			0.95			0.98			0.97	
Satd. Flow (perm)		1594			1716			1808			1763	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.89	0.89	0.89
Adj. Flow (vph)	58	134	18	28	169	40	13	273	14	30	331	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	210	0	0	237	0	0	300	0	0	418	0
Confl. Peds. (#/hr)	2		1	1		2	1					1
Confl. Bikes (#/hr)			3						1			1
Heavy Vehicles (%)	2%	2%	7%	8%	2%	2%	9%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		584			629			964			940	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.14			0.17			c0.24	
v/c Ratio		0.36			0.38			0.31			0.44	
Uniform Delay, d1		13.9			14.0			7.8			8.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.7			0.8			1.5	
Delay (s)		15.6			15.7			8.7			10.1	
Level of Service		B			B			A			B	
Approach Delay (s)		15.6			15.7			8.7			10.1	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	716	311	12	545	22	13
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	833	362	13	592	26	15
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1200		1342	603
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1200		1342	603
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		81	97
cM capacity (veh/h)			574		139	439

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	555	639	211	395	41
Volume Left	0	0	13	0	26
Volume Right	0	362	0	0	15
cSH	1700	1700	574	1700	187
Volume to Capacity	0.33	0.38	0.02	0.23	0.22
Queue Length 95th (ft)	0	0	2	0	20
Control Delay (s)	0.0	0.0	1.0	0.0	29.6
Lane LOS			A		D
Approach Delay (s)	0.0		0.3		29.6
Approach LOS					D

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Highland Avenue & Mt. Daniel Drive

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	2	47	14	32	301	7
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	2	55	16	38	354	8

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	58	54	362
Volume Left (vph)	2	16	0
Volume Right (vph)	55	0	8
Hadj (s)	-0.53	0.09	0.02
Departure Headway (s)	4.3	4.5	4.1
Degree Utilization, x	0.07	0.07	0.41
Capacity (veh/h)	764	773	854
Control Delay (s)	7.6	7.8	10.0
Approach Delay (s)	7.6	7.8	10.0
Approach LOS	A	A	A

Intersection Summary			
Delay	9.4		
Level of Service	A		
Intersection Capacity Utilization	28.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	199	285	31	297	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	8	221	335	36	349	36
Pedestrians		1	2			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	372				592	355
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	372				592	355
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				25	95
cM capacity (veh/h)	1187				465	689

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	229	372	386
Volume Left	8	0	349
Volume Right	0	36	36
cSH	1187	1700	480
Volume to Capacity	0.01	0.22	0.80
Queue Length 95th (ft)	0	0	188
Control Delay (s)	0.3	0.0	36.7
Lane LOS	A		E
Approach Delay (s)	0.3	0.0	36.7
Approach LOS			E

Intersection Summary			
Average Delay	14.5		
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	5	53	6	5	42
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	6	6	62	7	6	49
Pedestrians	8					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	135	74			77	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	135	74			77	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	849	980			1510	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	69	55
Volume Left	6	0	6
Volume Right	6	7	0
cSH	910	1700	1510
Volume to Capacity	0.01	0.04	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.0	0.0	0.8
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	0.8
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	16.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	32	420	272	40	37	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.85	0.85	0.89	0.89
Hourly flow rate (vph)	37	488	320	47	42	38
Pedestrians			9			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			1			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked	1.00				1.00	1.00
vC, conflicting volume	367				915	344
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	363				913	339
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				86	95
cM capacity (veh/h)	1191				290	700

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	526	367	80
Volume Left	37	0	42
Volume Right	0	47	38
cSH	1191	1700	404
Volume to Capacity	0.03	0.22	0.20
Queue Length 95th (ft)	2	0	18
Control Delay (s)	0.9	0.0	16.1
Lane LOS	A		C
Approach Delay (s)	0.9	0.0	16.1
Approach LOS			C

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	1	1	450	600	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.92	0.92
Hourly flow rate (vph)	2	1	1	529	652	3
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	922	329	656			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	922	329	656			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	269	666	926			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	178	353	435	221
Volume Left	2	1	0	0	0
Volume Right	1	0	0	0	3
cSH	335	926	1700	1700	1700
Volume to Capacity	0.01	0.00	0.21	0.26	0.13
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	15.8	0.1	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	15.8	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	5	1	442	579	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	20	6	1	520	681	28
Pedestrians	2			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.90					
vC, conflicting volume	1220	698	711			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1190	698	711			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	99	100			
cM capacity (veh/h)	187	439	886			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	521	709
Volume Left	20	1	0
Volume Right	6	0	28
cSH	215	886	1700
Volume to Capacity	0.12	0.00	0.42
Queue Length 95th (ft)	10	0	0
Control Delay (s)	24.0	0.0	0.0
Lane LOS	C	A	
Approach Delay (s)	24.0	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	315	376	435	624
v/c Ratio	0.53	0.59	0.46	0.68
Control Delay	18.8	20.0	10.6	15.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.8	20.0	10.6	15.0
Queue Length 50th (ft)	87	107	88	150
Queue Length 95th (ft)	142	170	137	251
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	600	637	951	917
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	0.53	0.59	0.46	0.68

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	192	29	26	244	49	17	330	23	48	450	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.99	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1815			1810			1840			1824	
Flt Permitted		0.90			0.96			0.97			0.94	
Satd. Flow (perm)		1639			1739			1783			1720	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.89	0.89	0.89
Adj. Flow (vph)	55	226	34	31	287	58	20	388	27	54	506	64
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	315	0	0	376	0	0	435	0	0	624	0
Confl. Peds. (#/hr)							3					3
Confl. Bikes (#/hr)			5			3			3			
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		600			637			950			917	
v/s Ratio Prot												
v/s Ratio Perm		0.19			c0.22			0.24			c0.36	
v/c Ratio		0.53			0.59			0.46			0.68	
Uniform Delay, d1		14.9			15.4			8.6			10.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.3			4.0			1.6			4.1	
Delay (s)		18.2			19.3			10.2			14.3	
Level of Service		B			B			B			B	
Approach Delay (s)		18.2			19.3			10.2			14.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX C

Appendix C - Background Traffic Information

Table C-1
Mt. Daniel's Elementary School
Pipeline Trip Generation Analysis(1)

Land Use	ITE Land Use Code	Size	Units	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total	PM Peak Hour (2) In	PM Peak Hour (2) Out	PM Peak Hour (2) Total	Weekday ADT
301 West Broad Street													
Apartments	220	294	DU	30	118	148	83	65	148	116	63	179	2,052
Internal Trip Reduction				-2	-6	-8	-9	-6	-15	-12	-6	-18	-205
				28	112	140	75	58	133	104	57	161	1,847
Total Retail Trips		64,894	GSF	136	87	223	428	483	911	339	329	668	10,981
Internal Trip Reduction				-6	-2	-8	-6	-9	-15	-6	-12	-18	-205
			Subtotal	130	85	215	422	475	897	333	317	650	10,776
Pass-By Trip Reduction (36%)				-47	-31	-78	-165	-158	-323	-120	-114	-234	-3,879
			Subtotal	83	54	137	257	316	574	213	203	416	6,897
301 West Broad Street Total External Trips				**111**	**166**	**277**	**332**	**375**	**707**	**317**	**260**	**577**	**8,744**
Mason Row													
Hotel	310	145	Occupied Rooms	56	41	97	50	57	107	50	52	102	1,293
Apartment	220	340	DU	34	136	170	88	69	157	133	72	205	2,184
			Subtotal	90	177	267	139	126	265	183	124	307	3,477
Internal Trip Reduction				-5	-6	-11	-8	-8	-16	-10	-8	-18	-420
			Subtotal	85	171	256	131	118	249	173	116	289	3,057
Non-Auto Mode Split Adjustment				-4	-9	-13	-7	-6	-13	-9	-6	-14	-153
Total Residential/Hotel External Trips				81	162	243	124	111	236	164	110	275	2,904
Specialty Retail Center	826	63,147	GSF	112	121	233	109	123	232	76	97	173	2,799
Internal Trip Reduction				-6	-5	-11	-11	-13	-24	-8	-10	-18	-420
			Subtotal	106	116	222	98	110	208	68	87	155	2,379
Pass-By Trips				-27	-29	-56	-24	-28	-52	-17	-22	-39	-595
			Subtotal	*79*	*87*	*166*	*73*	*83*	*156*	*51*	*65*	*116*	*1,784*
Office	710	5,317	GSF	7	1	8	3	7	10	1	7	8	141
Theatre	444	42,394	GSF	0	0	0	41	46	87	103	58	161	1,045
Mason Row Total External Trips				**167**	**250**	**417**	**241**	**247**	**488**	**319**	**240**	**560**	**5,874**

