

## **APPENDIX A: SEGMENT COUNTS**



THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

NATIONAL BTN 27TH & 28TH

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			9	9	12:00			88	55			
00:15			5	18	12:15			70	60			
00:30			12	11	12:30			59	54			
00:45			11	37	12:45			66	283	77	246	529
01:00			6	9	13:00			75	54			
01:15			9	10	13:15			59	66			
01:30			10	7	13:30			68	51			
01:45			5	30	13:45			74	276	40	211	487
02:00			4	6	14:00			90	35			
02:15			4	5	14:15			84	44			
02:30			1	4	14:30			88	51			
02:45			5	14	14:45			91	353	65	195	548
03:00			0	6	15:00			103	77			
03:15			4	6	15:15			121	54			
03:30			1	13	15:30			116	78			
03:45			7	12	15:45			135	475	66	275	750
04:00			11	10	16:00			168	51			
04:15			12	11	16:15			151	78			
04:30			15	18	16:30			188	78			
04:45			18	56	16:45			174	681	56	263	944
05:00			20	21	17:00			141	66			
05:15			22	22	17:15			130	41			
05:30			25	29	17:30			121	35			
05:45			28	95	17:45			126	518	48	190	708
06:00			31	37	18:00			106	51			
06:15			55	54	18:15			88	44			
06:30			60	84	18:30			70	48			
06:45			68	214	18:45			68	332	37	180	512
07:00			59	89	19:00			77	44			
07:15			77	70	19:15			54	29			
07:30			84	65	19:30			84	35			
07:45			95	315	19:45			88	303	44	152	455
08:00			65	77	20:00			70	25			
08:15			55	70	20:15			65	35			
08:30			60	84	20:30			44	33			
08:45			87	267	20:45			51	230	30	123	353
09:00			70	77	21:00			35	25			
09:15			74	84	21:15			44	29			
09:30			54	84	21:30			28	30			
09:45			66	264	21:45			35	142	15	99	241
10:00			60	65	22:00			44	19			
10:15			59	70	22:15			28	11			
10:30			70	77	22:30			19	15			
10:45			54	243	22:45			26	117	9	54	171
11:00			44	59	23:00			22	20			
11:15			65	74	23:15			35	16			
11:30			55	84	23:30			41	11			
11:45			68	232	23:45			20	118	15	62	180

**Total Vol.** 1779 2050 **3829** 3828 2050 **5878**

		Daily Totals		
NB	SB	EB	WB	Combined
		5607	4100	<b>9707</b>

Split %	AM			PM		
	46.5%	53.5%	<b>39.4%</b>	65.1%	34.9%	<b>60.6%</b>

<b>Peak Hour</b>	07:15	08:30	<b>08:30</b>	16:00	16:15	<b>16:00</b>
<b>Volume</b>	321	340	<b>631</b>	681	278	<b>944</b>
<b>P.H.F.</b>	0.84	0.89	<b>0.87</b>	0.91	0.89	<b>0.89</b>

THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

NATIONAL BTN 28TH & I-5 NB RAMP

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			16	44	12:00			79	211
00:15			14	35	12:15			61	205
00:30			10	26	12:30			77	218
00:45			16	56	12:45			77	294
01:00			5	28	13:00			78	246
01:15			12	22	13:15			57	199
01:30			4	26	13:30			68	236
01:45			6	27	13:45			73	276
02:00			5	26	14:00			72	235
02:15			3	20	14:15			80	224
02:30			4	18	14:30			90	243
02:45			5	17	14:45			126	368
03:00			4	22	15:00			166	285
03:15			2	15	15:15			131	262
03:30			5	12	15:30			132	262
03:45			5	16	15:45			117	546
04:00			10	20	16:00			109	227
04:15			2	22	16:15			135	218
04:30			7	20	16:30			121	234
04:45			7	26	16:45			119	484
05:00			8	55	17:00			135	238
05:15			15	40	17:15			134	240
05:30			13	63	17:30			110	238
05:45			13	49	17:45			103	482
06:00			32	86	18:00			86	194
06:15			19	88	18:15			82	182
06:30			20	106	18:30			81	178
06:45			31	102	18:45			90	339
07:00			29	188	19:00			77	161
07:15			50	205	19:15			68	151
07:30			56	206	19:30			70	148
07:45			58	193	19:45			54	269
08:00			72	190	20:00			62	162
08:15			51	182	20:15			35	135
08:30			51	189	20:30			44	144
08:45			47	221	20:45			41	182
09:00			45	186	21:00			35	118
09:15			64	168	21:15			41	109
09:30			50	188	21:30			40	121
09:45			54	213	21:45			32	148
10:00			71	177	22:00			28	88
10:15			51	165	22:15			20	95
10:30			59	184	22:30			18	77
10:45			60	241	22:45			11	77
11:00			67	161	23:00			19	84
11:15			74	185	23:15			20	77
11:30			89	177	23:30			16	65
11:45			85	315	23:45			10	65

**Total Vol.** 1476 4806 **6282** 3530 8619 **12149**

Daily Totals				
NB	SB	EB	WB	Combined
		5006	13425	<b>18431</b>

Split %	AM			PM		
	23.5%	76.5%	<b>34.1%</b>	29.1%	70.9%	<b>65.9%</b>

<b>Peak Hour</b>	11:15	11:45	<b>11:45</b>	14:45	15:00	<b>14:45</b>
<b>Volume</b>	327	823	<b>1125</b>	555	1089	<b>1641</b>
<b>P.H.F.</b>	0.92	0.94	<b>0.95</b>	0.84	0.96	<b>0.91</b>

THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

NATIONAL BTN I-5 NB RAMPS & 30TH

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB				
00:00			24	4	12:00			109	58				
00:15			16	9	12:15			107	30				
00:30			20	0	12:30			103	60				
00:45			17	77	2	15	92	12:45	94	413	46	194	607
01:00			9	3	13:00			38	106				
01:15			8	5	13:15			123	30				
01:30			7	5	13:30			92	27				
01:45			10	34	6	19	53	13:45	60	313	78	241	554
02:00			11	4	14:00			90	62				
02:15			7	3	14:15			99	73				
02:30			7	4	14:30			106	53				
02:45			9	34	5	16	50	14:45	120	415	50	238	653
03:00			9	2	15:00			147	76				
03:15			3	4	15:15			158	77				
03:30			4	1	15:30			141	60				
03:45			4	20	5	12	32	15:45	135	581	55	268	849
04:00			3	11	16:00			159	84				
04:15			5	6	16:15			162	88				
04:30			4	8	16:30			148	80				
04:45			10	22	14	39	61	16:45	144	613	70	322	935
05:00			9	23	17:00			175	65				
05:15			5	25	17:15			135	66				
05:30			24	43	17:30			126	75				
05:45			23	61	46	137	198	17:45	101	537	84	290	827
06:00			31	16	18:00			98	90				
06:15			35	46	18:15			99	65				
06:30			34	49	18:30			80	66				
06:45			24	124	103	214	338	18:45	78	355	70	291	646
07:00			49	60	19:00			98	54				
07:15			48	92	19:15			80	40				
07:30			60	121	19:30			75	35				
07:45			90	247	105	378	625	19:45	65	318	33	162	480
08:00			84	107	20:00			45	30				
08:15			68	84	20:15			50	28				
08:30			50	73	20:30			44	22				
08:45			82	284	59	323	607	20:45	48	187	26	106	293
09:00			60	50	21:00			51	21				
09:15			48	53	21:15			60	23				
09:30			75	45	21:30			48	25				
09:45			70	253	68	216	469	21:45	44	203	24	93	296
10:00			65	46	22:00			35	18				
10:15			81	27	22:15			28	11				
10:30			84	52	22:30			26	17				
10:45			87	317	44	169	486	22:45	33	122	9	55	177
11:00			56	64	23:00			35	12				
11:15			88	40	23:15			29	16				
11:30			103	37	23:30			20	11				
11:45			79	326	64	205	531	23:45	23	107	15	54	161

**Total Vol.** 1799 1743 **3542** 4164 2314 **6478**

		Daily Totals		
NB	SB	EB	WB	Combined
		5963	4057	<b>10020</b>

Split %	AM			PM		
	50.8%	49.2%	<b>35.3%</b>	64.3%	35.7%	<b>64.7%</b>

<b>Peak Hour</b>	11:30	07:15	<b>07:30</b>	16:15	16:00	<b>16:00</b>
<b>Volume</b>	398	425	<b>719</b>	629	322	<b>935</b>
<b>P.H.F.</b>	0.91	0.88	<b>0.92</b>	0.90	0.91	<b>0.94</b>

*CITY OF SAN DIEGO - TRAFFIC ENGINEERING*

*Machine Count Traffic Volumes - City Street*

*All From Dates 1/1/2002 to 1/2/2013*

1/2/2013

Page 525

STREET NAME	LIMITS	BLOCK NOS.	STATION NUMBER	DIRECTION	WK-DAY VOLUME	STARTING DATE	FILE NUMBER	
NATIONAL AV	[28 ST - 29 ST]	02800 - 02900	2059	WEST	:	5620	10/8/2009	MC0672-0
				*TOTAL	:	12550		
				EAST	:	6653	9/25/2012	MC0808-1
				WEST	:	7429	9/25/2012	MC0808-1
				*TOTAL	:	14082		
NATIONAL AV	[29 ST - 30 ST]	02900 - 03000	2066	EAST	:	5505	7/20/2011	MC0633-1
				WEST	:	5780	7/20/2011	MC0633-1
				*TOTAL	:	11285		
NATIONAL AV	[30 ST - 31 ST]	03000 - 03100	2065	WEST	:	5450	11/21/2002	1209-02
				EAST	:	7600	11/26/2002	1208-02
				EAST	:	7530	11/3/2005	0684-05
				WEST	:	6880	11/3/2005	0684-05
				*TOTAL	:	14410		
				EAST	:	7170	12/2/2008	0570-08
				WEST	:	6555	12/2/2008	0570-08
				*TOTAL	:	13725		
				EAST	:	5530	11/9/2011	MC1161-1
				WEST	:	5415	11/9/2011	MC1161-1
*TOTAL	:	10945						
NATIONAL AV	[32 ST - 33 ST]	03200 - 03300	2067	EAST	:	4765	6/22/2010	MC0448-1
				WEST	:	4890	6/22/2010	MC0448-1
				*TOTAL	:	9655		
NATIONAL AV	[33 ST - 35 ST]	03300 - 03500	3001	EAST	:	6730	1/7/2003	0060-03
				WEST	:	6740	1/7/2003	0061-03
				*TOTAL	:	13470		
				EAST	:	5930	1/17/2006	0002-06
				WEST	:	6410	1/17/2006	0002-06
				*TOTAL	:	12340		
				EAST	:	5330	1/15/2009	MC0017-0
				WEST	:	5440	1/15/2009	MC0017-0
				*TOTAL	:	10770		

**CITY OF SAN DIEGO - TRAFFIC ENGINEERING**

**Machine Count Traffic Volumes - City Street**

*All From Dates 1/1/2002 to 1/2/2013*

**1/2/2013**

**Page 526**

STREET NAME	LIMITS	BLOCK NOS.	STATION NUMBER	DIRECTION	WK-DAY VOLUME	STARTING DATE	FILE NUMBER
NATIONAL AV	[33 ST - 35 ST]	03300 - 03500	3001	EAST	: 5165	1/31/2012	MC0040-1
				WEST	: 5210	1/31/2012	MC0040-1
				*TOTAL	: 10375		
NATIONAL AV	[37 ST - 38 ST]	03700 - 03800	2069	EAST	: 5265	6/22/2010	MC0449-1
				WEST	: 5285	6/22/2010	MC0449-1
				*TOTAL	: 10550		
NATIONAL AV	[39 ST - 40 ST]	03900 - 04000	3000	BOTH	: 11960	1/6/2004	0002-04
				EAST	: 6030	1/18/2007	0017-07
				WEST	: 5630	1/18/2007	0017-07
				*TOTAL	: 11660		
				EAST	: 5575	1/28/2010	MC0003-1
				WEST	: 5455	1/28/2010	MC0003-1
*TOTAL	: 11030						
NATIONAL AV	[41 ST - 43 ST]	04100 - 04299	2994	EAST	: 5870	10/28/2004	0864-04
				WEST	: 6660	10/28/2004	0864-04
				*TOTAL	: 12530		
NAUTILUS ST	[NEPTUNE PL - LA JOLLA BL]	00200 - 00500	1500	EAST	: 1460	11/9/2004	0821-04
				WEST	: 1190	11/9/2004	0821-04
				*TOTAL	: 2650		
NAUTILUS ST	[LA JOLLA BL - DRAPER AV]	00500 - 00700	1392	EAST	: 3030	6/15/2010	MC0450-1
				WEST	: 3100	6/15/2010	MC0450-1
				*TOTAL	: 6130		
NAUTILUS ST	[ARANDA AV - AV MIROLA]	01000 - 01050	1390	EAST	: 5350	7/27/2006	0285-06
				WEST	: 4020	7/27/2006	0285-06
				*TOTAL	: 9370		
				EAST	: 4525	7/2/2009	MC0466-0
				WEST	: 4015	7/2/2009	MC0466-0
				*TOTAL	: 8540		
EAST	: 5754	6/12/2012	MC0494-1				

THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

NATIONAL BTN 35TH & 38TH

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			10	16	12:00			70	95			
00:15			12	12	12:15			75	61			
00:30			8	24	12:30			72	83			
00:45			9	39	18	70	109	73	290	77	316	606
01:00			10	6	13:00			83	93			
01:15			5	16	13:15			76	56			
01:30			4	15	13:30			84	96			
01:45			6	25	10	47	72	107	350	77	322	672
02:00			5	10	14:00			78	93			
02:15			4	6	14:15			74	72			
02:30			4	6	14:30			82	73			
02:45			2	15	6	28	43	108	342	75	313	655
03:00			3	3	15:00			138	120			
03:15			2	8	15:15			146	79			
03:30			1	9	15:30			135	96			
03:45			4	10	9	29	39	131	550	78	373	923
04:00			6	15	16:00			135	75			
04:15			5	10	16:15			135	98			
04:30			5	10	16:30			168	95			
04:45			1	17	23	58	75	120	558	70	338	896
05:00			9	29	17:00			143	93			
05:15			8	29	17:15			177	114			
05:30			12	59	17:30			158	92			
05:45			11	40	66	183	223	150	628	82	381	1009
06:00			18	55	18:00			140	83			
06:15			21	78	18:15			134	72			
06:30			22	81	18:30			108	70			
06:45			29	90	112	326	416	119	501	75	300	801
07:00			33	101	19:00			93	70			
07:15			26	126	19:15			86	66			
07:30			40	156	19:30			84	70			
07:45			42	141	159	542	683	77	340	55	261	601
08:00			73	180	20:00			68	41			
08:15			69	122	20:15			60	68			
08:30			48	123	20:30			54	66			
08:45			45	235	84	509	744	55	237	54	229	466
09:00			74	82	21:00			50	50			
09:15			52	73	21:15			43	42			
09:30			58	52	21:30			35	35			
09:45			50	234	64	271	505	33	161	41	168	329
10:00			43	75	22:00			30	28			
10:15			50	63	22:15			31	22			
10:30			51	52	22:30			28	26			
10:45			56	200	66	256	456	27	116	19	95	211
11:00			63	67	23:00			30	26			
11:15			63	58	23:15			22	18			
11:30			70	64	23:30			15	21			
11:45			78	274	67	256	530	19	86	20	85	171

**Total Vol.** 1320 2575 **3895** 4159 3181 **7340**

		Daily Totals		
NB	SB	EB	WB	Combined
		5479	5756	11235

Split %	AM			PM		
	33.9%	66.1%	34.7%	56.7%	43.3%	65.3%

<b>Peak Hour</b>	11:45	07:15	<b>07:30</b>	17:00	17:00	<b>17:00</b>
<b>Volume</b>	295	621	<b>841</b>	628	381	<b>1009</b>
<b>P.H.F.</b>	0.95	0.86	<b>0.83</b>	0.89	0.84	<b>0.87</b>

WEDNESDAY - OCTOBER 31, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

NATIONAL BTN 38TH & 40TH

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			12	10	12:00			77	50			
00:15			18	11	12:15			51	66			
00:30			9	9	12:30			68	70			
00:45			10	49	7	37	86	77	273	62	248	521
01:00			5	6	13:00			59	51			
01:15			4	9	13:15			67	68			
01:30			9	5	13:30			62	70			
01:45			9	27	5	25	52	84	272	84	273	545
02:00			5	7	14:00			81	70			
02:15			4	9	14:15			88	65			
02:30			9	5	14:30			92	77			
02:45			5	23	4	25	48	103	364	108	320	684
03:00			4	4	15:00			121	84			
03:15			6	8	15:15			141	90			
03:30			6	8	15:30			136	99			
03:45			9	25	5	25	50	129	527	84	357	884
04:00			5	6	16:00			148	80			
04:15			4	2	16:15			136	70			
04:30			2	3	16:30			121	89			
04:45			3	14	5	16	30	151	556	62	301	857
05:00			5	18	17:00			177	78			
05:15			4	35	17:15			162	90			
05:30			12	41	17:30			115	66			
05:45			18	39	44	138	177	126	580	67	301	881
06:00			20	62	18:00			108	84			
06:15			22	74	18:15			121	82			
06:30			35	84	18:30			106	79			
06:45			44	121	90	310	431	114	449	89	334	783
07:00			51	121	19:00			90	70			
07:15			66	135	19:15			84	75			
07:30			60	168	19:30			74	78			
07:45			75	252	141	565	817	65	313	60	283	596
08:00			65	116	20:00			55	52			
08:15			54	108	20:15			58	55			
08:30			44	113	20:30			54	40			
08:45			60	223	84	421	644	40	207	35	182	389
09:00			54	77	21:00			35	31			
09:15			48	68	21:15			28	28			
09:30			59	59	21:30			44	26			
09:45			66	227	70	274	501	41	148	19	104	252
10:00			70	77	22:00			30	26			
10:15			62	65	22:15			28	20			
10:30			68	48	22:30			19	19			
10:45			70	270	70	260	530	20	97	22	87	184
11:00			55	54	23:00			18	23			
11:15			59	67	23:15			26	17			
11:30			62	59	23:30			22	25			
11:45			44	220	66	246	466	18	84	15	80	164

**Total Vol.** 1490 2342 **3832** 3870 2870 **6740**

		Daily Totals		
NB	SB	EB	WB	Combined
		5360	5212	<b>10572</b>

Split %	AM			PM		
	38.9%	61.1%	<b>36.2%</b>	57.4%	42.6%	<b>63.8%</b>

<b>Peak Hour</b>	10:00	07:00	<b>07:15</b>	16:30	14:45	<b>16:30</b>
<b>Volume</b>	270	565	<b>826</b>	611	381	<b>930</b>
<b>P.H.F.</b>	0.96	0.84	<b>0.91</b>	0.86	0.88	<b>0.91</b>



THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

NATIONAL BTN 40TH & 41ST

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			7	14	12:00			89	74			
00:15			13	13	12:15			64	83			
00:30			6	12	12:30			71	87			
00:45			10	36	11	50	86	83	307	82	326	633
01:00			11	8	13:00			77	77			
01:15			4	7	13:15			71	90			
01:30			6	4	13:30			72	81			
01:45			5	26	11	30	56	75	295	78	326	621
02:00			5	3	14:00			88	83			
02:15			5	6	14:15			87	88			
02:30			7	8	14:30			105	99			
02:45			3	20	5	22	42	115	395	79	349	744
03:00			5	8	15:00			103	95			
03:15			6	3	15:15			121	77			
03:30			3	4	15:30			135	68			
03:45			3	17	7	22	39	141	500	58	298	798
04:00			1	7	16:00			126	79			
04:15			2	12	16:15			144	95			
04:30			5	12	16:30			141	84			
04:45			7	15	20	51	66	132	543	90	348	891
05:00			8	17	17:00			168	91			
05:15			7	23	17:15			141	78			
05:30			12	35	17:30			122	66			
05:45			16	43	37	112	155	134	565	68	303	868
06:00			21	43	18:00			114	70			
06:15			32	55	18:15			108	68			
06:30			36	83	18:30			121	74			
06:45			50	139	106	287	426	106	449	54	266	715
07:00			37	103	19:00			98	59			
07:15			48	128	19:15			88	56			
07:30			63	162	19:30			70	60			
07:45			56	204	155	548	752	54	310	52	227	537
08:00			82	173	20:00			44	48			
08:15			64	126	20:15			35	51			
08:30			47	96	20:30			41	44			
08:45			63	256	94	489	745	51	171	35	178	349
09:00			58	90	21:00			28	41			
09:15			61	77	21:15			33	28			
09:30			52	75	21:30			31	30			
09:45			58	229	77	319	548	27	119	27	126	245
10:00			67	86	22:00			20	22			
10:15			48	85	22:15			19	19			
10:30			54	63	22:30			24	26			
10:45			72	241	77	311	552	19	82	20	87	169
11:00			64	75	23:00			15	18			
11:15			56	81	23:15			11	20			
11:30			83	88	23:30			18	15			
11:45			63	266	78	322	588	19	63	9	62	125

**Total Vol.** 1492 2563 **4055** 3799 2896 **6695**

Daily Totals				
NB	SB	EB	WB	Combined
		5291	5459	<b>10750</b>

Split %	AM			PM		
	NB	SB	Combined	NB	SB	Combined
	36.8%	63.2%	<b>37.7%</b>	56.7%	43.3%	<b>62.3%</b>

Peak Hour	NB	SB	Combined	NB	SB	Combined
	11:30	07:15	<b>07:30</b>	16:15	14:15	<b>16:15</b>
Volume	299	618	<b>881</b>	585	361	<b>945</b>
P.H.F.	0.84	0.89	<b>0.86</b>	0.87	0.91	<b>0.91</b>

NATIONAL BTN 41ST & 43RD

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			10	9	12:00			85	71			
00:15			9	7	12:15			65	57			
00:30			7	2	12:30			68	63			
00:45			7	33	6	24	57	79	297	57	248	545
01:00			7	5	13:00			84	68			
01:15			4	1	13:15			85	68			
01:30			4	9	13:30			77	67			
01:45			5	20	6	21	41	74	320	89	292	612
02:00			8	5	14:00			84	73			
02:15			5	4	14:15			78	79			
02:30			4	5	14:30			76	69			
02:45			8	25	4	18	43	75	313	91	312	625
03:00			6	7	15:00			82	72			
03:15			2	0	15:15			88	92			
03:30			5	5	15:30			130	102			
03:45			3	16	6	18	34	135	435	76	342	777
04:00			6	10	16:00			121	88			
04:15			3	6	16:15			135	80			
04:30			5	17	16:30			128	69			
04:45			3	17	19	52	69	141	525	91	328	853
05:00			8	22	17:00			188	103			
05:15			14	43	17:15			162	88			
05:30			24	43	17:30			137	79			
05:45			29	75	39	147	222	121	608	80	350	958
06:00			20	50	18:00			157	87			
06:15			29	68	18:15			148	100			
06:30			60	79	18:30			140	86			
06:45			51	160	85	282	442	158	603	116	389	992
07:00			77	141	19:00			110	113			
07:15			51	159	19:15			126	89			
07:30			55	188	19:30			109	105			
07:45			78	261	152	640	901	75	420	93	400	820
08:00			69	135	20:00			88	90			
08:15			70	90	20:15			61	64			
08:30			77	88	20:30			81	59			
08:45			78	294	69	382	676	53	283	68	281	564
09:00			79	60	21:00			67	64			
09:15			53	72	21:15			52	60			
09:30			66	56	21:30			49	45			
09:45			44	242	57	245	487	37	205	59	228	433
10:00			46	55	22:00			39	46			
10:15			60	56	22:15			61	47			
10:30			71	66	22:30			39	36			
10:45			54	231	66	243	474	33	172	40	169	341
11:00			66	77	23:00			35	41			
11:15			60	59	23:15			46	27			
11:30			75	68	23:30			27	34			
11:45			64	265	70	274	539	32	140	25	127	267

**Total Vol.** 1639 2346 **3985** 4321 3466 **7787**

Split %	AM			PM		
	NB	SB	Combined	NB	SB	Combined
	41.1%	58.9%	<b>33.9%</b>	55.5%	44.5%	<b>66.1%</b>
<b>Peak Hour</b>	08:15	07:00	<b>07:00</b>	16:45	18:45	<b>18:00</b>
<b>Volume</b>	304	640	<b>901</b>	628	423	<b>992</b>
<b>P.H.F.</b>	0.96	0.85	<b>0.93</b>	0.84	0.91	<b>0.91</b>

LOGAN W-O 43RD

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			2	2	12:00			4	2			
00:15			0	0	12:15			3	2			
00:30			3	2	12:30			3	2			
00:45			0	5	0	4	9	3	13	0	6	19
01:00			2	2	13:00			2	4			
01:15			2	1	13:15			3	3			
01:30			0	1	13:30			2	5			
01:45			1	5	2	6	11	0	7	2	14	21
02:00			0	0	14:00			0	1			
02:15			0	0	14:15			5	3			
02:30			0	1	14:30			4	1			
02:45			0	0	1	2	2	3	12	5	10	22
03:00			0	0	15:00			1	4			
03:15			0	0	15:15			2	3			
03:30			0	0	15:30			1	7			
03:45			0	0	0	0		5	9	4	18	27
04:00			0	0	16:00			2	5			
04:15			0	0	16:15			2	3			
04:30			0	0	16:30			0	5			
04:45			0	0	0	0		2	6	1	14	20
05:00			0	1	17:00			4	2			
05:15			0	0	17:15			3	7			
05:30			3	0	17:30			6	4			
05:45			1	4	0	1	5	3	16	2	15	31
06:00			4	2	18:00			0	2			
06:15			0	1	18:15			8	6			
06:30			1	0	18:30			3	9			
06:45			0	5	0	3	8	9	20	1	18	38
07:00			2	4	19:00			3	3			
07:15			4	1	19:15			1	1			
07:30			5	2	19:30			6	3			
07:45			7	18	0	7	25	2	12	6	13	25
08:00			6	4	20:00			6	7			
08:15			4	2	20:15			4	2			
08:30			1	2	20:30			2	5			
08:45			5	16	0	8	24	0	12	1	15	27
09:00			4	2	21:00			2	3			
09:15			3	2	21:15			4	6			
09:30			0	3	21:30			0	3			
09:45			1	8	0	7	15	6	12	1	13	25
10:00			2	1	22:00			1	1			
10:15			1	2	22:15			0	1			
10:30			1	0	22:30			1	1			
10:45			6	10	3	6	16	1	3	1	4	7
11:00			2	5	23:00			0	0			
11:15			0	0	23:15			0	2			
11:30			0	0	23:30			1	1			
11:45			1	3	0	5	8	1	2	3	6	8

**Total Vol.** 74 49 123 124 146 270

		Daily Totals		
NB	SB	EB	WB	Combined
		198	195	393

Split %	AM			PM		
	60.2%	39.8%	31.3%	45.9%	54.1%	68.7%

Peak Hour	07:15	10:15	07:30	18:15	19:45	18:15
Volume	22	10	30	23	20	42
P.H.F.	0.79	0.50	0.75	0.64	0.71	0.75

28TH BTN LOGAN & NATIONAL

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB		
00:00	12	8			12:00	50	70				
00:15	13	9			12:15	61	62				
00:30	15	4			12:30	74	51				
00:45	13	53	5	26	79	12:45	68	253	55	238	491
01:00	7	2			13:00	59	60				
01:15	6	5			13:15	54	51				
01:30	5	2			13:30	48	68				
01:45	3	21	2	11	32	13:45	52	213	77	256	469
02:00	0	1			14:00	59	84				
02:15	3	4			14:15	68	70				
02:30	3	1			14:30	77	60				
02:45	6	12	4	10	22	14:45	78	282	66	280	562
03:00	3	2			15:00	54	78				
03:15	1	1			15:15	59	74				
03:30	1	3			15:30	77	84				
03:45	4	9	2	8	17	15:45	84	274	88	324	598
04:00	1	3			16:00	85	75				
04:15	2	4			16:15	81	92				
04:30	7	7			16:30	95	98				
04:45	5	15	13	27	42	16:45	77	338	70	335	673
05:00	9	9			17:00	56	90				
05:15	5	21			17:15	84	55				
05:30	8	17			17:30	82	68				
05:45	13	35	40	87	122	17:45	70	292	70	283	575
06:00	8	37			18:00	65	54				
06:15	23	32			18:15	59	55				
06:30	39	44			18:30	55	65				
06:45	52	122	58	171	293	18:45	65	244	62	236	480
07:00	34	43			19:00	48	58				
07:15	33	69			19:15	44	41				
07:30	66	78			19:30	52	35				
07:45	54	187	96	286	473	19:45	35	179	44	178	357
08:00	69	114			20:00	41	41				
08:15	65	75			20:15	27	51				
08:30	72	55			20:30	22	48				
08:45	77	283	55	299	582	20:45	26	116	35	175	291
09:00	76	68			21:00	20	28				
09:15	62	77			21:15	22	20				
09:30	53	78			21:30	22	19				
09:45	63	254	68	291	545	21:45	19	83	21	88	171
10:00	64	77			22:00	17	16				
10:15	55	84			22:15	15	18				
10:30	79	68			22:30	14	11				
10:45	59	257	77	306	563	22:45	17	63	19	64	127
11:00	71	54			23:00	12	11				
11:15	70	71			23:15	10	9				
11:30	70	72			23:30	11	10				
11:45	76	287	65	262	549	23:45	14	47	5	35	82

<b>Total Vol.</b>	1535	1784		<b>3319</b>		2384	2492			<b>4876</b>
-------------------	------	------	--	-------------	--	------	------	--	--	-------------

	Daily Totals		Combined	
	NB	SB	EB	WB
	3919	4276		<b>8195</b>

Split %	AM		PM	
	46.2%	53.8%	40.5%	59.5%

<b>Peak Hour</b>	08:15	07:30	<b>07:30</b>	15:45	15:45	<b>15:45</b>
<b>Volume</b>	290	363	<b>617</b>	345	353	<b>698</b>
<b>P.H.F.</b>	0.94	0.80	<b>0.84</b>	0.97	0.90	<b>0.90</b>

WEDNESDAY - OCTOBER 31, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

30TH BTN LOGAN & NATIONAL

AM Period				PM Period			
NB	SB	EB	WB	NB	SB	EB	WB
00:00	9	1		12:00	35	22	
00:15	6	4		12:15	58	39	
00:30	3	1		12:30	39	37	
00:45	8	26	2 8	12:45	45	177	31 129
01:00	3	1		13:00	37	42	
01:15	3	2		13:15	51	41	
01:30	1	1		13:30	47	33	
01:45	1	8	0 4	13:45	54	189	39 155
02:00	2	2		14:00	41	42	
02:15	1	0		14:15	45	46	
02:30	1	1		14:30	39	23	
02:45	2	6	0 3	14:45	39	164	41 152
03:00	2	0		15:00	54	37	
03:15	0	2		15:15	47	40	
03:30	2	1		15:30	55	38	
03:45	1	5	1 4	15:45	53	209	46 161
04:00	2	1		16:00	51	41	
04:15	2	0		16:15	39	40	
04:30	0	1		16:30	39	36	
04:45	4	8	3 5	16:45	55	184	51 168
05:00	4	4		17:00	50	41	
05:15	6	1		17:15	68	47	
05:30	6	9		17:30	48	55	
05:45	7	23	15 29	17:45	37	203	38 181
06:00	9	13		18:00	49	61	
06:15	12	10		18:15	45	41	
06:30	22	21		18:30	58	29	
06:45	22	65	27 71	18:45	40	192	41 172
07:00	26	34		19:00	37	25	
07:15	11	30		19:15	33	30	
07:30	44	29		19:30	28	21	
07:45	51	132	43 136	19:45	27	125	25 101
08:00	42	57		20:00	31	23	
08:15	31	36		20:15	34	22	
08:30	27	31		20:30	24	19	
08:45	28	128	23 147	20:45	33	122	12 76
09:00	33	20		21:00	36	22	
09:15	25	25		21:15	21	15	
09:30	33	42		21:30	37	20	
09:45	37	128	28 115	21:45	28	122	19 76
10:00	39	29		22:00	12	7	
10:15	30	26		22:15	31	20	
10:30	44	31		22:30	21	10	
10:45	35	148	36 122	22:45	18	82	3 40
11:00	32	21		23:00	20	7	
11:15	24	24		23:15	12	13	
11:30	44	44		23:30	9	7	
11:45	36	136	26 115	23:45	4	45	2 29
<b>Total Vol.</b>	<b>813</b>	<b>759</b>	<b>1572</b>		<b>1814</b>	<b>1440</b>	<b>3254</b>
					<b>NB</b>	<b>SB</b>	<b>Daily Totals</b>
					2627	2199	<b>EB</b> <b>WB</b> <b>Combined</b>
							4826
<b>Split %</b>	<b>51.7%</b>	<b>48.3%</b>	<b>32.6%</b>		<b>55.7%</b>	<b>44.3%</b>	<b>67.4%</b>
<b>Peak Hour</b>	11:30	07:45	<b>07:30</b>		16:45	17:15	<b>16:45</b>
<b>Volume</b>	173	167	<b>333</b>		221	201	<b>415</b>
<b>P.H.F.</b>	0.75	0.73	<b>0.84</b>		0.89	0.82	<b>0.90</b>

THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

32TH BTN LOGAN & NATIONAL

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	7	7			12:00	26	39		
00:15	5	6			12:15	26	36		
00:30	5	2			12:30	35	49		
00:45	4	21	8	23	12:45	44	131	62	186
01:00	2	4			13:00	32	63		
01:15	6	6			13:15	21	37		
01:30	3	4			13:30	28	35		
01:45	0	11	1	15	13:45	36	117	50	185
02:00	2	3			14:00	26	30		
02:15	2	1			14:15	29	43		
02:30	1	2			14:30	34	50		
02:45	0	5	2	8	14:45	36	125	40	163
03:00	0	4			15:00	31	48		
03:15	0	1			15:15	44	60		
03:30	1	2			15:30	41	57		
03:45	2	3	3	10	15:45	29	145	40	205
04:00	2	8			16:00	33	57		
04:15	1	3			16:15	29	58		
04:30	3	3			16:30	25	38		
04:45	4	10	6	20	16:45	44	131	66	219
05:00	4	15			17:00	26	50		
05:15	6	13			17:15	36	50		
05:30	6	22			17:30	31	55		
05:45	16	32	34	84	17:45	34	127	55	210
06:00	7	29			18:00	27	38		
06:15	14	37			18:15	26	42		
06:30	17	38			18:30	21	34		
06:45	17	55	41	145	18:45	28	102	46	160
07:00	8	35			19:00	22	33		
07:15	16	29			19:15	25	34		
07:30	19	27			19:30	20	31		
07:45	25	68	27	118	19:45	19	86	28	126
08:00	26	45			20:00	18	22		
08:15	28	42			20:15	22	26		
08:30	39	73			20:30	16	19		
08:45	15	108	28	188	20:45	19	75	26	93
09:00	16	25			21:00	11	25		
09:15	23	31			21:15	15	21		
09:30	14	26			21:30	9	18		
09:45	18	71	29	111	21:45	10	45	11	75
10:00	17	36			22:00	12	9		
10:15	22	28			22:15	14	10		
10:30	15	27			22:30	19	14		
10:45	16	70	36	127	22:45	11	56	12	45
11:00	21	33			23:00	8	16		
11:15	18	32			23:15	9	11		
11:30	25	46			23:30	10	14		
11:45	29	93	38	149	23:45	7	34	15	56