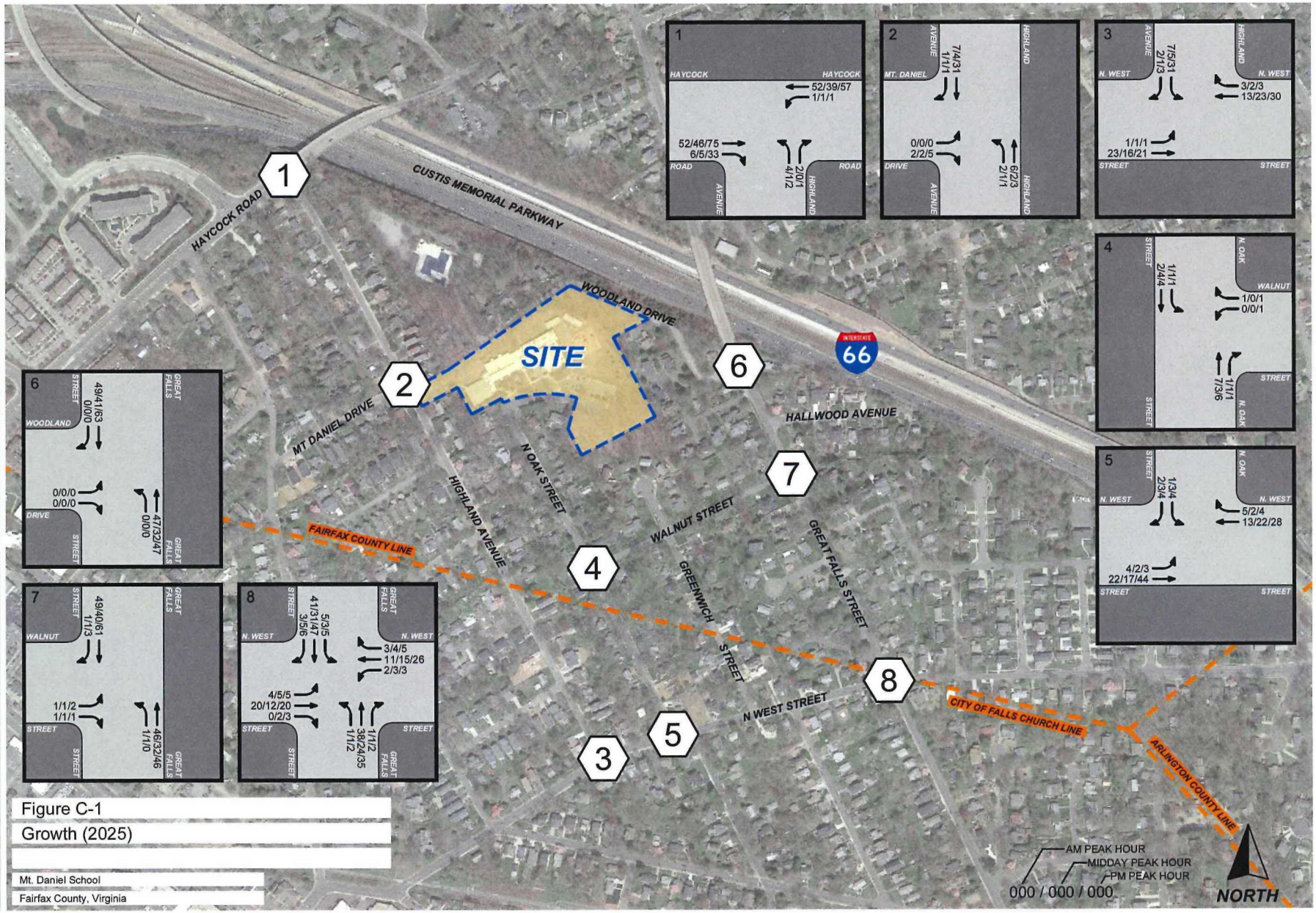

Figure C-1

Growth (2025)

Mt. Daniel School

Fairfax County, Virginia

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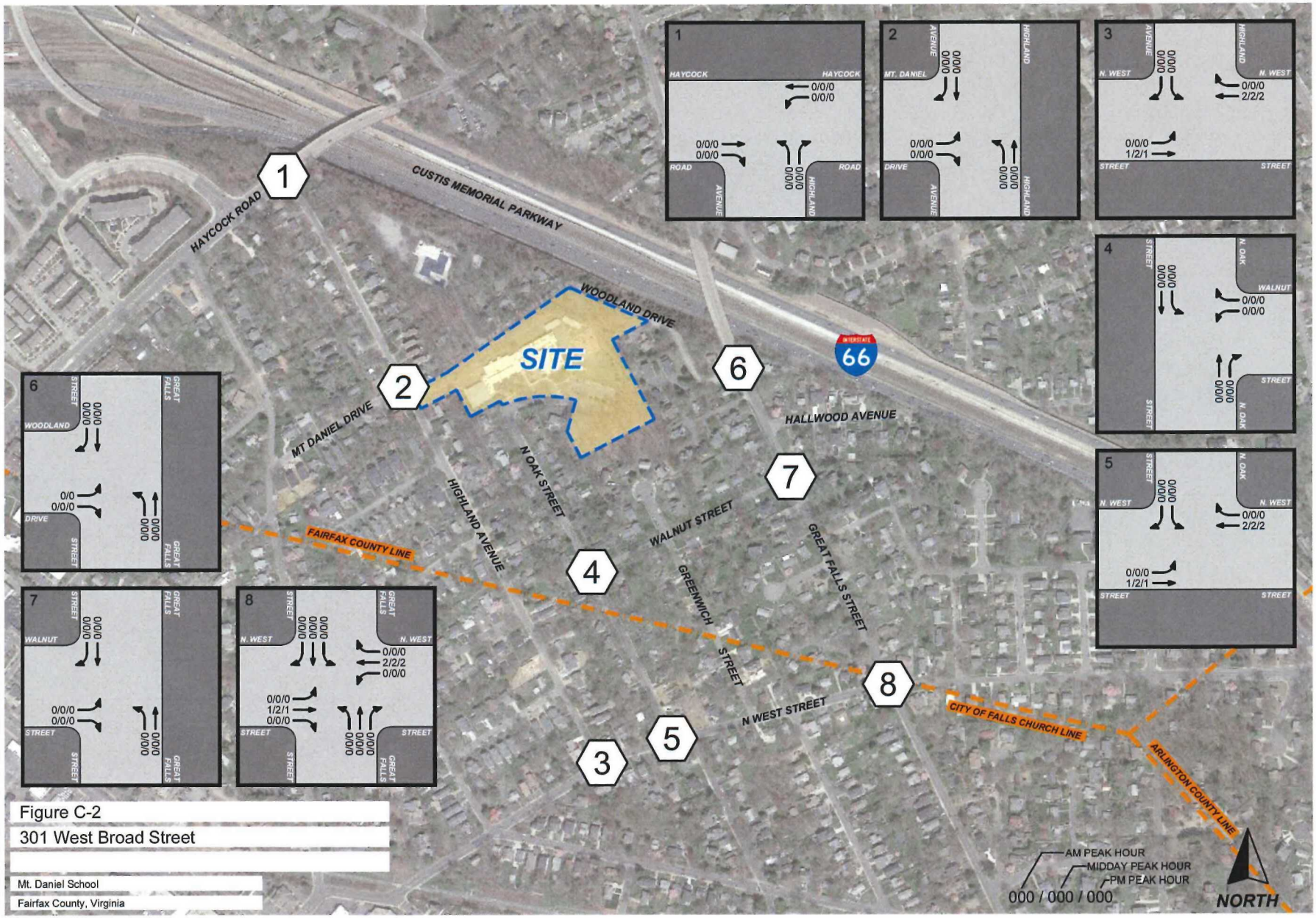

Figure C-2

301 West Broad Street

Mt. Daniel School

Fairfax County, Virginia

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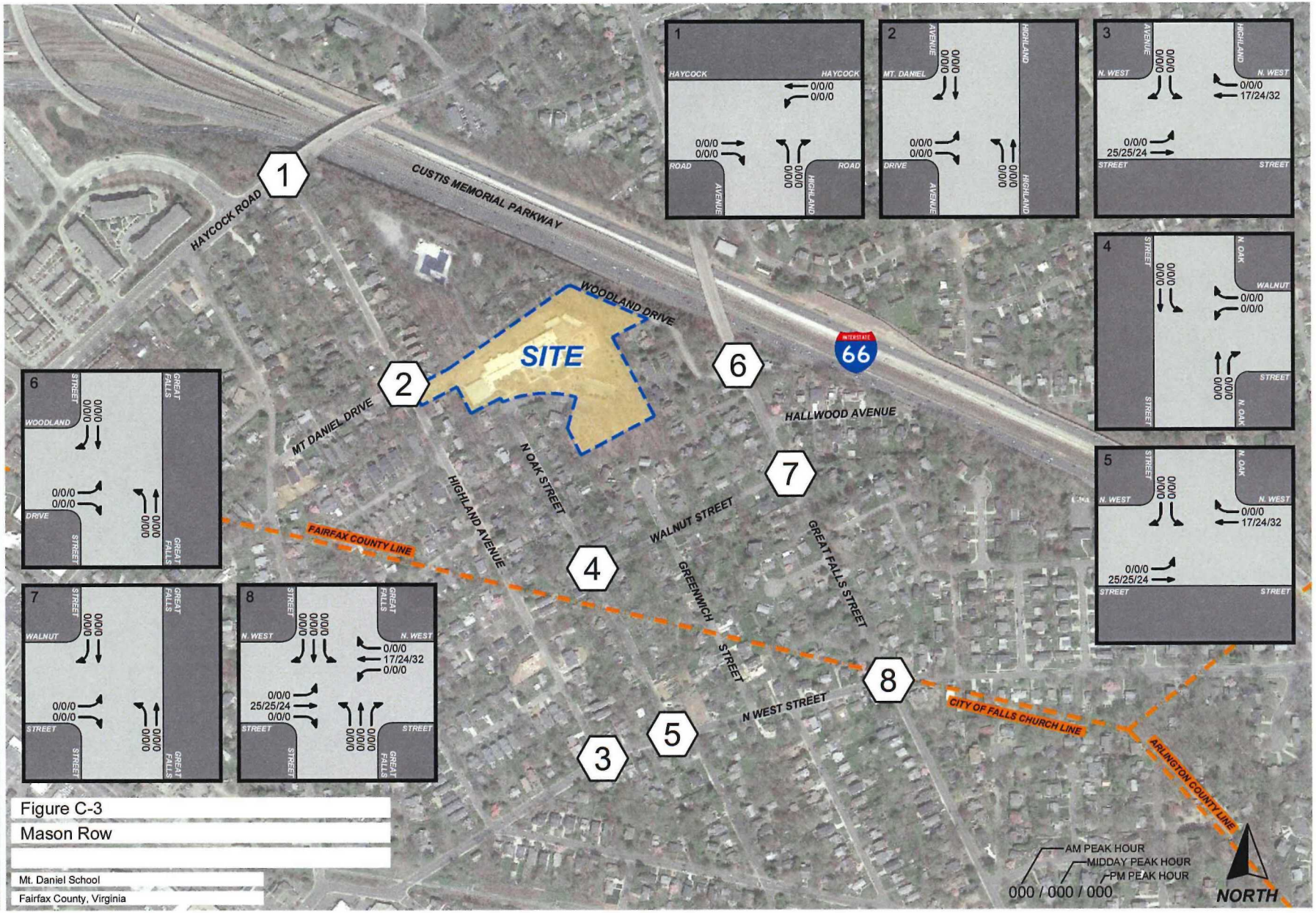

Figure C-3

Mason Row

Mt. Daniel School

Fairfax County, Virginia

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APPENDIX D

Appendix D - Background Capacity Analysis

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	548	67	13	550	44	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	596	73	14	598	48	21
Pedestrians				1	3	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				3.5	3.5	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			671		962	338
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			671		962	338
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		81	97
cM capacity (veh/h)			912		247	655

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	397	271	213	399	68
Volume Left	0	0	14	0	48
Volume Right	0	73	0	0	21
cSH	1700	1700	912	1700	304
Volume to Capacity	0.23	0.16	0.02	0.23	0.22
Queue Length 95th (ft)	0	0	1	0	21
Control Delay (s)	0.0	0.0	0.7	0.0	20.2
Lane LOS			A		C
Approach Delay (s)	0.0		0.3		20.2
Approach LOS					C

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Highland Avenue & Mt. Daniel Drive

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	1	19	17	62	74	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	21	18	67	80	7

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	22	86	87
Volume Left (vph)	1	18	0
Volume Right (vph)	21	0	7
Hadj (s)	-0.53	0.08	-0.01
Departure Headway (s)	3.7	4.1	4.0
Degree Utilization, x	0.02	0.10	0.10
Capacity (veh/h)	915	859	885
Control Delay (s)	6.8	7.5	7.4
Approach Delay (s)	6.8	7.5	7.4
Approach LOS	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	272	157	35	71	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	296	171	38	77	24
Pedestrians			4			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	209				522	190
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	209				522	190
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				85	97
cM capacity (veh/h)	1362				507	845

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	312	209	101
Volume Left	16	0	77
Volume Right	0	38	24
cSH	1362	1700	560
Volume to Capacity	0.01	0.12	0.18
Queue Length 95th (ft)	1	0	16
Control Delay (s)	0.5	0.0	12.8
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	12.8
Approach LOS			B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: N. Oak Street & Walnut Street