**Total Vol.** 547 998 **1545** 1174 1723 **2897**

		Daily Totals				
		NB	SB	EB	WB	Combined
		1721	2721			4442

Split %	AM		34.8%	PM		65.2%
	35.4%	64.6%		40.5%	59.5%	

<b>Peak Hour</b>	07:45	08:00	<b>07:45</b>	14:45	16:45	<b>15:15</b>
<b>Volume</b>	118	188	<b>305</b>	152	221	<b>361</b>
<b>P.H.F.</b>	0.76	0.64	<b>0.68</b>	0.88	0.84	<b>0.87</b>

THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

35TH BTN NATIONAL & NEWTON

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	1	1			12:00	14	20		
00:15	2	0			12:15	19	22		
00:30	0	1			12:30	20	16		
00:45	2	5	1	3	12:45	22	75	18	76
01:00	1	1			13:00	26	20		
01:15	1	3			13:15	21	10		
01:30	2	0			13:30	22	19		
01:45	3	7	1	5	13:45	32	101	22	71
02:00	0	2			14:00	25	15		
02:15	2	1			14:15	18	11		
02:30	1	0			14:30	26	17		
02:45	1	4	1	4	14:45	22	91	19	62
03:00	1	1			15:00	17	23		
03:15	0	2			15:15	10	22		
03:30	1	0			15:30	18	25		
03:45	0	2	1	4	15:45	26	71	20	90
04:00	0	1			16:00	21	17		
04:15	1	1			16:15	23	35		
04:30	1	1			16:30	22	41		
04:45	2	4	0	3	16:45	35	101	25	118
05:00	3	0			17:00	35	44		
05:15	1	4			17:15	24	26		
05:30	2	2			17:30	22	24		
05:45	1	7	3	9	17:45	30	111	21	115
06:00	4	5			18:00	15	18		
06:15	5	5			18:15	17	20		
06:30	6	4			18:30	19	22		
06:45	6	21	9	23	18:45	20	71	17	77
07:00	18	18			19:00	15	23		
07:15	26	11			19:15	18	11		
07:30	33	19			19:30	7	9		
07:45	41	118	22	70	19:45	9	49	9	52
08:00	26	26			20:00	12	10		
08:15	22	17			20:15	5	5		
08:30	30	28			20:30	5	4		
08:45	37	115	25	96	20:45	4	26	6	25
09:00	33	21			21:00	9	4		
09:15	26	19			21:15	5	2		
09:30	28	20			21:30	4	3		
09:45	31	118	16	76	21:45	0	18	2	11
10:00	25	11			22:00	4	1		
10:15	22	15			22:15	2	4		
10:30	26	12			22:30	1	2		
10:45	19	92	11	49	22:45	4	11	0	7
11:00	22	7			23:00	2	1		
11:15	26	15			23:15	4	0		
11:30	11	18			23:30	2	1		
11:45	17	76	17	57	23:45	1	9	1	3
<b>Total Vol.</b>	569	399			<b>968</b>	734	707		<b>1441</b>
								<b>Daily Totals</b>	
						NB	SB	EB	WB
						1303	1106		
									<b>Combined</b>
									<b>2409</b>
<b>Split %</b>		<b>AM</b>				<b>PM</b>			
	58.8%	41.2%		<b>40.2%</b>	50.9%	49.1%			<b>59.8%</b>
<b>Peak Hour</b>	07:15	08:00		<b>08:30</b>	16:30	16:15			<b>16:15</b>
<b>Volume</b>	126	96		<b>219</b>	116	145			<b>260</b>
<b>P.H.F.</b>	0.77	0.86		<b>0.88</b>	0.91	0.82			<b>0.82</b>

36TH BTN NATIONAL & NEWTON

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	4	2			12:00	8	3		
00:15	1	1			12:15	13	13		
00:30	2	2			12:30	10	6		
00:45	0	7	0	5	12:45	9	40	12	34
01:00	0	1			13:00	11	9		
01:15	1	1			13:15	10	3		
01:30	0	1			13:30	7	2		
01:45	0	1	2	5	13:45	9	37	9	23
02:00	0	0			14:00	9	10		
02:15	0	1			14:15	6	8		
02:30	0	1			14:30	17	13		
02:45	1	1	1	3	14:45	17	49	12	43
03:00	0	0			15:00	13	17		
03:15	0	1			15:15	15	11		
03:30	0	1			15:30	14	19		
03:45	1	1	0	2	15:45	27	69	29	76
04:00	1	0			16:00	22	15		
04:15	2	0			16:15	19	28		
04:30	5	2			16:30	18	28		
04:45	0	8	4	6	16:45	13	72	22	93
05:00	1	1			17:00	18	22		
05:15	0	2			17:15	20	28		
05:30	2	3			17:30	25	21		
05:45	9	12	3	9	17:45	15	78	33	104
06:00	4	4			18:00	20	22		
06:15	4	2			18:15	11	12		
06:30	13	4			18:30	18	12		
06:45	19	40	7	17	18:45	13	62	6	52
07:00	20	4			19:00	13	12		
07:15	15	5			19:15	16	9		
07:30	33	15			19:30	14	9		
07:45	35	103	12	36	19:45	7	50	13	43
08:00	10	7			20:00	7	4		
08:15	9	15			20:15	9	13		
08:30	11	20			20:30	9	9		
08:45	11	41	33	75	20:45	8	33	7	33
09:00	18	31			21:00	6	5		
09:15	12	7			21:15	6	7		
09:30	5	1			21:30	7	4		
09:45	10	45	6	45	21:45	6	25	8	24
10:00	6	5			22:00	3	10		
10:15	7	6			22:15	3	3		
10:30	7	7			22:30	2	3		
10:45	7	27	4	22	22:45	2	10	3	19
11:00	9	7			23:00	4	3		
11:15	8	11			23:15	0	2		
11:30	6	5			23:30	4	1		
11:45	6	29	7	30	23:45	2	10	1	7

<b>Total Vol.</b>	315	255		<b>570</b>		535	551		<b>1086</b>
-------------------	-----	-----	--	------------	--	-----	-----	--	-------------

					Daily Totals				
					NB	SB	EB	WB	Combined
					850	806			1656

Split %	AM			PM		
	55.3%	44.7%	34.4%	49.3%	50.7%	65.6%

<b>Peak Hour</b>	07:00	08:15		<b>08:15</b>	15:45	17:00		<b>15:45</b>
<b>Volume</b>	103	99		<b>148</b>	86	104		<b>186</b>
<b>P.H.F.</b>	0.74	0.75		<b>0.76</b>	0.81	0.79		<b>0.83</b>



THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

37TH BTN LOGAN & NATIONAL

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	2	2			12:00	10	1		
00:15	3	0			12:15	8	10		
00:30	7	6			12:30	13	11		
00:45	3	15	0	8	12:45	7	38	9	31
01:00	4	4			13:00	7	4		
01:15	1	0			13:15	7	9		
01:30	1	2			13:30	9	16		
01:45	0	6	1	7	13:45	10	33	9	38
02:00	2	0			14:00	10	10		
02:15	1	1			14:15	3	8		
02:30	1	0			14:30	9	10		
02:45	0	4	1	2	14:45	10	32	4	32
03:00	0	0			15:00	11	8		
03:15	0	1			15:15	18	17		
03:30	0	0			15:30	7	15		
03:45	2	2	1	2	15:45	9	45	9	49
04:00	0	0			16:00	20	9		
04:15	0	1			16:15	12	8		
04:30	2	1			16:30	15	13		
04:45	2	4	0	2	16:45	21	68	10	40
05:00	2	2			17:00	21	13		
05:15	3	0			17:15	13	13		
05:30	1	2			17:30	13	14		
05:45	2	8	2	6	17:45	20	67	16	56
06:00	8	4			18:00	10	12		
06:15	4	4			18:15	7	15		
06:30	5	8			18:30	11	14		
06:45	9	26	13	29	18:45	12	40	9	50
07:00	7	5			19:00	9	20		
07:15	9	6			19:15	7	7		
07:30	5	8			19:30	8	10		
07:45	11	32	8	27	19:45	9	33	10	47
08:00	16	7			20:00	15	6		
08:15	17	11			20:15	9	8		
08:30	12	6			20:30	11	10		
08:45	6	51	9	33	20:45	7	42	14	38
09:00	21	12			21:00	7	9		
09:15	13	10			21:15	9	19		
09:30	9	14			21:30	10	6		
09:45	4	47	8	44	21:45	7	33	6	40
10:00	11	4			22:00	4	7		
10:15	9	6			22:15	3	2		
10:30	13	9			22:30	1	5		
10:45	11	44	13	32	22:45	1	9	2	16
11:00	13	5			23:00	3	4		
11:15	8	6			23:15	1	1		
11:30	8	3			23:30	1	3		
11:45	10	39	3	17	23:45	4	9	5	13

**Total Vol.** 278 209 **487** 449 450 **899**

		Daily Totals				
		NB	SB	EB	WB	Combined
		727	659			1386

Split %	AM			PM		
	57.1%	42.9%	35.1%	49.9%	50.1%	64.9%

<b>Peak Hour</b>	07:45	08:45	<b>08:15</b>	16:30	18:15	<b>17:00</b>
<b>Volume</b>	56	45	<b>94</b>	70	58	<b>123</b>
<b>P.H.F.</b>	0.82	0.80	<b>0.71</b>	0.93	0.73	<b>0.85</b>

37TH BTN NATIONAL & NEWTON

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	1	1			12:00	6	8		
00:15	1	3			12:15	5	6		
00:30	1	3			12:30	9	6		
00:45	1	4	3	10	12:45	3	23	5	25
01:00	1	0			13:00	8	9		48
01:15	0	1			13:15	5	7		
01:30	0	0			13:30	9	9		
01:45	1	2	1	2	13:45	8	30	13	38
02:00	0	0			14:00	6	12		68
02:15	1	2			14:15	4	7		
02:30	3	2			14:30	3	6		
02:45	0	4	1	5	14:45	5	18	13	38
03:00	0	2			15:00	7	14		56
03:15	1	2			15:15	6	17		
03:30	1	1			15:30	9	10		
03:45	0	2	0	5	15:45	10	32	11	52
04:00	1	0			16:00	12	22		84
04:15	1	0			16:15	15	28		
04:30	3	1			16:30	9	19		
04:45	6	11	3	4	16:45	9	45	22	91
05:00	1	0			17:00	8	26		136
05:15	3	2			17:15	9	18		
05:30	5	2			17:30	10	21		
05:45	4	13	1	5	17:45	12	39	15	80
06:00	5	3			18:00	15	16		119
06:15	4	3			18:15	15	11		
06:30	14	11			18:30	13	18		
06:45	9	32	13	30	18:45	10	53	14	59
07:00	10	9			19:00	13	16		112
07:15	15	10			19:15	9	16		
07:30	6	7			19:30	7	11		
07:45	7	38	15	41	19:45	9	38	6	49
08:00	9	9			20:00	7	9		87
08:15	9	9			20:15	14	8		
08:30	10	8			20:30	6	15		
08:45	8	36	5	31	20:45	5	32	6	38
09:00	7	11			21:00	7	10		70
09:15	4	9			21:15	9	12		
09:30	4	9			21:30	1	7		
09:45	11	26	8	37	21:45	3	20	3	32
10:00	6	8			22:00	4	8		52
10:15	1	8			22:15	4	5		
10:30	8	4			22:30	2	1		
10:45	5	20	8	28	22:45	3	13	1	15
11:00	5	6			23:00	1	4		28
11:15	3	11			23:15	1	1		
11:30	7	7			23:30	2	3		
11:45	4	19	12	36	23:45	0	4	1	9
<b>Total Vol.</b>	<b>207</b>	<b>234</b>		<b>441</b>		<b>347</b>	<b>526</b>		<b>873</b>
								<b>Daily Totals</b>	
						<b>NB</b>	<b>SB</b>	<b>EB</b>	<b>WB</b>
						554	760		<b>1314</b>
								<b>PM</b>	
<b>Split %</b>	<b>46.9%</b>	<b>53.1%</b>		<b>33.6%</b>		<b>39.7%</b>	<b>60.3%</b>		<b>66.4%</b>
<b>Peak Hour</b>	<b>06:30</b>	<b>06:30</b>		<b>06:30</b>		<b>17:45</b>	<b>16:15</b>		<b>16:00</b>
<b>Volume</b>	<b>48</b>	<b>43</b>		<b>91</b>		<b>55</b>	<b>95</b>		<b>136</b>
<b>P.H.F.</b>	<b>0.80</b>	<b>0.83</b>		<b>0.91</b>		<b>0.95</b>	<b>0.85</b>		<b>0.79</b>

38TH BTN NATIONAL & NEWTON

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	2	3			12:00	31	16		
00:15	3	1			12:15	37	18		
00:30	1	1			12:30	22	33		
00:45	6	12	2	7	12:45	24	114	28	95
01:00	3	0			13:00	26	18		
01:15	2	0			13:15	32	19		
01:30	1	2			13:30	33	38		
01:45	2	8	0	2	13:45	26	117	21	96
02:00	4	2			14:00	41	26		
02:15	1	0			14:15	32	32		
02:30	1	0			14:30	22	29		
02:45	1	7	1	3	14:45	26	121	24	111
03:00	2	0			15:00	41	40		
03:15	3	0			15:15	35	27		
03:30	4	3			15:30	25	52		
03:45	1	10	1	4	15:45	22	123	27	146
04:00	1	1			16:00	33	48		
04:15	4	3			16:15	40	55		
04:30	5	3			16:30	45	48		
04:45	4	14	2	9	16:45	41	159	41	192
05:00	2	1			17:00	28	56		
05:15	5	0			17:15	41	55		
05:30	12	6			17:30	44	69		
05:45	17	36	6	13	17:45	36	149	63	243
06:00	15	7			18:00	40	61		
06:15	18	4			18:15	35	52		
06:30	27	9			18:30	44	32		
06:45	46	106	20	40	18:45	41	160	46	191
07:00	34	15			19:00	35	42		
07:15	43	28			19:15	23	37		
07:30	44	22			19:30	28	33		
07:45	69	190	26	91	19:45	32	118	43	155
08:00	41	23			20:00	19	21		
08:15	33	27			20:15	26	10		
08:30	31	18			20:30	22	24		
08:45	36	141	33	101	20:45	18	85	29	84
09:00	55	29			21:00	26	18		
09:15	42	28			21:15	20	20		
09:30	50	28			21:30	19	8		
09:45	46	193	22	107	21:45	22	87	21	67
10:00	32	16			22:00	19	9		
10:15	32	25			22:15	17	10		
10:30	36	15			22:30	19	12		
10:45	44	144	26	82	22:45	15	70	8	39
11:00	58	31			23:00	13	4		
11:15	55	30			23:15	9	4		
11:30	39	19			23:30	12	7		
11:45	28	180	17	97	23:45	7	41	4	19

**Total Vol.** 1041 556 **1597** 1344 1438 **2782**

Daily Totals				Combined
NB	SB	EB	WB	
2385	1994			4379

Split %	AM			PM		
	65.2%	34.8%	36.5%	48.3%	51.7%	63.5%

<b>Peak Hour</b>	07:15	08:45	<b>10:45</b>	17:15	17:15	<b>17:15</b>
<b>Volume</b>	197	118	<b>302</b>	161	248	<b>409</b>
<b>P.H.F.</b>	0.71	0.89	<b>0.85</b>	0.89	0.90	<b>0.90</b>

40TH BTN LOGAN & NATIONAL

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	1	0			12:00	5	4		
00:15	2	1			12:15	4	3		
00:30	3	2			12:30	8	6		
00:45	1	7	0	3	12:45	9	26	6	19
01:00	1	0			13:00	7	3		
01:15	0	0			13:15	8	6		
01:30	0	0			13:30	9	3		
01:45	2	3	0	0	13:45	10	34	5	17
02:00	2	1			14:00	11	7		
02:15	0	0			14:15	9	6		
02:30	0	0			14:30	17	8		
02:45	1	3	0	1	14:45	10	47	7	28
03:00	0	0			15:00	7	9		
03:15	2	0			15:15	9	5		
03:30	1	1			15:30	5	4		
03:45	0	3	0	1	15:45	4	25	5	23
04:00	1	1			16:00	4	5		
04:15	0	0			16:15	5	6		
04:30	1	0			16:30	11	5		
04:45	0	2	0	1	16:45	6	26	4	20
05:00	1	0			17:00	10	4		
05:15	3	3			17:15	5	6		
05:30	2	0			17:30	6	5		
05:45	1	7	1	4	17:45	5	26	5	20
06:00	1	1			18:00	4	4		
06:15	3	1			18:15	3	7		
06:30	9	3			18:30	9	3		
06:45	4	17	4	9	18:45	4	20	4	18
07:00	14	11			19:00	2	2		
07:15	11	7			19:15	5	3		
07:30	9	10			19:30	4	2		
07:45	4	38	5	33	19:45	5	16	1	8
08:00	6	5			20:00	3	4		
08:15	5	5			20:15	3	1		
08:30	4	7			20:30	1	2		
08:45	13	28	7	24	20:45	1	8	1	8
09:00	3	3			21:00	1	5		
09:15	2	5			21:15	0	4		
09:30	5	6			21:30	1	1		
09:45	8	18	8	22	21:45	4	6	2	12
10:00	7	8			22:00	1	1		
10:15	3	2			22:15	2	0		
10:30	9	4			22:30	1	0		
10:45	3	22	2	16	22:45	0	4	1	2
11:00	4	3			23:00	1	0		
11:15	8	6			23:15	1	1		
11:30	7	2			23:30	2	0		
11:45	9	28	2	13	23:45	3	7	1	2

**Total Vol.** 176 127 **303** 245 177 **422**

		Daily Totals					
		NB	SB	EB	WB	Combined	
		421	304			725	

Split %	AM			PM		
	58.1%	41.9%	41.8%	58.1%	41.9%	58.2%

<b>Peak Hour</b>	06:30	07:00	<b>07:00</b>	13:45	14:15	<b>14:00</b>
<b>Volume</b>	38	33	<b>71</b>	47	30	<b>75</b>
<b>P.H.F.</b>	0.68	0.75	<b>0.71</b>	0.89	0.83	<b>0.75</b>

40TH BTN NATIONAL & NEWTON

AM Period					PM Period						
NB	SB	EB	WB		NB	SB	EB	WB			
00:00	0	1			12:00	19	15				
00:15	1	0			12:15	22	13				
00:30	0	0			12:30	26	12				
00:45	1	2	1	2	4	12:45	21	88	11	51	139
01:00	2	2			13:00	20	9				
01:15	1	0			13:15	18	19				
01:30	1	0			13:30	11	10				
01:45	1	5	1	3	8	13:45	16	65	16	54	119
02:00	0	1			14:00	20	11				
02:15	1	2			14:15	19	16				
02:30	2	1			14:30	17	21				
02:45	1	4	0	4	8	14:45	15	71	25	73	144
03:00	1	0			15:00	11	11				
03:15	0	1			15:15	16	16				
03:30	2	0			15:30	20	20				
03:45	1	4	1	2	6	15:45	19	66	18	65	131
04:00	1	2			16:00	20	28				
04:15	0	1			16:15	18	30				
04:30	1	2			16:30	25	20				
04:45	2	4	0	5	9	16:45	20	83	19	97	180
05:00	4	4			17:00	19	23				
05:15	4	4			17:15	22	33				
05:30	3	5			17:30	21	20				
05:45	5	16	6	19	35	17:45	20	82	22	98	180
06:00	4	15			18:00	22	15				
06:15	9	11			18:15	12	9				
06:30	11	16			18:30	11	12				
06:45	18	42	20	62	104	18:45	19	64	13	49	113
07:00	22	18			19:00	4	11				
07:15	20	22			19:15	9	16				
07:30	31	20			19:30	9	9				
07:45	28	101	19	79	180	19:45	5	27	10	46	73
08:00	22	20			20:00	4	5				
08:15	20	15			20:15	6	4				
08:30	19	11			20:30	4	5				
08:45	10	71	12	58	129	20:45	1	15	6	20	35
09:00	21	17			21:00	0	5				
09:15	16	22			21:15	1	4				
09:30	22	10			21:30	2	1				
09:45	16	75	9	58	133	21:45	0	3	0	10	13
10:00	11	14			22:00	1	1				
10:15	15	11			22:15	2	2				
10:30	9	16			22:30	0	1				
10:45	19	54	9	50	104	22:45	1	4	0	4	8
11:00	11	10			23:00	2	0				
11:15	16	12			23:15	0	0				
11:30	11	18			23:30	0	1				
11:45	13	51	16	56	107	23:45	1	3	0	1	4
<b>Total Vol.</b>	429	398			<b>827</b>	571	568				<b>1139</b>
								<b>Daily Totals</b>			
						NB	SB	EB	WB	Combined	
						1000	966			1966	
<b>Split %</b>			<b>AM</b>				<b>PM</b>				
	51.9%	48.1%		<b>42.1%</b>		50.1%	49.9%			<b>57.9%</b>	
<b>Peak Hour</b>	07:00	07:15		<b>07:15</b>		12:15	17:00			<b>16:30</b>	
<b>Volume</b>	101	81		<b>182</b>		89	98			<b>181</b>	
<b>P.H.F.</b>	0.81	0.92		<b>0.89</b>		0.87	0.74			<b>0.82</b>	

41ST N-O NATIONAL

AM Period					PM Period				
NB	SB	EB	WB		NB	SB	EB	WB	
00:00	1	1			12:00	12	19		
00:15	1	0			12:15	9	15		
00:30	2	1			12:30	14	11		
00:45	0	4	0	2	12:45	11	46	16	61
01:00	1	0			13:00	16	12		
01:15	0	1			13:15	11	11		
01:30	0	1			13:30	20	13		
01:45	2	3	2	4	13:45	19	66	10	46
02:00	1	3			14:00	11	9		
02:15	0	1			14:15	18	7		
02:30	1	0			14:30	13	9		
02:45	1	3	1	5	14:45	17	59	13	38
03:00	0	0			15:00	19	11		
03:15	0	2			15:15	11	12		
03:30	2	1			15:30	12	9		
03:45	2	4	0	3	15:45	18	60	15	47
04:00	2	0			16:00	20	10		
04:15	1	0			16:15	18	18		
04:30	4	0			16:30	22	20		
04:45	5	12	1	1	16:45	26	86	16	64
05:00	6	4			17:00	20	11		
05:15	4	5			17:15	22	15		
05:30	5	6			17:30	18	9		
05:45	10	25	4	19	17:45	20	80	10	45
06:00	9	5			18:00	15	7		
06:15	15	10			18:15	9	9		
06:30	12	9			18:30	12	12		
06:45	18	54	13	37	18:45	18	54	16	44
07:00	23	10			19:00	7	11		
07:15	18	11			19:15	9	9		
07:30	25	10			19:30	12	5		
07:45	33	99	15	46	19:45	5	33	4	29
08:00	31	20			20:00	4	9		
08:15	25	22			20:15	9	9		
08:30	20	15			20:30	9	4		
08:45	18	94	11	68	20:45	4	26	5	27
09:00	21	15			21:00	2	3		
09:15	18	19			21:15	1	3		
09:30	11	20			21:30	1	3		
09:45	16	66	17	71	21:45	0	4	1	10
10:00	9	16			22:00	1	0		
10:15	17	14			22:15	2	1		
10:30	20	14			22:30	2	2		
10:45	22	68	20	64	22:45	2	7	1	4
11:00	26	22			23:00	1	0		
11:15	18	17			23:15	0	1		
11:30	21	18			23:30	0	2		
11:45	22	87	21	78	23:45	1	2	0	3
<b>Total Vol.</b>	<b>519</b>	<b>398</b>			<b>917</b>	<b>523</b>	<b>418</b>		<b>941</b>
								<b>Daily Totals</b>	
						<b>NB</b>	<b>SB</b>	<b>EB</b>	<b>WB</b>
						1042	816		
									<b>Combined</b>
									1858
<b>Split %</b>		<b>AM</b>				<b>PM</b>			
	56.6%	43.4%		<b>49.4%</b>	55.6%	44.4%			<b>50.6%</b>
<b>Peak Hour</b>	07:30	11:00		<b>07:30</b>	16:30	16:15			<b>16:30</b>
<b>Volume</b>	114	78		<b>181</b>	90	65			<b>152</b>
<b>P.H.F.</b>	0.86	0.89		<b>0.89</b>	0.85	0.81			<b>0.90</b>

THURSDAY - OCTOBER 25, 2012

CITY: SAN DIEGO

PROJECT: CA12-1026-01

43RD BTN LOGAN & NATIONAL

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	3	9			12:00	33	44		
00:15	4	5			12:15	30	41		
00:30	4	4			12:30	27	35		
00:45	6	17	6	24	12:45	25	115	31	151
01:00	5	4			13:00	28	29		
01:15	2	1			13:15	35	41		
01:30	3	2			13:30	44	35		
01:45	2	12	3	10	13:45	41	148	30	135
02:00	4	2			14:00	28	29		
02:15	2	1			14:15	31	31		
02:30	2	0			14:30	28	30		
02:45	1	9	1	4	14:45	28	115	27	117
03:00	0	2			15:00	21	41		
03:15	1	1			15:15	35	44		
03:30	2	1			15:30	44	48		
03:45	3	6	2	6	15:45	27	127	49	182
04:00	2	3			16:00	48	54		
04:15	1	1			16:15	41	66		
04:30	6	0			16:30	55	67		
04:45	0	9	1	5	16:45	68	212	70	257
05:00	1	2			17:00	62	65		
05:15	1	1			17:15	60	77		
05:30	6	3			17:30	48	84		
05:45	9	17	5	11	17:45	51	221	54	280
06:00	8	9			18:00	60	59		
06:15	9	12			18:15	41	60		
06:30	10	11			18:30	35	44		
06:45	17	44	14	46	18:45	40	176	41	204
07:00	33	21			19:00	28	35		
07:15	31	20			19:15	22	40		
07:30	58	18			19:30	31	35		
07:45	77	199	33	92	19:45	27	108	30	140
08:00	84	41			20:00	21	33		
08:15	68	28			20:15	22	28		
08:30	66	33			20:30	19	20		
08:45	59	277	27	129	20:45	20	82	19	100
09:00	48	35			21:00	18	26		
09:15	33	33			21:15	23	22		
09:30	35	35			21:30	17	19		
09:45	35	151	41	144	21:45	21	79	20	87
10:00	27	28			22:00	17	15		
10:15	35	22			22:15	10	11		
10:30	33	34			22:30	11	9		
10:45	18	113	41	125	22:45	9	47	12	47
11:00	26	44			23:00	10	13		
11:15	22	30			23:15	5	8		
11:30	28	42			23:30	4	9		
11:45	20	96	48	164	23:45	9	28	5	35

**Total Vol.** 950 760 **1710** 1458 1735 **3193**

		Daily Totals			
		NB	SB	EB	WB
		2408	2495		
				4903	Combined

Split %	AM		34.9%	PM		65.1%
	55.6%	44.4%		45.7%	54.3%	

<b>Peak Hour</b>	07:45	11:30	<b>07:45</b>	16:30	16:45	<b>16:45</b>
<b>Volume</b>	295	175	<b>430</b>	245	296	<b>534</b>
<b>P.H.F.</b>	0.88	0.91	<b>0.86</b>	0.91	0.88	<b>0.97</b>

43RD BTN NATIONAL & NEWTON

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB	
00:00	16	11			12:00	83	89			
00:15	22	15			12:15	104	114			
00:30	15	9			12:30	96	101			
00:45	11	64	12	47	12:45	104	387	93	397	
01:00	6	4			13:00	102	100			
01:15	15	9			13:15	94	94			
01:30	2	5			13:30	109	101			
01:45	6	29	3	21	13:45	93	398	92	387	
02:00	11	6			14:00	107	90			
02:15	3	6			14:15	84	85			
02:30	9	5			14:30	118	80			
02:45	5	28	6	23	14:45	115	424	127	382	
03:00	7	7			15:00	97	135			
03:15	11	3			15:15	104	125			
03:30	2	3			15:30	115	123			
03:45	3	23	4	17	15:45	113	429	125	508	
04:00	5	3			16:00	95	121			
04:15	6	4			16:15	101	166			
04:30	7	9			16:30	111	140			
04:45	10	28	5	21	16:45	126	433	131	558	
05:00	15	5			17:00	118	175			
05:15	18	10			17:15	115	159			
05:30	23	18			17:30	109	158			
05:45	32	88	28	61	17:45	105	447	141	633	
06:00	38	26			18:00	113	162			
06:15	45	22			18:15	130	146			
06:30	69	35			18:30	98	157			
06:45	89	241	57	140	18:45	129	470	116	581	
07:00	133	54			19:00	122	122			
07:15	128	45			19:15	120	112			
07:30	166	65			19:30	96	87			
07:45	165	592	78	242	19:45	79	417	86	407	
08:00	141	77			20:00	90	70			
08:15	108	60			20:15	98	114			
08:30	90	68			20:30	79	85			
08:45	99	438	44	249	20:45	85	352	67	336	
09:00	102	74			21:00	93	60			
09:15	72	81			21:15	64	63			
09:30	89	65			21:30	61	74			
09:45	78	341	77	297	21:45	61	279	60	257	
10:00	70	57			22:00	58	42			
10:15	54	69			22:15	46	36			
10:30	88	78			22:30	39	42			
10:45	82	294	84	288	22:45	42	185	34	154	
11:00	94	73			23:00	26	34			
11:15	93	99			23:15	27	19			
11:30	93	78			23:30	14	23			
11:45	82	362	115	365	23:45	25	92	13	89	
<b>Total Vol.</b>	2528	1771		<b>4299</b>		4313	4689		<b>9002</b>	
								<b>Daily Totals</b>		
						NB	SB	EB	WB	Combined
						6841	6460			13301
<b>Split %</b>	58.8%	41.2%		<b>32.3%</b>		47.9%	52.1%			<b>67.7%</b>
<b>Peak Hour</b>	07:15	11:45		<b>07:15</b>		18:15	17:00			<b>16:45</b>
<b>Volume</b>	600	419		<b>865</b>		479	633			<b>1091</b>
<b>P.H.F.</b>	0.90	0.91		<b>0.89</b>		0.93	0.90			<b>0.93</b>



*CITY OF SAN DIEGO - TRAFFIC ENGINEERING*

*Machine Count Traffic Volumes - City Street*

*All From Dates 1/1/2002 to 1/2/2013*

1/2/2013

Page 25

STREET NAME	LIMITS	BLOCK NOS.	STATION NUMBER	DIRECTION	WK-DAY VOLUME	STARTING DATE	FILE NUMBER
28 ST	[SD 005 R-A - NATIONAL AV]	01050S - 01000S	2013	NORTH	: 7520	11/25/2008	0563-08
				SOUTH	: 6740	11/25/2008	0563-08
				*TOTAL	: 14260		
				NORTH	: 6915	11/17/2011	MC1098-1
				SOUTH	: 7250	11/17/2011	MC1098-1
				*TOTAL	: 14165		
28 ST	[C ST - B ST]	01100 - 01200	2182	NORTH	: 4420	11/9/2005	0692-05
				SOUTH	: 4510	11/9/2005	0692-05
				*TOTAL	: 8930		
				NORTH	: 4190	12/3/2008	0578-08
				SOUTH	: 3710	12/3/2008	0578-08
				*TOTAL	: 7900		
				NORTH	: 3710	11/8/2011	MC1101-1
				SOUTH	: 3025	11/8/2011	MC1101-1
*TOTAL	: 6735						
28 ST	[MAIN ST - BOSTON AV]	01300S - 01200S	2020	NORTH	: 11810	11/21/2002	1199-02
				SOUTH	: 13250	11/21/2002	1200-02
				*TOTAL	: 25060		
				NORTH	: 12380	11/8/2005	0679-05
				SOUTH	: 13640	11/8/2005	0679-05
				*TOTAL	: 26020		
				NORTH	: 10140	11/25/2008	0564-08
				SOUTH	: 10765	11/25/2008	0564-08
				*TOTAL	: 20905		
				NORTH	: 10925	11/9/2011	MC1099-1
				SOUTH	: 11895	11/9/2011	MC1099-1
				*TOTAL	: 22820		
28 ST	[HARBOR DR - MAIN ST]	01399S - 01300S	2021	SOUTH	: 9650	11/21/2002	1207-02
				NORTH	: 6930	11/26/2002	1206-02
				NORTH	: 8710	11/8/2005	0677-05
				SOUTH	: 9690	11/8/2005	0677-05

**CITY OF SAN DIEGO - TRAFFIC ENGINEERING**

**Machine Count Traffic Volumes - City Street**

*All From Dates 1/1/2002 to 1/2/2013*

**1/2/2013**

**Page 33**

STREET NAME	LIMITS	BLOCK NOS.	STATION NUMBER	DIRECTION	WK-DAY VOLUME	STARTING DATE	FILE NUMBER	
32 ST	[G ST - F ST]	00700 - 00800	2005	*TOTAL	:	9460		
				NORTH	:	2760	10/17/2006	0413-06
				SOUTH	:	4270	10/17/2006	0413-06
				*TOTAL	:	7030		
				NORTH	:	2945	10/13/2009	MC0665-0
				SOUTH	:	4415	10/13/2009	MC0665-0
32 ST	[GREELY AV - MARTIN AV (S)]	00800S - 00710S	2002	NORTH	:	2050	1/16/2008	0538-07
				SOUTH	:	2300	1/16/2008	0538-07
				*TOTAL	:	4350		
				NORTH	:	1310	2/23/2011	MC0094-1
				SOUTH	:	735	2/23/2011	MC0094-1
				*TOTAL	:	2045		
32 ST	[NEWTON AV - NATIONAL AV]	01100S - 01000S	2000	BOTH	:	4790	11/27/2002	1204-02
				NORTH	:	2670	11/8/2005	0676-05
				SOUTH	:	2680	11/8/2005	0676-05
				*TOTAL	:	5350		
				NORTH	:	3065	12/2/2008	0561-08
				SOUTH	:	3115	12/2/2008	0561-08
				*TOTAL	:	6180		
				NORTH	:	2555	12/9/2011	MC1103-1
				SOUTH	:	2865	12/9/2011	MC1103-1
				*TOTAL	:	5420		
32 ST	[WABASH BL - COLTON RD]	01700S - 01600S	2001	NORTH	:	7425	10/20/2009	MC0663-0
				SOUTH	:	7825	10/20/2009	MC0663-0
				*TOTAL	:	15250		
32 ST	[WABASH BL - UNNAMED 4 RD]	01700S - 01600S	2001	NORTH	:	6430	10/17/2006	0411-06
				SOUTH	:	7590	10/17/2006	0411-06
				*TOTAL	:	14020		
32 ST	[MCCANDLESS BL - WABASH BL]	01800S - 01700S	2006	NORTH	:	10540	1/16/2008	0540-07
				SOUTH	:	9810	1/16/2008	0540-07