10/20/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	8	78	9	8	23
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	9	85	10	9	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	132	90			95	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	132	90			95	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	99			99	
cM capacity (veh/h)	857	968			1433	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	95	34
Volume Left	3	0	9
Volume Right	9	10	0
cSH	935	1700	1433
Volume to Capacity	0.01	0.06	0.01
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.9	0.0	2.0
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	2.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	42	261	157	50	13	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	46	284	171	54	14	24
Pedestrians		1	26		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	2		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked						
vC, conflicting volume	228				602	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228				602	202
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	96				97	97
cM capacity (veh/h)	1302				434	836

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	329	225	38
Volume Left	46	0	14
Volume Right	0	54	24
cSH	1302	1700	622
Volume to Capacity	0.04	0.13	0.06
Queue Length 95th (ft)	3	0	5
Control Delay (s)	1.4	0.0	11.2
Lane LOS	A		B
Approach Delay (s)	1.4	0.0	11.2
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
6: Great Falls Street & Woodland Drive

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	3	2	497	519	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	3	2	540	564	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	839	283	565			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	839	283	565			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	304	714	1003			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	182	360	376	189
Volume Left	1	2	0	0	0
Volume Right	3	0	0	0	1
cSH	534	1003	1700	1700	1700
Volume to Capacity	0.01	0.00	0.21	0.22	0.11
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.8	0.1	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.8	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	8	7	489	517	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	9	8	532	562	11
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.87					
vC, conflicting volume	1115	567	573			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1057	567	573			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	98	99			
cM capacity (veh/h)	215	523	1000			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	20	539	573
Volume Left	11	8	0
Volume Right	9	0	11
cSH	291	1000	1700
Volume to Capacity	0.07	0.01	0.34
Queue Length 95th (ft)	5	1	0
Control Delay (s)	18.3	0.2	0.0
Lane LOS	C	A	
Approach Delay (s)	18.3	0.2	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	313	207	469	556
v/c Ratio	0.50	0.34	0.48	0.62
Control Delay	18.1	15.7	10.9	13.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.1	15.7	10.9	13.4
Queue Length 50th (ft)	85	53	97	126
Queue Length 95th (ft)	150	99	162	216
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	630	616	971	904
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	0.50	0.34	0.48	0.62

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	237	4	21	138	31	13	405	14	55	429	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			1.00			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		1844			1762			1852			1837	
Flt Permitted		0.93			0.95			0.98			0.92	
Satd. Flow (perm)		1720			1680			1822			1696	
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)	51	258	4	23	150	34	14	440	15	60	466	30
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	313	0	0	207	0	0	469	0	0	556	0
Confl. Peds. (#/hr)							1					1
Confl. Bikes (#/hr)			2			3						5
Heavy Vehicles (%)	2%	2%	2%	11%	4%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		630			616			971			904	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.12			0.26			c0.33	
v/c Ratio		0.50			0.34			0.48			0.62	
Uniform Delay, d1		14.7			13.7			8.8			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.8			1.5			1.7			3.1	
Delay (s)		17.5			15.2			10.5			12.8	
Level of Service		B			B			B			B	
Approach Delay (s)		17.5			15.2			10.5			12.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	482	49	15	411	14	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	524	53	16	447	15	4
Pedestrians	1				3	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			580		811	292
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			580		811	292
tC, single (s)			4.2		7.0	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			98		95	99
cM capacity (veh/h)			953		299	703

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	349	228	165	298	20
Volume Left	0	0	16	0	15
Volume Right	0	53	0	0	4
cSH	1700	1700	953	1700	343
Volume to Capacity	0.21	0.13	0.02	0.18	0.06
Queue Length 95th (ft)	0	0	1	0	5
Control Delay (s)	0.0	0.0	1.0	0.0	16.1
Lane LOS			A		C
Approach Delay (s)	0.0		0.4		16.1
Approach LOS					C

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Highland Avenue & Mt. Daniel Drive

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	3	24	6	18	46	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	26	7	20	50	7

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	29	26	57
Volume Left (vph)	3	7	0
Volume Right (vph)	26	0	7
Hadj (s)	-0.48	0.14	0.00
Departure Headway (s)	3.6	4.1	4.0
Degree Utilization, x	0.03	0.03	0.06
Capacity (veh/h)	972	848	892
Control Delay (s)	6.7	7.3	7.2
Approach Delay (s)	6.7	7.3	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.1		
Level of Service	A		
Intersection Capacity Utilization	16.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	9	199	270	24	49	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	216	293	26	53	12
Pedestrians		2	9			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		0	1			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	320				551	309
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320				551	309
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				89	98
cM capacity (veh/h)	1240				487	690

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	226	320	65
Volume Left	10	0	53
Volume Right	0	26	12
cSH	1240	1700	515
Volume to Capacity	0.01	0.19	0.13
Queue Length 95th (ft)	1	0	11
Control Delay (s)	0.4	0.0	13.0
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	13.0
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: N. Oak Street & Walnut Street

10/20/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	4	34	7	7	47
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	4	37	8	8	51
Pedestrians	15					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	1					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	122	60			60	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122	60			60	
tC, single (s)	6.4	6.2			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.4	
p0 queue free %	100	100			99	
cM capacity (veh/h)	856	988			1433	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	45	59
Volume Left	3	0	8
Volume Right	4	8	0
cSH	927	1700	1433
Volume to Capacity	0.01	0.03	0.01
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.9	0.0	1.0
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	1.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	24	211	256	20	27	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	229	278	22	29	37
Pedestrians			27			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			3			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked						
vC, conflicting volume	300				598	289
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300				598	289
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	98				93	95
cM capacity (veh/h)	1222				427	741

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	255	300	66
Volume Left	26	0	29
Volume Right	0	22	37
cSH	1222	1700	559
Volume to Capacity	0.02	0.18	0.12
Queue Length 95th (ft)	2	0	10
Control Delay (s)	1.0	0.0	12.3
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	12.3
Approach LOS			B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	4	0	1	342	436	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	1	372	474	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	664	239	477			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	664	239	477			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	394	763	1081			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	125	248	316	161
Volume Left	4	1	0	0	0
Volume Right	0	0	0	0	3
cSH	394	1081	1700	1700	1700
Volume to Capacity	0.01	0.00	0.15	0.19	0.09
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	14.2	0.1	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	14.2	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Great Falls Street & Walnut Street

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	12	7	7	335	424	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	8	8	364	461	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.99					
vC, conflicting volume	848	469	477			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	839	469	477			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	99			
cM capacity (veh/h)	329	594	1085			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	21	372	477
Volume Left	13	8	0
Volume Right	8	0	16
cSH	394	1085	1700
Volume to Capacity	0.05	0.01	0.28
Queue Length 95th (ft)	4	1	0
Control Delay (s)	14.7	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	14.7	0.2	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
8: Great Falls Street & N. West Street

10/20/2015

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	243	271	305	448
v/c Ratio	0.41	0.43	0.32	0.48
Control Delay	16.7	16.9	9.0	10.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.7	16.9	9.0	10.9
Queue Length 50th (ft)	64	71	56	92
Queue Length 95th (ft)	117	129	98	156
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	597	631	963	938
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	0.41	0.43	0.32	0.48