**CITY OF SAN DIEGO - TRAFFIC ENGINEERING**

**Machine Count Traffic Volumes - City Street**

*All From Dates 1/1/2002 to 1/2/2013*

**1/2/2013**

**Page 36**

<b>STREET NAME</b>	<b>LIMITS</b>	<b>BLOCK NOS.</b>	<b>STATION NUMBER</b>	<b>DIRECTION</b>	<b>WK-DAY VOLUME</b>	<b>STARTING DATE</b>	<b>FILE NUMBER</b>	
33 ST	[ORANGE AV (E) - BRAMSON PL]	04200 - 04250	9038	SOUTH	:	2140	4/7/2005	0649-05
				*TOTAL	:	4640		
				NORTH	:	3050	6/5/2008	0243-08
				SOUTH	:	2970	6/5/2008	0243-08
				*TOTAL	:	6020		
				NORTH	:	3275	6/22/2011	MC0461-1
				SOUTH	:	3160	6/22/2011	MC0461-1
				*TOTAL	:	6435		
				33 ST	[EL CAJON BL - MEADE AV]	04300 - 04400	9039	NORTH
SOUTH	:	3420	3/13/2002					0314-02
*TOTAL	:	6490						
NORTH	:	2020	8/23/2005					0378-05
SOUTH	:	2450	8/23/2005					0378-05
*TOTAL	:	4470						
NORTH	:	2810	6/10/2008					0244-08
SOUTH	:	2940	6/10/2008					0244-08
*TOTAL	:	5750						
NORTH	:	2435	6/22/2011					MC0462-1
SOUTH	:	2890	6/22/2011					MC0462-1
*TOTAL	:	5325						
35 ST	[ADAMS AV - COLLIER AV]	-	2551	NORTH	:	475	6/5/2012	MC0487-1
				SOUTH	:	611	6/5/2012	MC0487-1
				*TOTAL	:	1086		
35 ST	[LOGAN AV (N) - NATIONAL AV]	-	7532	NORTH	:	3135	9/1/2011	MC0725-1
				SOUTH	:	2550	9/1/2011	MC0725-1
				*TOTAL	:	5685		
35 ST	[MARTIN AV - VALLE AV]	00699S - 00600S	2556	NORTH	:	3135	8/9/2011	MC0724-1
				SOUTH	:	3580	8/9/2011	MC0724-1
				*TOTAL	:	6715		
35 ST	[LOGAN AV (N) - FLORENCE ST]	00899S - 00800S	9040	NORTH	:	3640	1/16/2008	0607-07

*CITY OF SAN DIEGO - TRAFFIC ENGINEERING*

*Machine Count Traffic Volumes - City Street*

*All From Dates 1/1/2002 to 1/2/2013*

1/2/2013

Page 39

STREET NAME	LIMITS	BLOCK NOS.	STATION NUMBER	DIRECTION	WK-DAY VOLUME	STARTING DATE	FILE NUMBER
38 ST	[ UNIVERSITY AV - WIGHTMAN ST]	-	4508	SOUTH	625	7/7/2009	MC0481-0
				*TOTAL	1125		
				NORTH	453	6/26/2012	MC0496-1
				SOUTH	566	6/26/2012	MC0496-1
				*TOTAL	1019		
38 ST	[POLK AV - UNIVERSITY AV]	-	4507	NORTH	840	7/7/2009	MC0480-0
				SOUTH	550	7/7/2009	MC0480-0
				*TOTAL	1390		
				NORTH	818	6/26/2012	MC0495-1
				SOUTH	542	6/26/2012	MC0495-1
				*TOTAL	1360		
38 ST	[OCEAN VW BL - FRANKLIN AV]	00500S - 00400S	3562	NORTH	645	8/9/2011	MC0726-1
				SOUTH	610	8/9/2011	MC0726-1
				*TOTAL	1255		
38 ST	[NATIONAL AV - LOGAN AV]	01000S - 00900S	3561	BOTH	4320	1/7/2003	0062-03
				NORTH	1650	8/9/2011	MC0727-1
				SOUTH	1935	8/9/2011	MC0727-1
				*TOTAL	3585		
38 ST	[BETA ST - ALPHA ST]	01500S - 01400S	3560	BOTH	4380	1/6/2004	0003-04
				NORTH	2640	1/30/2007	0036-07
				SOUTH	2250	1/30/2007	0036-07
				*TOTAL	4890		
				NORTH	1460	8/9/2011	MC0728-1
				SOUTH	1755	8/9/2011	MC0728-1
				*TOTAL	3215		
39 ST	[WIGHTMAN ST - UNIVERSITY AV]	03800 - 04000	3563	BOTH	4200	3/5/2004	0189-04
40 ST	[FRANKLIN AV (S) - FRANKLIN AV (N)]	00400S - 00300S	3565	NORTH	1780	1/11/2002	0026-02
				SOUTH	2820	1/11/2002	0027-02
				*TOTAL	4600		

## **APPENDIX B: INTERSECTION COUNTS**



# INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

<b>DATE:</b> 10/24/12 WEDNESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	SAN DIEGO 27TH NATIONAL	PROJECT #: LOCATION #: CONTROL:	CA12-1026-01 7 1-WAY STOP (NB)
---------------------------------------	--	-------------------------------	---------------------------------------	--------------------------------------

NOTES:	AM PM MD OTHER	▲ N ▼	← W E →	
--------	-------------------------	-------------	------------	--

	NORTHBOUND 27TH			SOUTHBOUND 27TH			EASTBOUND NATIONAL			WESTBOUND NATIONAL			TOTAL	U-TURNS					
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL	
	1	X	1	X	X	X	X	2	0	0	2	X		X	X	X	X	X	
AM	7:00 AM	8		43				29	1		17	61						0	
	7:15 AM	3		58				27	0		14	47						0	
	7:30 AM	1		44				28	3		15	68						0	
	7:45 AM	12		40				20	3		12	70						0	
	8:00 AM	6		36				31	1		7	69						0	
	8:15 AM	7		28				28	2		11	74						0	
	8:30 AM	10		37				34	3		9	64						0	
	8:45 AM	3		38				42	2		7	49						0	
	VOLUMES	50	0	324	0	0	0	0	239	15		92	502	0					1,222
	APPROACH %	13%	0%	87%	0%	0%	0%	0%	94%	6%		15%	85%	0%					
APP/DEPART	374	/	0	0	/	107	254	/	563	594	/	552	0					0	
BEGIN PEAK HR	7:00 AM																		
VOLUMES	24	0	185	0	0	0	0	104	7		58	246	0					624	
APPROACH %	11%	0%	89%	0%	0%	0%	0%	94%	6%		19%	81%	0%						
PEAK HR FACTOR	0.857			0.000			0.895			0.916						0.981			
APP/DEPART	209	/	0	0	/	65	111	/	289	304	/	270	0					0	
PM	4:00 PM	6		59				97	7		6	50						0	
	4:15 PM	5		39				125	3		9	57						0	
	4:30 PM	6		60				117	4		10	50						0	
	4:45 PM	4		63				119	0		7	33						0	
	5:00 PM	3		48				76	0		8	58						0	
	5:15 PM	3		49				80	1		5	40						0	
	5:30 PM	6		49				60	0		12	41						0	
	5:45 PM	8		33				28	0		7	26						0	
	VOLUMES	41	0	400	0	0	0	0	702	15		64	355	0					1,577
	APPROACH %	9%	0%	91%	0%	0%	0%	0%	98%	2%		15%	85%	0%					
APP/DEPART	441	/	0	0	/	79	717	/	1,102	419	/	396	0					0	
BEGIN PEAK HR	4:00 PM																		
VOLUMES	21	0	221	0	0	0	0	458	14		32	190	0					936	
APPROACH %	9%	0%	91%	0%	0%	0%	0%	97%	3%		14%	86%	0%						
PEAK HR FACTOR	0.903			0.000			0.922			0.841						0.947			
APP/DEPART	242	/	0	0	/	46	472	/	679	222	/	211	0					0	



AM	7:00 AM					
	7:15 AM					
	7:30 AM					
	7:45 AM					
	8:00 AM					
	8:15 AM					
	8:30 AM					
	8:45 AM					
	TOTAL					
PM	4:00 PM					
	4:15 PM					
	4:30 PM					
	4:45 PM					
	5:00 PM					
	5:15 PM					
	5:30 PM					
	5:45 PM					
	TOTAL					

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
	1		1	2
	2			2
	2	1	4	7
	6			6
	4	1	1	6
	4			4
	4	2	1	7
	2			2
0	25	4	7	36
	2	1	2	5
	2		1	3
	4	1		5
	3	2		5
	2	2	2	6
	5			5
	4	1	1	6
	2			2
0	24	7	6	37

PEDESTRIAN ACTIVATIONS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
				0
	1			1
				0
	1			1
		1		1
	2			2
	1			1
	1			1
0	6	1	0	7
				0
	1			1
			1	1
	2			2
	1			1
	1	1		2
				0
	1			1
0	6	1	1	8

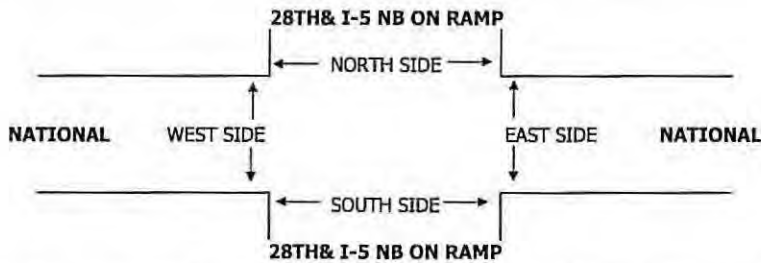
# INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE: 10/24/12 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	SAN DIEGO 28TH& I-5 NB ON RAMP NATIONAL	PROJECT #: LOCATION #: CONTROL:
			CA12-1026-01 8 SIGNAL

NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
--------	----------------------------------	--------------------------------

	NORTHBOUND 28TH& I-5 NB ON RAMP			SOUTHBOUND 28TH& I-5 NB ON RAMP			EASTBOUND NATIONAL			WESTBOUND NATIONAL			TOTAL	I-5 NB ON RAMP						
	NL 1	NT 1	NR 1	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 0		NB X	SB X	EB X	WR X	TTL		
AM	7:00 AM	5	11	3	5	20	40	8	47	2	37	133	9	320				162	162	
	7:15 AM	8	11	1	7	29	56	26	40	3	30	153	24	388				140	140	
	7:30 AM	5	19	6	13	36	51	29	43	4	21	143	10	380				125	125	
	7:45 AM	11	16	4	16	43	58	27	48	8	23	152	13	419				134	134	
	8:00 AM	12	17	4	8	28	46	15	43	9	23	130	15	350				118	118	
	8:15 AM	14	14	9	9	23	34	21	44	6	22	123	17	336				83	83	
	8:30 AM	5	9	2	3	26	36	17	42	8	23	121	16	308				82	82	
	8:45 AM	6	17	3	10	28	36	14	34	10	33	104	20	315				60	60	
	VOLUMES	66	114	32	71	233	357	157	341	50	212	1,059	124	2,816	0	0	0	904	904	
	APPROACH %	31%	54%	15%	11%	35%	54%	29%	62%	9%	15%	76%	9%							
APP/DEPART	212	/	395	661	/	495	548	/	444	1,395	/	1,482	0							
BEGIN PEAK HR	7:15 AM																			
VOLUMES	36	63	15	44	136	211	97	174	24	97	578	62	1,537							
APPROACH %	32%	55%	13%	11%	35%	54%	33%	59%	8%	13%	78%	8%								
PEAK HR FACTOR	0.864			0.835						0.889						0.890				
APP/DEPART	114	/	222	391	/	257	295	/	233	737	/	825	0							
PM	4:00 PM	9	20	11	14	33	19	30	109	18	34	82	39	418				52	52	
	4:15 PM	9	12	14	16	49	33	16	127	29	35	68	38	446				57	57	
	4:30 PM	8	17	15	7	44	24	22	116	31	39	71	28	422				52	52	
	4:45 PM	9	21	10	13	37	26	22	113	22	40	88	21	422				53	53	
	5:00 PM	9	19	7	13	40	25	27	97	26	38	76	38	415				45	45	
	5:15 PM	6	20	11	19	46	21	16	80	31	37	83	28	398				49	49	
	5:30 PM	3	15	10	11	36	22	13	66	26	39	66	45	352				46	46	
	5:45 PM	5	14	13	14	39	20	15	53	21	30	65	33	322				49	49	
	VOLUMES	58	138	91	107	324	190	161	761	204	292	599	270	3,195	0	0	0	403	403	
	APPROACH %	20%	48%	32%	17%	52%	31%	14%	68%	18%	25%	52%	23%							
APP/DEPART	287	/	569	621	/	820	1,126	/	959	1,161	/	847	0							
BEGIN PEAK HR	4:00 PM																			
VOLUMES	35	70	50	50	163	102	90	465	100	148	309	126	1,708							
APPROACH %	23%	45%	32%	16%	52%	32%	14%	71%	15%	25%	53%	22%								
PEAK HR FACTOR	0.969			0.804						0.952						0.940				
APP/DEPART	155	/	286	315	/	411	655	/	565	583	/	446	0							



AM	7:00 AM	3	1	7	2	13
	7:15 AM	4	1	6	1	12
	7:30 AM	11	4	17	3	35
	7:45 AM	5	2	5		12
	8:00 AM	4	2	7	1	14
	8:15 AM	6	2	5		13
	8:30 AM	9	3	12	2	26
	8:45 AM	3		4		7
TOTAL	45	15	63	9	132	
PM	4:00 PM	9	3	14	2	28
	4:15 PM	14	5	18	4	41
	4:30 PM	9	2	11	2	24
	4:45 PM	11	6	10	15	42
	5:00 PM	9	4	13	4	30
	5:15 PM	6	3	5	2	16
	5:30 PM	12	7	9	4	32
	5:45 PM	8	5	13	6	32
TOTAL	78	35	93	39	245	

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
3	1	7	2	13
4	1	6	1	12
11	4	17	3	35
5	2	5		12
4	2	7	1	14
6	2	5		13
9	3	12	2	26
3		4		7
45	15	63	9	132
9	3	14	2	28
14	5	18	4	41
9	2	11	2	24
11	6	10	15	42
9	4	13	4	30
6	3	5	2	16
12	7	9	4	32
8	5	13	6	32
78	35	93	39	245

PEDESTRIAN ACTIVATIONS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
	1			1
1	1		1	3
2		2		4
	1		1	2
3		1	1	5
				0
2			1	3
	1			1
8	4	3	4	19
2	1	1		4
1				1
1			1	2
	1			1
2		2		4
	1	1	1	3
3			1	4
2	1		1	4
11	4	4	4	23

# INTERSECTION TURNING MOVEMENT COUNTS

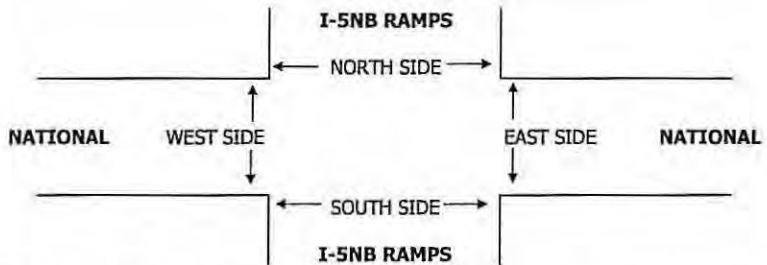
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

<b>DATE:</b> 10/24/12 WEDNESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	SAN DIEGO I-5NB RAMPS NATIONAL	<b>PROJECT #:</b> CA12-1026-01	<b>LOCATION #:</b> 9	<b>CONTROL:</b> SIGNAL
---------------------------------------	--	--------------------------------------	-----------------------------------	-------------------------	---------------------------

NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
--------	----------------------------------	--------------------------------

LANES:	NORTHBOUND I-5NB RAMPS			SOUTHBOUND I-5NB RAMPS			EASTBOUND NATIONAL			WESTBOUND NATIONAL			TOTAL
	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 1	WL X	WT 1	WR X	
7:00 AM	71		13					51	9		121		265
7:15 AM	50		33					44	11		168		306
7:30 AM	58		24					50	7		101		240
7:45 AM	74		22					62	5		127		290
8:00 AM	84		32					37	6		80		239
8:15 AM	73		14					58	9		77		231
8:30 AM	85		14					42	11		78		230
8:45 AM	99		20					36	5		62		222
<b>VOLUMES</b>	594	0	172	0	0	0	0	380	63	0	814	0	2,023
<b>APPROACH %</b>	78%	0%	22%	0%	0%	0%	0%	86%	14%	0%	100%	0%	
<b>APP/DEPART</b>	766	/	0	0	/	63	443	/	552	814	/	1,408	0
<b>BEGIN PEAK HR</b>	7:00 AM												
<b>VOLUMES</b>	253	0	92	0	0	0	0	207	32	0	517	0	1,101
<b>APPROACH %</b>	73%	0%	27%	0%	0%	0%	0%	87%	13%	0%	100%	0%	
<b>PEAK HR FACTOR</b>	0.898			0.000			0.892			0.769			0.900
<b>APP/DEPART</b>	345	/	0	0	/	32	239	/	299	517	/	770	0
4:00 PM	76		42					101	13		88		320
4:15 PM	84		33					111	18		68		314
4:30 PM	67		37					134	15		70		323
4:45 PM	70		35					116	16		72		309
5:00 PM	70		33					128	15		88		334
5:15 PM	72		29					99	14		70		284
5:30 PM	67		26					78	11		65		247
5:45 PM	65		33					70	3		72		243
<b>VOLUMES</b>	571	0	268	0	0	0	0	837	105	0	593	0	2,374
<b>APPROACH %</b>	68%	0%	32%	0%	0%	0%	0%	89%	11%	0%	100%	0%	
<b>APP/DEPART</b>	839	/	0	0	/	105	942	/	1,105	593	/	1,164	0
<b>BEGIN PEAK HR</b>	4:15 PM												
<b>VOLUMES</b>	291	0	138	0	0	0	0	489	64	0	298	0	1,280
<b>APPROACH %</b>	68%	0%	32%	0%	0%	0%	0%	88%	12%	0%	100%	0%	
<b>PEAK HR FACTOR</b>	0.917			0.000			0.928			0.847			0.958
<b>APP/DEPART</b>	429	/	0	0	/	64	553	/	627	298	/	589	0

I-5 ON RAMP FROM 28TH				
NR X	SB X	EB X	WB X	TTL
75				75
81				81
88				88
65				65
69				69
66				66
55				55
65				65
564	0	0	0	564
120				120
127				127
122				122
103				103
107				107
78				78
88				88
66				66
811	0	0	0	811



		7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	TOTAL
AM	7:00 AM									
	7:15 AM									
	7:30 AM									
	7:45 AM									
	8:00 AM									
	8:15 AM									
	8:30 AM									
	8:45 AM									
	TOTAL									
	PM	4:00 PM								
4:15 PM										
4:30 PM										
4:45 PM										
5:00 PM										
5:15 PM										
5:30 PM										
5:45 PM										
TOTAL										

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
	2	1		3
	3			3
	4	1	1	6
	5		1	6
1	2		2	5
1	1			2
	4	1	1	6
	1	2		3
2	22	5	5	34
	3			3
	6	1	1	8
	3			3
2	6	1	1	10
1	5		2	8
	2	2		4
	5			5
1	6	1		8
4	36	5	4	49

PEDESTRIAN ACTIVATIONS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
	1			1
	2		1	3
1				1
	2			2
1			1	2
	1			1
				0
	1			1
2	7	0	2	11
	1			1
			1	1
1	1			2
1	1	1		3
	2			2
				0
				0
	1			1
2	6	1	1	10



## INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

<b>DATE:</b> 10/24/12 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	SAN DIEGO 29TH NATIONAL	PROJECT #: LOCATION #: CONTROL:	CA12-1026-01 10 1-WAY STOP (NB)
---------------------------------------	---	-------------------------------	---------------------------------------	---------------------------------------

NOTES:	AM PM MD OTHER OTHER	▲ N ▼	← W E →
--------	----------------------------------	-------------	------------

LANES:	NORTHBOUND 29TH			SOUTHBOUND 29TH			EASTBOUND NATIONAL			WESTBOUND NATIONAL			TOTAL	U-TURNS						
	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0		NB X	SB X	EB X	WB X	TTL		
	AM	7:00 AM	1	3	0	3	1	3	8	50	0	0		136	10	215				
	7:15 AM	1	0	0	1	0	10	12	50	0	1	117	20	212					0	
	7:30 AM	1	0	0	6	0	5	23	51	0	0	109	24	219					0	
	7:45 AM	0	1	0	3	0	4	22	68	1	0	103	24	226					0	
	8:00 AM	2	0	2	1	1	8	12	59	3	3	104	7	202					0	
	8:15 AM	2	0	1	5	0	6	6	49	5	2	96	2	174					0	
	8:30 AM	5	0	4	5	0	4	9	52	1	2	85	2	169					0	
	8:45 AM	0	0	0	0	0	1	6	44	1	0	37	3	92					0	
	<b>VOLUMES</b>	12	4	7	24	2	41	98	423	11	8	787	92	1,509	0	0	0	0	0	
	<b>APPROACH %</b>	52%	17%	30%	36%	3%	61%	18%	80%	2%	1%	89%	10%							
	<b>APP/DEPART</b>	23	/	194	67	/	21	532	/	454	887	/	840	0						
	<b>BEGIN PEAK HR VOLUMES</b>	7:00 AM			13	1	22	65	219	1	1	465	78	872						
	<b>APPROACH %</b>	43%	57%	0%	36%	3%	61%	23%	77%	0%	0%	85%	14%							
	<b>PEAK HR FACTOR</b>	0.438			0.818			0.783			0.932			0.965						
	<b>APP/DEPART</b>	7	/	147	36	/	3	285	/	232	544	/	490	0						
PM	4:00 PM	1	1	0	11	0	7	20	142	7	0	60	11	260					0	
	4:15 PM	0	0	2	8	1	9	10	112	3	1	65	6	217					0	
	4:30 PM	2	0	0	4	2	5	16	134	6	2	71	4	246					0	
	4:45 PM	3	1	0	6	1	12	18	131	5	1	69	8	255					0	
	5:00 PM	1	1	3	10	0	9	19	138	4	2	59	6	252					0	
	5:15 PM	3	1	2	8	0	9	10	114	5	1	68	8	229					0	
	5:30 PM	1	1	0	4	3	3	12	77	2	0	42	5	150					0	
	5:45 PM	2	1	1	7	1	6	9	89	2	1	66	5	190					0	
		<b>VOLUMES</b>	13	6	8	58	8	60	114	937	34	8	500	53	1,799	0	0	0	0	0
		<b>APPROACH %</b>	48%	22%	30%	46%	6%	48%	11%	86%	3%	1%	89%	9%						
		<b>APP/DEPART</b>	27	/	173	126	/	50	1,085	/	1,003	561	/	573	0					
	<b>BEGIN PEAK HR VOLUMES</b>	4:30 PM			28	3	35	63	517	20	6	267	26	982						
	<b>APPROACH %</b>	53%	18%	29%	42%	5%	53%	11%	86%	3%	2%	89%	9%							
	<b>PEAK HR FACTOR</b>	0.708			0.868			0.932			0.958			0.963						
	<b>APP/DEPART</b>	17	/	92	66	/	29	600	/	550	299	/	311	0						



		PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	5	1		2	8
	7:15 AM	1	2	1	1	5
	7:30 AM	3			2	5
	7:45 AM	4	4	1	3	12
	8:00 AM	2	2		4	8
	8:15 AM	1	1	2	2	6
	8:30 AM	6	3	3	1	13
	8:45 AM	2	2			4
	<b>TOTAL</b>	24	15	7	15	61
PM	4:00 PM	4	4			8
	4:15 PM	3	1	1	2	7
	4:30 PM	8	2	1	4	15
	4:45 PM	2	6	1	5	14
	5:00 PM	9	4	2	4	19
	5:15 PM	6	2		2	10
	5:30 PM	5	1	3	2	11
	5:45 PM	4	3	4		11
	<b>TOTAL</b>	41	23	12	19	95

		PEDESTRIAN ACTIVATIONS					
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
	7:00 AM					0	
	7:15 AM					0	
	7:30 AM					0	
	7:45 AM					0	
	8:00 AM					0	
	8:15 AM					0	
	8:30 AM					0	
	8:45 AM					0	
		<b>TOTAL</b>	0	0	0	0	0

		BICYCLE CROSSINGS					
		NS	SS	ES	WS	TOTAL	
	7:00 AM					0	
	7:15 AM			1		1	
	7:30 AM			1	1	2	
	7:45 AM	2		1		3	
	8:00 AM	1	1			2	
	8:15 AM		1		1	2	
	8:30 AM					0	
	8:45 AM		2			2	
		<b>TOTAL</b>	3	4	3	2	12

		PEDESTRIAN CROSSINGS					
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
	4:00 PM					0	
	4:15 PM		1			1	
	4:30 PM				1	1	
	4:45 PM		1	2		3	
	5:00 PM	1	2		1	4	
	5:15 PM			1		1	
	5:30 PM	1				1	
	5:45 PM					0	
		<b>TOTAL</b>	2	4	3	2	11

**INTERSECTION TURNING MOVEMENT COUNTS**

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:  
10/24/12  
WEDNESDAY

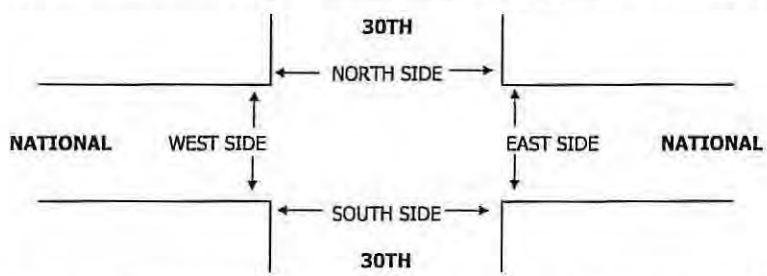
LOCATION: SAN DIEGO  
NORTH & SOUTH: 30TH  
EAST & WEST: NATIONAL

PROJECT #: CA12-1026-01  
LOCATION #: 11  
CONTROL: SIGNAL

NOTES:	AM	▲	
	PM		N
	MD	←	W
	OTHER		E →
	OTHER	S	
		▼	

	NORTHBOUND 30TH			SOUTHBOUND 30TH			EASTBOUND NATIONAL			WESTBOUND NATIONAL			TOTAL
	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	
7:00 AM	2	0	0	6	1	16	8	30	1	0	114	15	193
7:15 AM	4	7	1	13	4	17	6	41	2	1	108	16	220
7:30 AM	8	4	2	18	4	19	7	55	6	2	111	19	255
7:45 AM	4	1	5	11	2	22	12	51	2	4	98	20	232
8:00 AM	3	3	1	15	2	16	11	42	7	1	88	7	196
8:15 AM	1	2	4	9	3	15	16	48	8	4	83	8	201
8:30 AM	2	3	2	12	3	15	14	40	4	2	95	11	203
8:45 AM	1	1	2	8	1	6	9	33	6	3	52	7	129
VOLUMES	25	21	17	92	20	126	83	340	36	17	749	103	1,629
APPROACH %	40%	33%	27%	39%	8%	53%	18%	74%	8%	2%	86%	12%	
APP/DEPART	63	/	207	238	/	73	459	/	449	869	/	900	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	19	15	9	57	12	74	36	189	17	8	405	62	903
APPROACH %	44%	35%	21%	40%	8%	52%	15%	78%	7%	2%	85%	13%	
PEAK HR FACTOR	0.768			0.872			0.890			0.900			0.885
APP/DEPART	43	/	113	143	/	37	242	/	255	475	/	498	0
VOLUMES	43	10	17	167	55	117	196	767	57	10	430	134	2,003
APPROACH %	61%	14%	24%	49%	16%	35%	19%	75%	6%	2%	75%	23%	
APP/DEPART	70	/	340	339	/	122	1,020	/	951	574	/	590	0
BEGIN PEAK HR	4:15 PM												
VOLUMES	24	7	11	89	25	72	95	427	25	6	220	60	1,061
APPROACH %	57%	17%	26%	48%	13%	39%	17%	78%	5%	2%	77%	21%	
PEAK HR FACTOR	0.750			0.845			0.924			0.883			0.961
APP/DEPART	42	/	162	186	/	56	547	/	527	286	/	316	0

U-TURNS				
NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
0	0	0	0	0



AM	
7:00 AM	
7:15 AM	
7:30 AM	
7:45 AM	
8:00 AM	
8:15 AM	
8:30 AM	
8:45 AM	
TOTAL	
PM	
4:00 PM	
4:15 PM	
4:30 PM	
4:45 PM	
5:00 PM	
5:15 PM	
5:30 PM	
5:45 PM	
TOTAL	

PEDESTRIAN CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
2	5	2	1	10	
15	22	5	2	44	
18	11	4	4	37	
11	18	3	5	37	
5	9	5	6	25	
4	10	4	3	21	
9	5	1	4	19	
2	4	2		8	
66	84	26	25	201	
4	5	11	3	23	
7	9	5	2	23	
9	15	4	4	32	
10	8	4	1	23	
11	9	3	4	27	
8	11	5	2	26	
4	5	6	4	19	
8	4	7	2	21	
61	66	45	22	194	

PEDESTRIAN ACTIVATIONS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
0	0	0	0	0	

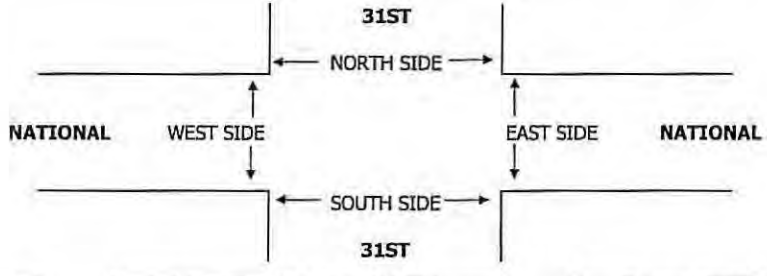
BICYCLE CROSSINGS					
NS	SS	ES	WS	TOTAL	
1				1	
1	1		2	4	
3		2		5	
	1	1		2	
2		1		3	
	2		1	3	
1	1	1	1	4	
1	3			4	
9	8	5	4	26	
			1	1	
1				1	
	1	1	1	3	
2	1			3	
			2	2	
1	2	1		4	
1			1	2	
				0	
5	4	2	5	16	

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE: 10/24/12 WEDNESDAY
LOCATION: NORTH & SOUTH: EAST & WEST:
SAN DIEGO 31ST NATIONAL
PROJECT #: CA-1026-01
LOCATION #: 12
CONTROL: 2-WAY STOP (NS)
NOTES:

Main data table with columns for Northbound, Southbound, Eastbound, Westbound, and U-Turns. Rows include time intervals (7:00 AM to 5:45 PM), VOLUMES, APPROACH %, APP/DEPART, and BEGIN PEAK HR.



Summary table with AM and PM rows for various metrics.

PEDESTRIAN CROSSINGS table with columns for N SIDE, S SIDE, E SIDE, W SIDE, and TOTAL.

PEDESTRIAN ACTIVATIONS table with columns for N SIDE, S SIDE, E SIDE, W SIDE, and TOTAL.

BICYCLE CROSSINGS table with columns for NS, SS, ES, WS, and TOTAL.



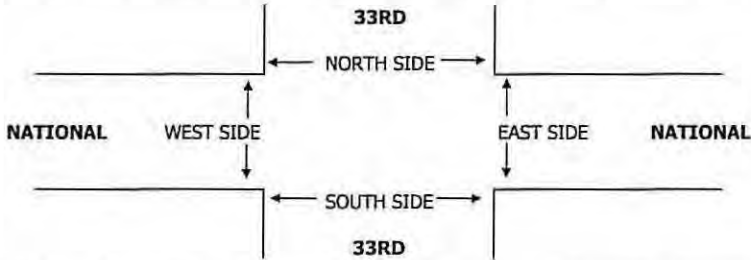
## INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE: 10/24/12 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	SAN DIEGO 33RD NATIONAL	PROJECT #: LOCATION #: CONTROL:	CA12-1026-01 14 2-WAY STOP (NS)
--------------------------------	---	-------------------------------	---------------------------------------	---------------------------------------

NOTES:	AM PM MD OTHER OTHER	▲ N S ▼	← W E →
--------	----------------------------------	------------------	------------

	NORTHBOUND 33RD			SOUTHBOUND 33RD			EASTBOUND NATIONAL			WESTBOUND NATIONAL			TOTAL	U-TURNS									
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL					
LANES:	0	1	0	0	1	0	1	1	0	1	1	0	X	X	X	X							
AM																							
7:00 AM	1	0	0	4	0	2	5	32	0	0	124	1						169					
7:15 AM	0	0	0	4	0	3	3	42	1	0	136	8						197					
7:30 AM	1	0	1	7	0	0	5	48	0	1	146	10						219					
7:45 AM	0	0	0	7	2	0	0	90	0	0	151	16						266					
8:00 AM	0	0	0	4	0	3	2	62	0	0	118	3						192					
8:15 AM	2	0	0	3	0	3	2	57	0	0	103	3						173					
8:30 AM	1	0	0	6	0	1	4	51	3	0	80	3						149					
8:45 AM	0	0	2	12	0	4	2	54	2	2	67	6						151					
VOLUMES	5	0	3	47	2	16	23	436	6	3	925	50						1,516					
APPROACH %	63%	0%	38%	72%	3%	25%	5%	94%	1%	0%	95%	5%											
APP/DEPART	8	/	73	65	/	11	465	/	486	978	/	946						0					
BEGIN PEAK HR	7:15 AM																						
VOLUMES	1	0	1	22	2	6	10	242	1	1	551	37						874					
APPROACH %	50%	0%	50%	73%	7%	20%	4%	96%	0%	0%	94%	6%											
PEAK HR FACTOR	0.250			0.833			0.703			0.882								0.821					
APP/DEPART	2	/	47	30	/	4	253	/	265	589	/	558						0					
PM																							
4:00 PM	0	0	1	5	0	5	1	138	0	0	67	5						222					
4:15 PM	0	0	1	10	0	3	7	140	0	0	82	6						249					
4:30 PM	0	1	0	2	0	3	2	113	1	0	69	3						194					
4:45 PM	0	0	0	5	0	1	0	140	0	0	75	4						225					
5:00 PM	0	0	0	11	0	4	8	133	0	0	72	5						233					
5:15 PM	0	0	1	3	0	0	0	133	1	0	74	9						221					
5:30 PM	0	0	0	9	0	4	2	119	0	0	64	2						200					
5:45 PM	1	1	1	11	1	2	6	87	1	0	79	8						198					
VOLUMES	1	2	4	56	1	22	26	1,003	3	0	582	42						1,742					
APPROACH %	14%	29%	57%	71%	1%	28%	3%	97%	0%	0%	93%	7%											
APP/DEPART	7	/	70	79	/	4	1,032	/	1,063	624	/	605						0					
BEGIN PEAK HR	4:15 PM																						
VOLUMES	0	1	1	28	0	11	17	526	1	0	298	18						901					
APPROACH %	0%	50%	50%	72%	0%	28%	3%	97%	0%	0%	94%	6%											
PEAK HR FACTOR	0.500			0.650			0.925			0.898								0.905					
APP/DEPART	2	/	36	39	/	1	544	/	555	316	/	309						0					



AM	7:00 AM	8	5	1	1	15
	7:15 AM	14	6		2	22
	7:30 AM	6	1	1		8
	7:45 AM	5	3	2	2	12
	8:00 AM	9	4		2	15
	8:15 AM	11	1	1	3	16
	8:30 AM	5	5	1	4	15
	8:45 AM	4	2	2		8
	<b>TOTAL</b>	<b>62</b>	<b>27</b>	<b>8</b>	<b>14</b>	<b>111</b>

PEDESTRIAN CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
4	2	2	2	10	
6	5	1	2	14	
9	2	3	1	15	
12	2			14	
8	6	4	3	21	
6	1	2		9	
5	4	2		11	
4				4	
<b>TOTAL</b>	<b>54</b>	<b>22</b>	<b>14</b>	<b>8</b>	<b>98</b>

PEDESTRIAN ACTIVATIONS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

BICYCLE CROSSINGS					
N5	SS	ES	WS	TOTAL	
				0	
	1			1	
1	1		1	3	
		1		1	
1				1	
2	2			4	
1	1			2	
				0	
5	5	1	1	12	
				0	
	2			2	
1	1		1	3	
1	2	1		4	
2	1			3	
1	1			2	
2				2	
1	1			2	
<b>TOTAL</b>	<b>8</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>18</b>