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	153	17	27	185	38	12	256	13	30	326	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.98	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1811			1797			1840			1816	
Flt Permitted		0.89			0.95			0.98			0.96	
Satd. Flow (perm)		1630			1722			1807			1758	
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)	59	166	18	29	201	41	13	278	14	33	354	61
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	243	0	0	271	0	0	305	0	0	448	0
Confl. Peds. (#/hr)	2		1	1		2	1					1
Confl. Bikes (#/hr)			3						1			1
Heavy Vehicles (%)	2%	2%	7%	8%	2%	2%	9%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		597			631			963			937	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.16			0.17			c0.25	
v/c Ratio		0.41			0.43			0.32			0.48	
Uniform Delay, d1		14.1			14.3			7.9			8.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.1			2.1			0.9			1.7	
Delay (s)		16.2			16.4			8.7			10.5	
Level of Service		B			B			A			B	
Approach Delay (s)		16.2			16.4			8.7			10.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	791	344	13	602	24	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	860	374	14	654	26	15
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1240		1408	623
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1240		1408	623
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		79	96
cM capacity (veh/h)			554		126	427

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	573	661	232	436	41
Volume Left	0	0	14	0	26
Volume Right	0	374	0	0	15
cSH	1700	1700	554	1700	170
Volume to Capacity	0.34	0.39	0.03	0.26	0.24
Queue Length 95th (ft)	0	0	2	0	23
Control Delay (s)	0.0	0.0	1.0	0.0	32.9
Lane LOS			A		D
Approach Delay (s)	0.0		0.4		32.9
Approach LOS					D

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Highland Avenue & Mt. Daniel Drive

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	2	52	15	35	332	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	57	16	38	361	9

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	59	54	370
Volume Left (vph)	2	16	0
Volume Right (vph)	57	0	9
Hadj (s)	-0.54	0.09	0.02
Departure Headway (s)	4.3	4.5	4.1
Degree Utilization, x	0.07	0.07	0.42
Capacity (veh/h)	761	770	853
Control Delay (s)	7.6	7.8	10.1
Approach Delay (s)	7.6	7.8	10.1
Approach LOS	A	A	B

Intersection Summary			
Delay	9.5		
Level of Service	A		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	245	349	34	328	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	266	379	37	357	37
Pedestrians		1	2			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	416				684	399
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	416				684	399
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				13	94
cM capacity (veh/h)	1143				411	650

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	275	416	393
Volume Left	9	0	357
Volume Right	0	37	37
cSH	1143	1700	425
Volume to Capacity	0.01	0.24	0.93
Queue Length 95th (ft)	1	0	258
Control Delay (s)	0.3	0.0	58.3
Lane LOS	A		F
Approach Delay (s)	0.3	0.0	58.3
Approach LOS			F

Intersection Summary			
Average Delay	21.2		
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	6	59	7	6	46
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	7	64	8	7	50
Pedestrians	8					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	139	76			80	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	139	76			80	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	844	978			1507	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	72	57
Volume Left	7	0	7
Volume Right	7	8	0
cSH	906	1700	1507
Volume to Capacity	0.01	0.04	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.0	0.0	0.9
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	0.9
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	17.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	35	489	334	44	41	38
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	532	363	48	45	41
Pedestrians			9			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			1			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	411				1004	387
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	352				977	327
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				82	94
cM capacity (veh/h)	1145				253	678

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	570	411	86
Volume Left	38	0	45
Volume Right	0	48	41
cSH	1145	1700	362
Volume to Capacity	0.03	0.24	0.24
Queue Length 95th (ft)	3	0	23
Control Delay (s)	0.9	0.0	18.0
Lane LOS	A		C
Approach Delay (s)	0.9	0.0	18.0
Approach LOS			C

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	1	1	497	663	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	1	1	540	721	3
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	996	363	725			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	996	363	725			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	241	633	873			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	3	181	360	480	243
Volume Left	2	1	0	0	0
Volume Right	1	0	0	0	3
cSH	304	873	1700	1700	1700
Volume to Capacity	0.01	0.00	0.21	0.28	0.14
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	17.0	0.1	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	17.0	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Great Falls Street & Walnut Street

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	6	1	488	640	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	7	1	530	696	29
Pedestrians	2			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.90					
vC, conflicting volume	1245	713	727			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1216	713	727			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	98	100			
cM capacity (veh/h)	179	430	875			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	532	725
Volume Left	21	1	0
Volume Right	7	0	29
cSH	208	875	1700
Volume to Capacity	0.13	0.00	0.43
Queue Length 95th (ft)	11	0	0
Control Delay (s)	24.9	0.0	0.0
Lane LOS	C	A	
Approach Delay (s)	24.9	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
8: Great Falls Street & N. West Street

10/20/2015

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	350	421	445	666
v/c Ratio	0.59	0.66	0.47	0.73
Control Delay	20.4	21.8	10.8	16.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.4	21.8	10.8	16.6
Queue Length 50th (ft)	100	123	91	166
Queue Length 95th (ft)	175	210	154	287
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	592	640	947	914
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	0.59	0.66	0.47	0.73

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	237	32	29	304	54	19	365	25	53	497	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.99			0.99	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1818			1815			1841			1824	
Flt Permitted		0.88			0.96			0.96			0.94	
Satd. Flow (perm)		1617			1747			1777			1715	
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)	57	258	35	32	330	59	21	397	27	58	540	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	350	0	0	421	0	0	445	0	0	666	0
Confl. Peds. (#/hr)							3					3
Confl. Bikes (#/hr)			5			3			3			
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		592			640			947			914	
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.24			0.25			c0.39	
v/c Ratio		0.59			0.66			0.47			0.73	
Uniform Delay, d1		15.4			15.9			8.7			10.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.3			5.2			1.7			5.1	
Delay (s)		19.7			21.1			10.4			15.8	
Level of Service		B			C			B			B	
Approach Delay (s)		19.7			21.1			10.4			15.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX E

Appendix E - Total Future Capacity Analysis

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	548	71	13	550	45	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	596	77	14	598	49	21
Pedestrians				1	3	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				3.5	3.5	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			676		964	340
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			676		964	340
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		80	97
cM capacity (veh/h)			909		246	653

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	397	276	213	399	70
Volume Left	0	0	14	0	49
Volume Right	0	77	0	0	21
cSH	1700	1700	909	1700	302
Volume to Capacity	0.23	0.16	0.02	0.23	0.23
Queue Length 95th (ft)	0	0	1	0	22
Control Delay (s)	0.0	0.0	0.7	0.0	20.4
Lane LOS			A		C
Approach Delay (s)	0.0		0.3		20.4
Approach LOS					C

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Highland Avenue & Mt. Daniel Drive

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	1	21	18	63	78	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	23	20	68	85	7

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	24	88	91
Volume Left (vph)	1	20	0
Volume Right (vph)	23	0	7
Hadj (s)	-0.53	0.08	-0.01
Departure Headway (s)	3.7	4.1	4.0
Degree Utilization, x	0.02	0.10	0.10
Capacity (veh/h)	911	856	882
Control Delay (s)	6.8	7.6	7.5
Approach Delay (s)	6.8	7.6	7.5
Approach LOS	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	311	171	37	77	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	338	186	40	84	24
Pedestrians			4			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	226				581	206
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	226				581	206
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				82	97
cM capacity (veh/h)	1342				469	827

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	354	226	108
Volume Left	16	0	84
Volume Right	0	40	24
cSH	1342	1700	518
Volume to Capacity	0.01	0.13	0.21
Queue Length 95th (ft)	1	0	19
Control Delay (s)	0.5	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	13.8
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: N. Oak Street & Walnut Street

10/20/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	32	152	9	16	49
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	35	165	10	17	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	258	170			175	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	258	170			175	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	96			99	
cM capacity (veh/h)	721	874			1338	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	38	175	71
Volume Left	3	0	17
Volume Right	35	10	0
cSH	858	1700	1338
Volume to Capacity	0.04	0.10	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	9.4	0.0	2.0
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	2.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	87	261	157	79	23	38
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	95	284	171	86	25	41
Pedestrians		1	26		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	2		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked						
vC, conflicting volume	260				715	218
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	260				715	218
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	93				93	95
cM capacity (veh/h)	1267				357	819

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	378	257	66
Volume Left	95	0	25
Volume Right	0	86	41
cSH	1267	1700	551
Volume to Capacity	0.07	0.15	0.12
Queue Length 95th (ft)	6	0	10
Control Delay (s)	2.6	0.0	12.4
Lane LOS	A		B
Approach Delay (s)	2.6	0.0	12.4
Approach LOS			B

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	3	2	498	523	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	3	2	541	568	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	844	285	570			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	844	285	570			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	302	712	999			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	183	361	379	191
Volume Left	1	2	0	0	0
Volume Right	3	0	0	0	1
cSH	531	999	1700	1700	1700
Volume to Capacity	0.01	0.00	0.21	0.22	0.11
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.8	0.1	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.8	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	11	15	27	489	517	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	16	29	532	562	15
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.85					
vC, conflicting volume	1161	570	577			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1103	570	577			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	97	97			
cM capacity (veh/h)	194	521	996			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	561	577
Volume Left	12	29	0
Volume Right	16	0	15
cSH	304	996	1700
Volume to Capacity	0.09	0.03	0.34
Queue Length 95th (ft)	8	2	0
Control Delay (s)	18.1	0.8	0.0
Lane LOS	C	A	
Approach Delay (s)	18.1	0.8	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

Queues
8: Great Falls Street & N. West Street

10/20/2015

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	324	212	518	564
v/c Ratio	0.52	0.35	0.56	0.63
Control Delay	18.4	15.8	12.4	13.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.4	15.8	12.4	13.8
Queue Length 50th (ft)	89	54	114	130
Queue Length 95th (ft)	156	101	193	223
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	628	614	917	896
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	0.35	0.56	0.63

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	237	14	21	138	36	42	420	14	57	434	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			1.00			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		1835			1758			1847			1837	
Flt Permitted		0.93			0.95			0.93			0.91	
Satd. Flow (perm)		1714			1675			1720			1680	
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)	51	258	15	23	150	39	46	457	15	62	472	30
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	324	0	0	212	0	0	518	0	0	564	0
Confl. Peds. (#/hr)							1					1
Confl. Bikes (#/hr)			2			3						5
Heavy Vehicles (%)	2%	2%	2%	11%	4%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		628			614			917			896	
v/s Ratio Prot												
v/s Ratio Perm		c0.19			0.13			0.30			c0.34	
v/c Ratio		0.52			0.35			0.56			0.63	
Uniform Delay, d1		14.8			13.8			9.4			9.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.0			1.5			2.5			3.3	
Delay (s)		17.9			15.3			11.9			13.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.9			15.3			11.9			13.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	482	51	15	411	16	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	524	55	16	447	17	4
Pedestrians	1				3	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			582		812	293
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			582		812	293
tC, single (s)			4.2		7.0	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.3
p0 queue free %			98		94	99
cM capacity (veh/h)			952		299	702

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	349	230	165	298	22
Volume Left	0	0	16	0	17
Volume Right	0	55	0	0	4
cSH	1700	1700	952	1700	338
Volume to Capacity	0.21	0.14	0.02	0.18	0.06
Queue Length 95th (ft)	0	0	1	0	5
Control Delay (s)	0.0	0.0	1.0	0.0	16.4
Lane LOS			A		C
Approach Delay (s)	0.0		0.4		16.4
Approach LOS					C

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Highland Avenue & Mt. Daniel Drive

10/20/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	3	25	7	20	48	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	27	8	22	52	7

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	30	29	59
Volume Left (vph)	3	8	0
Volume Right (vph)	27	0	7
Hadj (s)	-0.48	0.14	0.00
Departure Headway (s)	3.6	4.1	4.0
Degree Utilization, x	0.03	0.03	0.07
Capacity (veh/h)	969	847	890
Control Delay (s)	6.7	7.3	7.3
Approach Delay (s)	6.7	7.3	7.3
Approach LOS	A	A	A

Intersection Summary			
Delay	7.1		
Level of Service	A		
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	9	215	294	28	51	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	234	320	30	55	12
Pedestrians		2	9			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		0	1			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	350				597	337
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	350				597	337
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				88	98
cM capacity (veh/h)	1209				458	665

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	243	350	67
Volume Left	10	0	55
Volume Right	0	30	12
cSH	1209	1700	485
Volume to Capacity	0.01	0.21	0.14
Queue Length 95th (ft)	1	0	12
Control Delay (s)	0.4	0.0	13.6
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	13.6
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	14	65	7	22	93
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	15	71	8	24	101
Pedestrians	15					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	3.5					3.5
Percent Blockage	1					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	238	93			93	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	238	93			93	
tC, single (s)	6.4	6.2			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.4	
p0 queue free %	100	98			98	
cM capacity (veh/h)	726	946			1392	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	18	78	125
Volume Left	3	0	24
Volume Right	15	8	0
cSH	898	1700	1392
Volume to Capacity	0.02	0.05	0.02
Queue Length 95th (ft)	2	0	1
Control Delay (s)	9.1	0.0	1.6
Lane LOS	A		A
Approach Delay (s)	9.1	0.0	1.6
Approach LOS	A		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	43	211	256	32	45	62
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	229	278	35	49	67
Pedestrians			27			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			3			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked						
vC, conflicting volume	313				645	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	313				645	296
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	96				88	91
cM capacity (veh/h)	1209				393	734

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	276	313	116
Volume Left	47	0	49
Volume Right	0	35	67
cSH	1209	1700	538
Volume to Capacity	0.04	0.18	0.22
Queue Length 95th (ft)	3	0	20
Control Delay (s)	1.7	0.0	13.5
Lane LOS	A		B
Approach Delay (s)	1.7	0.0	13.5
Approach LOS			B

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	4	0	1	344	438	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	1	374	476	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	667	240	479			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	667	240	479			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	392	761	1079			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	126	249	317	162
Volume Left	4	1	0	0	0
Volume Right	0	0	0	0	3
cSH	392	1079	1700	1700	1700
Volume to Capacity	0.01	0.00	0.15	0.19	0.10
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	14.3	0.1	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	14.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	14	19	15	335	424	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	21	16	364	461	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.98					
vC, conflicting volume	867	470	479			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	857	470	479			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	97	98			
cM capacity (veh/h)	318	593	1083			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	36	380	479
Volume Left	15	16	0
Volume Right	21	0	18
cSH	434	1083	1700
Volume to Capacity	0.08	0.02	0.28
Queue Length 95th (ft)	7	1	0
Control Delay (s)	14.0	0.5	0.0
Lane LOS	B	A	
Approach Delay (s)	14.0	0.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
8: Great Falls Street & N. West Street

10/20/2015

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	263	273	325	461
v/c Ratio	0.44	0.43	0.35	0.49
Control Delay	17.3	17.0	9.4	11.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.3	17.0	9.4	11.2
Queue Length 50th (ft)	70	72	61	96
Queue Length 95th (ft)	127	130	107	163
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	593	630	934	933
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	0.44	0.43	0.35	0.49