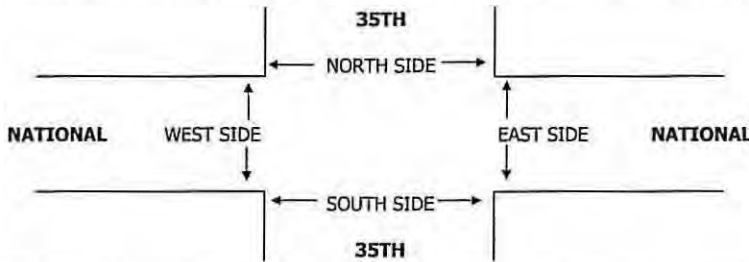
# INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE: 10/24/12 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	SAN DIEGO 35TH NATIONAL	PROJECT #: LOCATION #: CONTROL:	CA12-1026-01 15 SIGNAL
--------------------------------	---	-------------------------------	---------------------------------------	------------------------------

NOTES:	AM PM MD OTHER	▲ N ▼	← W E →
--------	-------------------------	-------------	------------

	NORTHBOUND 35TH			SOUTHBOUND 35TH			EASTBOUND NATIONAL			WESTBOUND NATIONAL			TOTAL	U-TURNS				
	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0		NB X	SB X	EB X	WB X	TTL
<b>AM</b>																		
7:00 AM	9	5	0	8	6	7	7	28	2	4	126	21	223					
7:15 AM	11	10	2	3	9	13	10	30	6	1	117	29	241					
7:30 AM	15	9	4	9	8	8	6	37	9	3	149	21	278					
7:45 AM	14	8	2	11	7	19	7	80	7	3	146	24	328					
8:00 AM	5	9	5	4	9	13	10	43	9	6	96	18	227					
8:15 AM	4	17	3	8	6	10	8	45	7	3	94	14	219					
8:30 AM	9	17	7	9	14	14	3	45	3	9	57	16	203					
8:45 AM	12	12	21	16	15	10	13	43	8	14	57	14	235					
VOLUMES	79	87	44	68	74	94	64	351	51	43	842	157	1,954					
APPROACH %	38%	41%	21%	29%	31%	40%	14%	75%	11%	4%	81%	15%						
APP/DEPART	210	/	308	236	/	168	466	/	463	1,042	/	1,015	0					
BEGIN PEAK HR	7:15 AM																	
VOLUMES	45	36	13	27	33	53	33	190	31	13	508	92	1,074					
APPROACH %	48%	38%	14%	24%	29%	47%	13%	75%	12%	2%	83%	15%						
PEAK HR FACTOR	0.839			0.764			0.676			0.886			0.819					
APP/DEPART	94	/	161	113	/	77	254	/	230	613	/	606	0					
<b>PM</b>																		
4:00 PM	8	9	7	26	9	12	19	113	17	9	61	10	300					
4:15 PM	7	6	4	25	18	10	21	118	8	3	72	9	301					
4:30 PM	7	11	9	33	9	7	7	88	21	4	59	13	268					
4:45 PM	7	13	6	28	14	9	22	111	14	2	59	15	300					
5:00 PM	4	13	3	24	11	12	19	113	17	9	61	10	296					
5:15 PM	10	6	10	18	9	0	11	120	9	8	68	10	279					
5:30 PM	4	10	11	23	10	12	10	103	18	6	55	14	276					
5:45 PM	7	13	3	29	8	14	17	79	7	4	62	13	256					
VOLUMES	54	81	53	206	88	76	126	845	111	45	497	94	2,276					
APPROACH %	29%	43%	28%	56%	24%	21%	12%	78%	10%	7%	78%	15%						
APP/DEPART	188	/	301	370	/	244	1,082	/	1,104	636	/	627	0					
BEGIN PEAK HR	4:00 PM																	
VOLUMES	29	39	26	112	50	38	69	430	60	18	251	47	1,169					
APPROACH %	31%	41%	28%	56%	25%	19%	12%	77%	11%	6%	79%	15%						
PEAK HR FACTOR	0.870			0.943			0.938			0.940			0.971					
APP/DEPART	94	/	155	200	/	128	559	/	568	316	/	318	0					



<b>AM</b>	7:00 AM	9	5	0	8	6	7	7	28	2	4	126	21	223
	7:15 AM	11	10	2	3	9	13	10	30	6	1	117	29	241
	7:30 AM	15	9	4	9	8	8	6	37	9	3	149	21	278
	7:45 AM	14	8	2	11	7	19	7	80	7	3	146	24	328
	8:00 AM	5	9	5	4	9	13	10	43	9	6	96	18	227
	8:15 AM	4	17	3	8	6	10	8	45	7	3	94	14	219
	8:30 AM	9	17	7	9	14	14	3	45	3	9	57	16	203
	8:45 AM	12	12	21	16	15	10	13	43	8	14	57	14	235
<b>TOTAL</b>		79	87	44	68	74	94	64	351	51	43	842	157	1,954
<b>PM</b>	4:00 PM	8	9	7	26	9	12	19	113	17	9	61	10	300
	4:15 PM	7	6	4	25	18	10	21	118	8	3	72	9	301
	4:30 PM	7	11	9	33	9	7	7	88	21	4	59	13	268
	4:45 PM	7	13	6	28	14	9	22	111	14	2	59	15	300
	5:00 PM	4	13	3	24	11	12	19	113	17	9	61	10	296
	5:15 PM	10	6	10	18	9	0	11	120	9	8	68	10	279
	5:30 PM	4	10	11	23	10	12	10	103	18	6	55	14	276
	5:45 PM	7	13	3	29	8	14	17	79	7	4	62	13	256
<b>TOTAL</b>		54	81	53	206	88	76	126	845	111	45	497	94	2,276

PEDESTRIAN CROSSINGS					
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
9	1	8		18	
10	5	7	1	23	
6	2	6	1	15	
9	3	11		23	
12	4	9	1	26	
11	6	7	2	26	
5	2	5		12	
9		9	1	19	
<b>TOTAL</b>	71	23	62	6	162

PEDESTRIAN ACTIVATIONS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
<b>TOTAL</b>	0	0	0	0

BICYCLE CROSSINGS					
NS	SS	ES	WS	TOTAL	
				0	
1	1	1	1	4	
		2		2	
	2	3		5	
1		1		2	
1	1	1		3	
2	1			3	
		1		1	
<b>TOTAL</b>	5	5	9	1	20







### INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE: 10/24/12 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	SAN DIEGO 38TH NATIONAL	PROJECT #: LOCATION #: CONTROL:	CA12-1026-01 18 SIGNAL
--------------------------------	---	-------------------------------	---------------------------------------	------------------------------

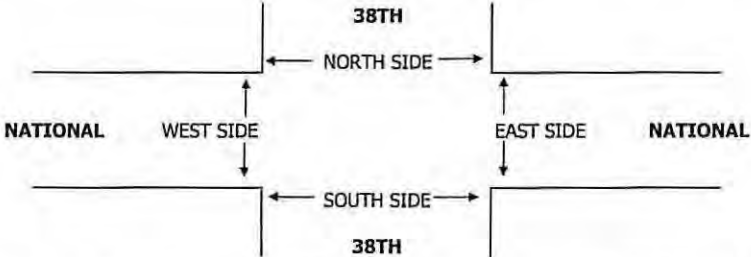
NOTES:	AM PM MD OTHER OTHER	▲ N ▼	← W E →	S
--------	----------------------------------	-------------	------------	---

		NORTHBOUND <small>38TH</small>			SOUTHBOUND <small>38TH</small>			EASTBOUND <small>NATIONAL</small>			WESTBOUND <small>NATIONAL</small>			
LANES:		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
		0	1	0	0	1	0	1	1	0	1	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
X	X	X	X	

	NORTHBOUND		SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	24	12	2	6	7	6	1	34	3	3	111	10	219
7:15 AM	18	9	9	2	6	5	3	28	10	7	123	8	228
7:30 AM	30	12	5	5	13	7	2	33	9	6	127	6	255
7:45 AM	32	19	2	6	10	8	3	60	10	3	124	9	286
8:00 AM	17	18	4	4	7	10	2	39	12	4	87	7	211
8:15 AM	12	12	7	4	14	5	8	45	6	5	88	9	215
8:30 AM	14	14	2	9	7	5	6	38	11	0	68	8	182
8:45 AM	15	14	8	8	14	3	6	46	16	4	58	8	200
VOLUMES	162	110	39	44	78	49	31	323	77	32	786	65	1,796
APPROACH %	52%	35%	13%	26%	46%	29%	7%	75%	18%	4%	89%	7%	
APP/DEPART	311	/	206	171	/	187	431	/	406	883	/	997	0
BEGIN PEAK HR VOLUMES	7:00 AM												
APPROACH %	104	52	18	19	36	26	9	155	32	19	485	33	988
PEAK HR FACTOR	60%	30%	10%	23%	44%	32%	5%	79%	16%	4%	90%	6%	0.864
APP/DEPART	174	/	94	81	/	87	196	/	192	537	/	615	0
4:00 PM	16	11	5	14	18	5	5	103	25	2	46	1	251
4:15 PM	16	18	6	10	17	7	10	123	26	11	52	12	308
4:30 PM	15	19	10	5	18	11	6	101	25	4	53	8	275
4:45 PM	13	19	10	9	18	4	6	119	20	4	60	10	292
5:00 PM	9	15	4	19	22	4	3	152	29	5	65	13	340
5:15 PM	14	10	7	17	20	6	11	124	25	8	57	10	309
5:30 PM	9	13	19	14	28	5	10	106	19	10	56	9	298
5:45 PM	17	12	12	20	22	7	5	103	26	6	62	7	299
VOLUMES	109	117	73	108	163	49	56	931	195	50	451	70	2,372
APPROACH %	36%	39%	24%	34%	51%	15%	5%	79%	16%	9%	79%	12%	
APP/DEPART	299	/	243	320	/	408	1,182	/	1,112	571	/	609	0
BEGIN PEAK HR VOLUMES	5:00 PM												
APPROACH %	49	50	42	70	92	22	29	485	99	29	240	39	1,246
PEAK HR FACTOR	35%	35%	30%	38%	50%	12%	5%	79%	16%	9%	78%	13%	0.916
APP/DEPART	141	/	118	184	/	220	613	/	597	308	/	311	0

NB	SB	EB	WB	TTL
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0



	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	TOTAL
AM									
PM									
TOTAL									

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
3	5	2	1	11
3	8	3	1	15
5	8	5	4	22
2	9	5	2	18
2	5	4	3	14
3	11			14
5	4	1	4	14
1	9		1	11
24	59	20	16	119
8	5	4	2	19
5	9	8	1	23
7	4	6	5	22
3	5	5		13
3	5	3	2	13
9	8		1	18
3	1	1		5
5	2			7
43	39	27	11	120

PEDESTRIAN ACTIVATIONS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
				0
1	1			2
				0
1	1		1	3
				0
1	2	1		4
1				1
				0
4	4	1	1	10
				0
1				1
1		1		2
2	2			4
1			1	2
	1			1
			1	1
1				1
6	4	1	2	13









## **APPENDIX C: TRANSIT DATA**



**SANDAG Passenger Counting Program**  
**Ridership by Route and Stop**

**MTS Bus - Direct**

**FY2010 MTS Directly Operated\_Weekday\_Fall Route 11**

**Route #11 - North**

Sort	Stop	Dir	Stop ID	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips				
				Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board				Alight	Load		
							Avg	Max	Total				Avg	Max	Avg				Max	Avg	Max							Avg	Max	
10	Paradise Valley Rd/Meadowbrook Dr		11465	64	187	32	2	5	155	20	54	18	2	5	24	74	9	3	4	12	38	4	3	5	.	.	2,594			
20	Paradise Valley Rd/Deep Dell Rd		99144	64	8	2	3	5	161	20	4	1	2	5	24	2	.	3	4	12	1	.	3	5	.	.	2,594			
30	Deep Dell Rd/Paradise Valley Rd		12972	72	122	4	4	13	280	20	62	1	5	13	24	27	1	4	5	12	12	1	4	6	.	.	2,873			
40	Brookhaven Rd/Woodway Ct		10720	72	21	1	4	14	300	20	10	.	6	14	24	6	.	4	5	12	1	.	4	6	.	.	2,873			
50	Meadowbrook Dr/Skyline Dr		12578	72	101	7	5	19	394	20	42	1	8	19	24	32	3	5	8	12	15	2	5	7	.	.	2,873			
60	Skyline Dr/Deerock Pl		11070	72	16	4	6	19	406	20	6	.	8	19	24	6	2	5	8	12	3	2	5	7	.	.	2,873			
70	Skyline Dr/Siena St		11067	72	28	5	6	21	429	20	12	1	8	21	24	8	2	6	9	12	3	1	5	7	.	.	2,873			
80	Skyline Dr/Lausanne Dr		11444	72	.	.	6	21	430	20	.	.	8	21	24	.	.	6	9	12	.	.	5	7	.	.	2,873			
90	Skyline Dr/Sychar Rd		11063	72	55	7	7	22	477	20	23	1	10	22	24	16	3	6	9	12	9	2	6	8	.	.	2,873			
100	Skyline Dr/Tuther Way		11437	72	12	4	7	22	485	20	5	2	10	22	24	3	1	6	9	12	3	1	6	8	.	.	2,873			
110	Skyline Dr/69th St		11434	72	80	70	7	17	494	20	13	59	7	12	24	47	8	8	17	12	14	3	7	9	.	.	2,873			
120	Skyline Dr/Rio Lindo Dr		11432	72	12	2	7	17	505	20	6	1	8	12	24	4	.	8	17	12	1	.	7	9	.	.	2,873			
130	Skyline Dr/Leghorn Av		11051	72	21	15	7	17	511	20	8	4	8	13	24	6	7	8	17	12	3	4	7	8	.	.	2,873			
140	Skyline Dr/Detroit Pl		11423	72	25	9	7	17	527	20	10	2	8	14	24	8	3	8	17	12	4	3	7	8	.	.	2,873			
150	Skyline Dr/O*Meara St		11417	72	39	15	8	18	551	20	9	9	8	14	24	22	4	9	18	12	5	1	7	9	.	.	2,873			
160	Skyline Dr/Ozzie Way		11411	72	46	22	8	24	575	20	10	9	8	15	24	24	7	10	24	12	9	5	8	9	.	.	2,873			
170	Skyline Dr/Radio Dr		11408	72	35	9	8	25	602	20	13	3	9	16	24	14	4	10	25	12	6	1	8	10	.	.	2,873			
180	58th St/Mira Flores Dr		11767	72	25	6	9	25	620	20	7	1	9	17	24	11	2	11	25	12	3	2	8	10	.	.	2,873			
190	Olvera Av/Las Flores Ter		11397	72	8	1	9	25	628	20	4	.	9	17	24	2	.	11	25	12	1	.	8	10	.	.	2,873			
200	Olvera Av/San Onofre Ter		11024	72	11	3	9	24	635	20	4	.	10	17	24	3	1	11	24	12	2	1	8	10	.	.	2,873			
210	Olvera Av/Santa Isabel Dr		11391	72	17	4	9	24	648	20	8	.	10	18	24	5	3	11	24	12	2	1	9	10	.	.	2,873			
220	Olvera Av/Gwen St		11386	72	7	1	9	24	654	20	4	.	10	18	24	2	1	11	24	12	1	.	9	10	.	.	2,873			
230	Olvera Av/Euclid Av		11011	72	36	122	8	19	568	20	10	34	9	15	24	14	57	9	19	12	8	22	7	9	.	.	2,873			
240	Logan Av/Euclid Av		11382	72	44	11	8	20	601	20	14	2	10	16	24	17	4	10	20	12	7	4	8	9	.	.	2,873			
250	Logan Av/Jarrett Ct		11000	72	52	10	9	20	644	20	17	3	10	18	24	19	5	10	20	12	10	2	8	10	.	.	2,873			
260	Logan Av/47th St		11371	72	54	41	9	18	657	20	11	11	10	18	24	23	20	10	18	12	11	7	9	10	.	.	2,873			
270	Logan Av/46th St		11370	72	12	5	9	18	664	20	3	.	10	18	24	4	2	10	18	12	2	2	9	10	.	.	2,873			
280	Logan Av/45th St		13440	72	42	13	10	19	693	20	14	3	11	19	24	16	6	11	18	12	6	3	9	11	.	.	2,873			