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	153	35	27	185	40	24	262	13	33	335	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.98			0.99			0.98	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1786			1795			1833			1817	
Flt Permitted		0.90			0.95			0.95			0.96	
Satd. Flow (perm)		1618			1718			1754			1751	
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)	59	166	38	29	201	43	26	285	14	36	364	61
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	263	0	0	273	0	0	325	0	0	461	0
Confl. Peds. (#/hr)	2		1	1		2	1					1
Confl. Bikes (#/hr)			3						1			1
Heavy Vehicles (%)	2%	2%	7%	8%	2%	2%	9%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		593			629			935			933	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.16			0.19			c0.26	
v/c Ratio		0.44			0.43			0.35			0.49	
Uniform Delay, d1		14.4			14.3			8.0			8.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.4			2.2			1.0			1.9	
Delay (s)		16.8			16.5			9.0			10.7	
Level of Service		B			B			A			B	
Approach Delay (s)		16.8			16.5			9.0			10.7	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1: Highland Avenue & Haycock Road

10/20/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	791	347	13	602	26	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	860	377	14	654	28	15
Pedestrians					6	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1243		1410	624
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1243		1410	624
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		77	96
cM capacity (veh/h)			553		125	426

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	573	664	232	436	43
Volume Left	0	0	14	0	28
Volume Right	0	377	0	0	15
cSH	1700	1700	553	1700	166
Volume to Capacity	0.34	0.39	0.03	0.26	0.26
Queue Length 95th (ft)	0	0	2	0	25
Control Delay (s)	0.0	0.0	1.0	0.0	34.1
Lane LOS			A		D
Approach Delay (s)	0.0		0.4		34.1
Approach LOS					D

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	2	53	16	37	335	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	58	17	40	364	9

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	60	58	373
Volume Left (vph)	2	17	0
Volume Right (vph)	58	0	9
Hadj (s)	-0.54	0.09	0.02
Departure Headway (s)	4.3	4.5	4.1
Degree Utilization, x	0.07	0.07	0.43
Capacity (veh/h)	757	769	852
Control Delay (s)	7.6	7.8	10.2
Approach Delay (s)	7.6	7.8	10.2
Approach LOS	A	A	B

Intersection Summary			
Delay	9.6		
Level of Service	A		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	275	373	38	332	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	299	405	41	361	37
Pedestrians		1	2			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		3.5	3.5			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1207			
pX, platoon unblocked						
vC, conflicting volume	447				744	427
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	447				744	427
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				5	94
cM capacity (veh/h)	1114				378	627

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	308	447	398
Volume Left	9	0	361
Volume Right	0	41	37
cSH	1114	1700	393
Volume to Capacity	0.01	0.26	1.01
Queue Length 95th (ft)	1	0	314
Control Delay (s)	0.3	0.0	81.9
Lane LOS	A		F
Approach Delay (s)	0.3	0.0	81.9
Approach LOS			F

Intersection Summary			
Average Delay	28.4		
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
4: N. Oak Street & Walnut Street

10/20/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	24	115	7	20	91
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	26	125	8	22	99
Pedestrians	8					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	279	137			141	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	279	137			141	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	97			98	
cM capacity (veh/h)	695	905			1432	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	33	133	121
Volume Left	7	0	22
Volume Right	26	8	0
cSH	853	1700	1432
Volume to Capacity	0.04	0.08	0.02
Queue Length 95th (ft)	3	0	1
Control Delay (s)	9.4	0.0	1.5
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	1.5
Approach LOS	A		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	69	489	334	66	59	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	532	363	72	64	71
Pedestrians			9			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			3.5			
Percent Blockage			1			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			894			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	435				1089	399
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	379				1068	341
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				70	89
cM capacity (veh/h)	1121				216	666

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	607	435	135
Volume Left	75	0	64
Volume Right	0	72	71
cSH	1121	1700	334
Volume to Capacity	0.07	0.26	0.40
Queue Length 95th (ft)	5	0	47
Control Delay (s)	1.8	0.0	22.9
Lane LOS	A		C
Approach Delay (s)	1.8	0.0	22.9
Approach LOS			C

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	1	1	499	666	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	1	1	542	724	3
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1000	365	728			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1000	365	728			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	239	632	870			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	3	182	362	483	245
Volume Left	2	1	0	0	0
Volume Right	1	0	0	0	3
cSH	302	870	1700	1700	1700
Volume to Capacity	0.01	0.00	0.21	0.28	0.14
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	17.1	0.1	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	17.1	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	18	16	488	640	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	20	17	530	696	33
Pedestrians	2			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				900		
pX, platoon unblocked	0.89					
vC, conflicting volume	1279	715	730			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1252	715	730			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	86	95	98			
cM capacity (veh/h)	166	430	872			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	42	548	728
Volume Left	23	17	0
Volume Right	20	0	33
cSH	231	872	1700
Volume to Capacity	0.18	0.02	0.43
Queue Length 95th (ft)	16	2	0
Control Delay (s)	24.0	0.6	0.0
Lane LOS	C	A	
Approach Delay (s)	24.0	0.6	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
8: Great Falls Street & N. West Street

10/20/2015

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	369	425	481	679
v/c Ratio	0.63	0.66	0.54	0.75
Control Delay	21.3	22.0	12.0	17.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.3	22.0	12.0	17.6
Queue Length 50th (ft)	106	125	103	173
Queue Length 95th (ft)	187	213	176	#301
Internal Link Dist (ft)	814	1441	912	557
Turn Bay Length (ft)				
Base Capacity (vph)	590	640	896	907
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	0.63	0.66	0.54	0.75

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	237	50	29	304	58	41	376	25	56	506	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.98			0.99			0.99	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1805			1812			1838			1825	
Flt Permitted		0.89			0.96			0.91			0.93	
Satd. Flow (perm)		1611			1747			1682			1703	
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)	57	258	54	32	330	63	45	409	27	61	550	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	369	0	0	425	0	0	481	0	0	679	0
Confl. Peds. (#/hr)							3					3
Confl. Bikes (#/hr)			5			3			3			
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			30.0			30.0	
Effective Green, g (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		590			640			897			908	
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.24			0.29			c0.40	
v/c Ratio		0.63			0.66			0.54			0.75	
Uniform Delay, d1		15.6			15.9			9.2			10.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.9			5.4			2.3			5.6	
Delay (s)		20.6			21.3			11.4			16.5	
Level of Service		C			C			B			B	
Approach Delay (s)		20.6			21.3			11.4			16.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX F

Appendix F - Travel Time Capacity Analysis

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	78	0	0	0	0	0	0	0	28	0
Future Volume (vph)	0	0	78	0	0	0	0	0	0	0	28	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	236	0	0	0	0	0	0	0	85	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	236	0	0	85
Volume Left (vph)	0	0	0	0
Volume Right (vph)	236	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.5	4.3	4.4	4.4
Degree Utilization, x	0.23	0.00	0.00	0.10
Capacity (veh/h)	995	900	900	770
Control Delay (s)	7.6	7.3	7.4	7.9
Approach Delay (s)	7.6	0.0	0.0	7.9
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Existing Midday

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	35	0	0	0	0	0	0	0	49	0
Future Volume (vph)	0	0	35	0	0	0	0	0	0	0	49	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	106	0	0	0	0	0	0	0	148	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	106	0	0	148
Volume Left (vph)	0	0	0	0
Volume Right (vph)	106	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.7	4.3	4.3	4.1
Degree Utilization, x	0.11	0.00	0.00	0.17
Capacity (veh/h)	943	900	900	847
Control Delay (s)	7.1	7.3	7.3	8.0
Approach Delay (s)	7.1	0.0	0.0	8.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Background PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	58	0	0	0	0	0	0	0	47	0
Future Volume (vph)	0	0	58	0	0	0	0	0	0	0	47	0
Peak Hour Factor	0.74	0.74	0.74	0.40	0.40	0.40	0.40	0.40	0.40	0.73	0.73	0.73
Hourly flow rate (vph)	0	0	78	0	0	0	0	0	0	0	64	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	78	0	0	64
Volume Left (vph)	0	0	0	0
Volume Right (vph)	78	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.5	4.1	4.1	4.1
Degree Utilization, x	0.08	0.00	0.00	0.07
Capacity (veh/h)	1012	900	900	862
Control Delay (s)	6.8	7.1	7.1	7.4
Approach Delay (s)	6.8	0.0	0.0	7.4
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.0		
Level of Service	A		
Intersection Capacity Utilization	13.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Background AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	86	0	0	0	0	0	0	0	31	0
Future Volume (vph)	0	0	86	0	0	0	0	0	0	0	31	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	261	0	0	0	0	0	0	0	94	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	261	0	0	94
Volume Left (vph)	0	0	0	0
Volume Right (vph)	261	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.6	4.3	4.5	4.4
Degree Utilization, x	0.26	0.00	0.00	0.12
Capacity (veh/h)	987	900	900	759
Control Delay (s)	7.8	7.3	7.5	8.0
Approach Delay (s)	7.8	0.0	0.0	8.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.8		
Level of Service	A		
Intersection Capacity Utilization	15.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Existing Midday

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	38	0	0	0	0	0	0	0	54	0
Future Volume (vph)	0	0	38	0	0	0	0	0	0	0	54	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	115	0	0	0	0	0	0	0	164	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	115	0	0	164
Volume Left (vph)	0	0	0	0
Volume Right (vph)	115	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.7	4.4	4.3	4.2
Degree Utilization, x	0.12	0.00	0.00	0.19
Capacity (veh/h)	930	900	900	842
Control Delay (s)	7.2	7.4	7.3	8.1
Approach Delay (s)	7.2	0.0	0.0	8.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Background PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	65	0	0	0	0	0	0	0	52	0
Future Volume (vph)	0	0	65	0	0	0	0	0	0	0	52	0
Peak Hour Factor	0.74	0.74	0.74	0.40	0.40	0.40	0.40	0.40	0.40	0.73	0.73	0.73
Hourly flow rate (vph)	0	0	88	0	0	0	0	0	0	0	71	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	88	0	0	71
Volume Left (vph)	0	0	0	0
Volume Right (vph)	88	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.5	4.1	4.1	4.1
Degree Utilization, x	0.09	0.00	0.00	0.08
Capacity (veh/h)	1006	900	900	857
Control Delay (s)	6.8	7.1	7.1	7.5
Approach Delay (s)	6.8	0.0	0.0	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.1		
Level of Service	A		
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Total Future AM (704)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	173	0	0	0	0	0	0	0	61	0
Future Volume (vph)	0	0	173	0	0	0	0	0	0	0	61	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	524	0	0	0	0	0	0	0	185	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	524	0	0	185
Volume Left (vph)	0	0	0	0
Volume Right (vph)	524	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.8	4.9	5.3	5.0
Degree Utilization, x	0.56	0.00	0.00	0.26
Capacity (veh/h)	907	900	900	659
Control Delay (s)	11.5	7.9	8.3	9.8
Approach Delay (s)	11.5	0.0	0.0	9.8
Approach LOS	B	A	A	A

Intersection Summary			
Delay	11.1		
Level of Service	B		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Total Future AM Conditions (792)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	184	0	0	0	0	0	0	0	65	0
Future Volume (vph)	0	0	184	0	0	0	0	0	0	0	65	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	558	0	0	0	0	0	0	0	197	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	558	0	0	197
Volume Left (vph)	0	0	0	0
Volume Right (vph)	558	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.9	5.0	5.4	5.1
Degree Utilization, x	0.60	0.00	0.00	0.28
Capacity (veh/h)	899	900	900	648
Control Delay (s)	12.5	8.0	8.4	10.1
Approach Delay (s)	12.5	0.0	0.0	10.1
Approach LOS	B	A	A	B

Intersection Summary			
Delay	11.9		
Level of Service	B		
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Total Future Midday (742)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	75	0	0	0	0	0	0	0	108	0
Future Volume (vph)	0	0	75	0	0	0	0	0	0	0	108	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	227	0	0	0	0	0	0	0	327	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	227	0	0	327
Volume Left (vph)	0	0	0	0
Volume Right (vph)	227	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	4.1	4.9	4.8	4.4
Degree Utilization, x	0.26	0.00	0.00	0.40
Capacity (veh/h)	816	900	900	777
Control Delay (s)	8.5	7.9	7.8	10.4
Approach Delay (s)	8.5	0.0	0.0	10.4
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.6		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Total Future Midday (792)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	79	0	0	0	0	0	0	0	115	0
Future Volume (vph)	0	0	79	0	0	0	0	0	0	0	115	0
Peak Hour Factor	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Hourly flow rate (vph)	0	0	239	0	0	0	0	0	0	0	348	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	239	0	0	348
Volume Left (vph)	0	0	0	0
Volume Right (vph)	239	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	4.2	5.0	4.8	4.5
Degree Utilization, x	0.28	0.00	0.00	0.43
Capacity (veh/h)	804	900	900	771
Control Delay (s)	8.8	8.0	7.8	10.8
Approach Delay (s)	8.8	0.0	0.0	10.8
Approach LOS	A	A	A	B

Intersection Summary			
Delay	10.0		
Level of Service	A		
Intersection Capacity Utilization	17.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Total Future PM (742)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	124	0	0	0	0	0	0	0	100	0
Future Volume (vph)	0	0	124	0	0	0	0	0	0	0	100	0
Peak Hour Factor	0.74	0.74	0.74	0.40	0.40	0.40	0.40	0.40	0.40	0.73	0.73	0.73
Hourly flow rate (vph)	0	0	168	0	0	0	0	0	0	0	137	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	168	0	0	137
Volume Left (vph)	0	0	0	0
Volume Right (vph)	168	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.6	4.4	4.4	4.3
Degree Utilization, x	0.17	0.00	0.00	0.16
Capacity (veh/h)	951	900	900	814
Control Delay (s)	7.4	7.4	7.4	8.1
Approach Delay (s)	7.4	0.0	0.0	8.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: N. Oak Street NB & N. Oak Street SB

Total Future PM (792)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	139	0	0	0	0	0	0	0	111	0
Future Volume (vph)	0	0	139	0	0	0	0	0	0	0	111	0
Peak Hour Factor	0.74	0.74	0.74	0.40	0.40	0.40	0.40	0.40	0.40	0.73	0.73	0.73
Hourly flow rate (vph)	0	0	188	0	0	0	0	0	0	0	152	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	188	0	0	152
Volume Left (vph)	0	0	0	0
Volume Right (vph)	188	0	0	0
Hadj (s)	-0.57	0.00	0.00	0.03
Departure Headway (s)	3.7	4.4	4.4	4.3
Degree Utilization, x	0.19	0.00	0.00	0.18
Capacity (veh/h)	940	900	900	794
Control Delay (s)	7.6	7.4	7.4	8.3
Approach Delay (s)	7.6	0.0	0.0	8.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		