# SANDAG Passenger Counting Program

## Ridership by Route and Stop

MTS Bus - Direct

FY2010 MTS Directly Operated\_Weekday\_Fall Route 11

Route #11 - North

Sort	Stop	Dir	Stop ID	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips	
				Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board				Alight
290	Logan Av/Dominion St		10987	72	14	31	9	17	677	20	5	17	10	15	24	5	8	11	17	12	2	6	9	11	.	.	2,873
300	43rd St/National Av		11724	72	222	37	12	19	861	20	63	7	13	18	24	84	18	13	19	12	42	8	11	15	.	.	2,873
310	National Av/41st St		10975	72	45	16	12	19	890	20	16	3	14	19	24	15	6	14	19	12	6	4	12	16	.	.	2,873
320	National Av/40th St		10967	72	67	18	13	21	938	20	36	3	15	21	24	18	8	14	19	12	8	5	12	17	.	.	2,873
330	National Av/38th St		11337	72	197	61	15	27	1,074	20	83	10	19	27	24	62	26	16	21	12	28	20	12	19	.	.	2,873
340	National Av/36th St		10948	72	109	45	16	30	1,137	20	53	5	21	30	24	33	23	16	22	12	12	14	12	18	.	.	2,873
350	National Av/35th St		10946	72	153	36	17	34	1,255	20	49	4	24	34	24	60	18	18	26	12	22	9	13	19	.	.	2,873
360	National Av/33rd St		11316	72	17	8	18	34	1,264	20	7	2	24	34	24	7	3	18	26	12	2	1	13	20	.	.	2,873
370	National Av/32nd St		11309	72	78	39	18	35	1,303	20	31	9	25	35	24	25	17	18	27	12	11	8	14	20	.	.	2,873
380	National Av/30th St		11299	72	97	39	19	37	1,361	20	33	7	26	37	24	35	17	19	28	12	15	11	14	21	.	.	2,873
390	National Av/29th St		10919	72	26	53	19	37	1,335	20	10	40	25	37	24	10	8	19	28	12	4	4	14	21	.	.	2,873
400	National Av/28th St		10910	72	45	79	18	37	1,301	20	13	22	24	37	24	19	29	19	27	12	8	11	14	20	.	.	2,873
410	National Av/27th St		11284	72	10	4	18	37	1,307	20	4	1	25	37	24	4	1	19	27	12	1	1	14	20	.	.	2,873
420	National Av/26th St		10895	72	17	14	18	38	1,309	20	6	2	25	38	24	5	6	19	27	12	2	3	14	20	.	.	2,873
430	Logan Av/Sampson St		11277	72	84	35	19	39	1,358	20	35	5	26	39	24	31	15	19	29	12	9	9	14	21	.	.	2,873
440	Logan Av/I-5 Ramp		10884	72	11	21	19	39	1,348	20	2	6	26	39	24	6	7	19	28	12	2	6	13	20	.	.	2,873
450	Logan Av/Cesar Chavez Pkwy		10876	72	53	73	18	38	1,328	20	10	26	25	38	24	27	27	19	27	12	9	9	13	20	.	.	2,873
460	Logan Av/Bearsley St		11262	72	32	36	18	38	1,324	20	5	10	25	38	24	17	22	19	27	12	6	3	14	21	.	.	2,873
470	Logan Av/Sigsbee St		10868	72	5	12	18	38	1,317	20	1	1	25	38	24	2	4	19	27	12	1	4	13	20	.	.	2,873
480	Imperial Av/15th St		99146	72	73	69	18	38	1,322	20	13	11	25	38	24	48	40	19	27	12	8	9	13	20	.	.	2,873
490	12th/Imperial Transit Center		91102	72	264	817	11	19	769	20	74	350	11	19	24	112	266	13	16	12	48	93	10	15	.	.	2,873
500	Park Bl/10th Av (Petco Park)		99006	72	8	12	11	18	765	20	1	4	11	18	24	3	5	13	16	12	3	2	10	14	.	.	2,873
510	11th Av/J St		99007	72	4	5	11	18	765	20	1	1	11	18	24	2	2	13	16	12	1	1	10	14	.	.	2,873
520	Market St/10th Av		10856	72	49	43	11	19	770	20	11	10	11	19	24	22	22	13	15	12	10	5	10	15	.	.	2,873
530	Market St/8th Av		10848	72	17	26	11	19	761	20	4	9	11	19	24	7	12	13	15	12	5	3	10	15	.	.	2,873
540	Market St/6th Av		10846	72	35	48	10	19	748	20	7	10	11	19	24	15	24	12	15	12	9	9	10	15	.	.	2,873
550	Market St/4th Av		13191	72	35	58	10	19	725	20	9	13	11	19	24	14	23	12	15	12	7	13	10	13	.	.	2,873
560	1st Av/G St		12750	72	102	84	10	18	743	20	13	25	10	18	24	45	36	12	15	12	32	14	11	14	.	.	2,873



**SANDAG Passenger Counting Program**  
**Ridership by Route and Stop**

**MTS Bus - Direct**

**FY2010 MTS Directly Operated\_Weekday\_Fall Route 11**

**Route #11 - North**

Sort	Stop	Dir	Stop ID	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips				
				Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board				Alight	Load		
							Avg	Max	Total				Avg	Max	Total				Avg	Max	Total							Avg	Max	Total
570	1st Av/Broadway		99118	72	251	209	11	21	786	20	37	73	8	18	24	112	79	14	17	12	74	19	16	21	.	.	2,873			
580	1st Av/C St		60546	72	103	30	12	22	858	20	21	8	9	19	24	41	12	15	19	12	29	5	18	22	.	.	2,873			
590	1st Av/Ash St		12411	72	103	130	12	23	831	20	18	53	7	16	24	44	49	15	19	12	31	19	19	23	.	.	2,873			
600	1st Av/Elm St		12753	62	35	115	12	22	751	12	7	11	12	15	24	15	50	13	17	12	10	38	16	22	.	.	2,494			
610	1st Av/Grape St		12415	62	15	25	12	21	741	12	3	4	12	15	24	7	11	13	17	12	4	6	16	21	.	.	2,494			
620	1st Av/Ivy St		12756	62	35	62	12	20	715	12	9	10	11	15	24	14	24	13	16	12	7	20	15	20	.	.	2,494			
630	1ST AV/LAUREL ST		99757	62	22	56	11	19	681	12	4	11	11	14	24	12	27	12	15	12	4	11	15	19	.	.	2,494			
640	5th Av/Laurel St		12767	62	30	23	11	19	688	12	5	4	11	15	24	14	10	12	16	12	7	5	15	19	.	.	2,494			
650	5th Av/Nutmeg St		12772	62	15	9	11	19	694	12	3	2	11	15	24	10	6	12	16	12	2	1	15	19	.	.	2,494			
660	5th Av/Palm St		12775	62	8	11	11	19	691	12	1	3	11	15	24	5	4	12	16	12	2	3	15	19	.	.	2,494			
670	5th Av/Redwood St		12428	62	7	12	11	19	686	12	1	3	11	14	24	3	4	12	16	12	2	4	15	19	.	.	2,494			
680	5th Av/Upas St		12773	62	27	20	11	19	693	12	6	4	11	14	24	14	10	13	17	12	5	5	14	19	.	.	2,494			
690	5th Av/Brookes Av		12429	62	7	12	11	19	688	12	1	2	11	14	24	4	6	12	16	12	1	4	14	19	.	.	2,494			
700	5th Av/Pennsylvania Av		12432	62	5	21	11	19	672	12	1	4	10	13	24	2	9	12	16	12	1	5	14	19	.	.	2,494			
710	5th Av/University Av		12431	62	158	152	11	19	678	12	17	29	9	12	24	73	74	12	16	12	46	31	15	19	.	.	2,494			
720	University Av/7th Av		10478	62	34	15	11	20	697	12	2	2	9	13	24	18	8	13	17	12	11	4	16	20	.	.	2,494			
730	University Av/8th Av		13391	62	35	30	11	21	702	12	3	4	9	13	24	17	14	13	17	12	12	8	16	21	.	.	2,494			
740	University Av/10th Av		10106	62	35	37	11	20	700	12	8	5	10	13	24	14	18	12	16	12	10	11	16	20	.	.	2,494			
750	University Av/Vermont St		10111	62	51	37	12	21	714	12	6	4	10	13	24	25	21	13	16	12	14	9	16	21	.	.	2,494			
760	University Av/Richmond St		10114	62	23	41	11	21	696	12	2	7	9	12	24	10	21	12	16	12	6	9	16	21	.	.	2,494			
770	University Av/Herbert St		10494	62	21	37	11	20	680	12	2	8	9	11	24	12	18	12	16	12	5	8	16	20	.	.	2,494			
780	Park Bl/University Av		12804	62	158	126	11	22	712	12	23	19	9	11	24	81	62	13	18	12	39	31	16	22	.	.	2,494			
790	Park Bl/Lincoln Av		12452	62	6	10	11	22	708	12	2	2	9	11	24	3	4	13	18	12	1	3	16	22	.	.	2,494			
800	Park Bl/Polk Av		12453	62	5	18	11	22	695	12	1	6	9	10	24	3	8	12	18	12	1	3	16	22	.	.	2,494			
810	Park Bl/Howard Av		12454	62	39	65	11	21	669	12	7	8	9	11	24	20	37	12	17	12	9	16	16	21	.	.	2,494			
820	Park Bl/El Cajon Bl		12800	62	20	12	11	21	677	12	5	2	9	11	24	9	6	12	19	12	3	3	16	21	.	.	2,494			
830	Park Bl/Meade Av		12801	62	9	17	11	21	669	12	3	3	9	11	24	4	7	12	18	12	2	5	15	21	.	.	2,494			
840	Park Bl/Monroe Av		12455	62	10	29	10	19	650	12	2	3	9	11	24	5	13	11	18	12	1	11	14	19	.	.	2,494			

# SANDAG Passenger Counting Program Ridership by Route and Stop

MTS Bus - Direct

FY2010 MTS Directly Operated\_Weekday\_Fall Route 11

Route #11 - North

Sort	Stop	Dir	Stop ID	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips				
				Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board				Alight	Load		
							Avg	Max	Total				Avg	Max	Total				Avg	Max	Total							Avg	Max	Total
850	Park Bl/Madison Av		12802	62	23	49	10	18	624	12	5	10	9	11	24	11	18	11	18	12	4	12	14	18	.	.	2,494			
860	Adams Av/Georgia St		10121	62	3	6	10	18	621	12	.	1	9	11	24	1	3	11	18	12	1	1	14	18	.	.	2,494			
870	Adams Av/Florida St		10507	62	8	10	10	18	618	12	2	1	9	11	24	3	4	11	17	12	1	4	13	18	.	.	2,494			
880	Adams Av/Louisiana St		10518	62	5	9	10	18	614	12	1	1	9	11	24	2	4	11	17	12	1	3	13	18	.	.	2,494			
890	Adams Av/Arizona St		10140	62	17	24	10	18	608	12	4	1	9	11	24	8	10	11	17	12	3	8	13	18	.	.	2,494			
900	Adams Av/Idaho St		10540	62	17	34	10	17	591	12	6	1	9	12	24	7	17	11	16	12	2	11	12	17	.	.	2,494			
910	Adams Av/30th St		10160	62	93	61	10	17	623	12	20	6	10	13	24	44	29	11	17	12	17	18	12	17	.	.	2,494			
920	Adams Av/Boundary St		10169	62	19	8	10	17	633	12	6	1	11	13	24	7	3	11	17	12	2	2	12	17	.	.	2,494			
930	Adams Av/W Mountain View Dr		10549	62	8	15	10	17	626	12	2	1	11	13	24	2	7	11	16	12	1	4	12	17	.	.	2,494			
940	Adams Av/32nd St		10554	62	19	38	10	15	607	12	7	2	11	13	24	7	20	11	15	12	1	11	11	15	.	.	2,494			
950	Adams Av/33rd St		10188	62	28	70	9	14	565	12	8	6	12	14	24	13	32	10	14	12	3	22	10	14	.	.	2,494			
960	Adams Av/34th St		10564	62	24	56	9	14	534	12	7	6	12	14	24	10	26	9	13	12	3	17	8	12	.	.	2,494			
970	Adams Av/35th St		10198	62	43	71	8	15	505	12	14	8	12	15	24	17	32	8	12	12	5	23	7	10	.	.	2,494			
980	Adams Av/Wilson Av		10573	2	.	.	3	3	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	96			
990	Adams Av/Cherokee Av		10577	62	41	90	7	14	456	12	11	13	12	14	24	17	40	7	11	12	5	26	5	7	.	.	2,494			
1000	Adams Av/39th St		10581	62	7	11	7	15	453	12	3	2	12	15	24	3	5	7	12	12	1	2	5	7	.	.	2,494			
1010	Adams Av/Kensington Dr		10594	60	19	43	7	14	426	12	6	10	12	14	24	8	20	7	11	12	3	9	5	6	.	.	2,398			
1020	Adams Av/Biona Dr		10224	60	8	12	7	14	422	12	4	4	12	14	24	3	4	7	11	12	1	3	4	6	.	.	2,398			
1030	Fairmount Av/Talmadge Canyon Row		12872	60	2	6	7	14	418	12	1	2	12	14	24	1	2	7	11	12	.	1	4	6	.	.	2,398			
1040	Montezuma Rd/Collwood Bl		10634	62	4	6	7	14	419	12	2	1	12	14	24	2	3	7	11	12	.	1	4	6	.	.	2,494			
1050	Montezuma Rd/54th St		10258	62	3	7	7	14	415	12	1	1	12	14	24	1	3	7	12	12	.	2	4	6	.	.	2,494			
1060	Montezuma Rd/55th St		10654	62	1	10	7	14	406	12	.	3	11	14	24	.	3	7	11	12	.	2	4	6	.	.	2,494			
1070	Campanile Dr/Montezuma Rd		13158	62	.	30	6	13	376	12	.	15	10	13	24	.	8	6	11	12	.	2	4	5	.	.	2,494			
1080	Sdsu Transit Center		99017	62	32	408	0	0	1	12	8	130	0	0	24	15	165	0	0	12	6	53	0	0	.	.	2,494			
All Stops		Total		4,680	4,680					1,299	1,299				1,922	1,921				889	889			.	.					
		Average		9	9	11				12	12	12			18	18	11				8	8	11							
		Maximum					39						39					29						23						

**SANDAG Passenger Counting Program**  
**Ridership by Route and Stop**

**MTS Bus - Direct**

**FY2010 MTS Directly Operated\_Weekday\_Fall Route 11**

**Route #11 - South**

Sort	Stop	Dir	Stop ID	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips				
				Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board				Alight	Load		
							Avg	Max	Total				Avg	Max	Total				Avg	Max	Total							Avg	Max	Total
10	Sdsu Transit Center		99017	61	427	23	7	15	404	12	44	6	3	6	25	172	9	7	9	12	132	4	11	12	.	.	2,536			
20	Montezuma Rd/College Av		11031	61	19	3	7	16	420	12	3	.	3	6	25	7	1	7	10	12	6	1	11	13	.	.	2,536			
30	Montezuma Rd/55th St		11395	61	7	1	7	16	427	12	1	.	3	6	25	3	.	7	10	12	2	.	11	13	.	.	2,536			
40	Montezuma Rd/54th St		11390	61	6	3	7	16	429	12	2	.	4	7	25	2	1	7	10	12	2	1	11	13	.	.	2,536			
50	Montezuma Rd/Collwood Bl		11009	61	6	2	7	16	434	12	1	.	4	7	25	3	1	7	10	12	2	1	11	13	.	.	2,536			
60	Adams Av/Biona Dr		11354	60	12	10	7	15	428	12	4	1	4	7	25	5	3	7	10	12	2	4	11	13	.	.	2,502			
70	Adams Av/Kensington Dr		10973	60	40	19	7	16	449	12	5	2	4	8	25	19	8	8	10	12	10	6	12	13	.	.	2,502			
80	Adams Av/39th St		11342	61	12	8	8	16	461	12	5	1	5	8	25	4	3	8	10	12	2	4	12	13	.	.	2,536			
90	Adams Av/Cherokee Av		11335	61	108	52	8	14	516	12	23	2	6	9	25	49	21	9	11	12	19	16	12	14	.	.	2,536			
100	Adams Av/35th St		11327	61	56	30	9	13	543	12	21	2	8	11	25	20	10	9	11	12	9	13	11	13	.	.	2,536			
110	Adams Av/Hawley Bl		10947	61	72	22	10	14	592	12	25	2	10	14	25	24	9	10	12	12	11	7	12	14	.	.	2,536			
120	Adams Av/33rd St		10939	61	93	37	11	17	648	12	26	2	12	17	25	42	16	11	13	12	15	12	12	14	.	.	2,536			
130	Adams Av/32nd St		10937	61	28	19	11	18	658	12	10	1	13	18	25	11	7	11	13	12	3	7	12	14	.	.	2,536			
140	Adams Av/W Mountain View Dr		10933	61	17	10	11	18	665	12	6	.	13	18	25	7	4	11	13	12	2	3	12	14	.	.	2,536			
150	Adams Av/30th St		11297	61	63	109	10	18	620	12	14	13	13	18	25	27	51	10	13	12	11	33	10	12	.	.	2,536			
160	Adams Av/Utah St		11291	61	25	15	10	20	629	12	9	1	14	20	25	8	7	10	13	12	3	5	10	12	.	.	2,536			
170	Adams Av/Arizona St		10900	61	33	21	11	23	641	12	15	3	15	23	25	10	11	10	13	12	4	5	10	12	.	.	2,536			
180	Adams Av/Panorama Dr (E)		11271	61	11	5	11	23	647	12	5	.	15	23	25	4	2	10	13	12	2	2	10	12	.	.	2,536			
190	Adams Av/Florida St		11266	61	11	7	11	24	652	12	5	.	16	24	25	3	4	10	13	12	2	1	10	12	.	.	2,536			
200	Adams Av/Park Bl		10872	61	2	5	11	24	648	12	.	1	16	24	25	1	1	10	13	12	.	2	9	11	.	.	2,536			
210	Park Bl/Madison Av		11673	61	43	25	11	25	665	12	11	5	16	25	25	19	9	11	14	12	7	7	9	11	.	.	2,536			
220	Park Bl/Monroe Av		11672	61	31	14	11	25	682	12	7	1	17	25	25	14	6	11	14	12	3	4	9	11	.	.	2,536			
230	Park Bl/Meade Av		12065	61	19	10	11	26	691	12	5	1	17	26	25	8	4	11	14	12	3	3	9	11	.	.	2,536			
240	Park Bl/Howard Av		11671	61	47	30	12	26	707	12	6	5	17	26	25	26	16	11	15	12	11	7	10	11	.	.	2,536			
250	Park Bl/Polk Av		11670	61	27	9	12	26	724	12	6	3	17	26	25	15	5	12	15	12	4	1	10	11	.	.	2,536			
260	Park Bl/Lincoln Av		11669	61	7	10	12	26	722	12	1	2	17	26	25	4	4	12	15	12	2	2	10	12	.	.	2,536			
270	Park Bl/University Av		11675	61	153	173	12	19	702	12	32	63	15	19	25	80	63	13	15	12	28	24	10	13	.	.	2,536			
280	University Av/Normal St		10865	61	34	21	12	18	715	12	4	5	15	18	25	18	11	13	15	12	6	4	10	14	.	.	2,536			

**SANDAG Passenger Counting Program**  
**Ridership by Route and Stop**

**MTS Bus - Direct**

**FY2010 MTS Directly Operated\_Weekday\_Fall Route 11**

**Route #11 - South**

Sort	Stop	Dir	Stop ID	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips				
				Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board				Alight	Load		
							Avg	Max	Total				Avg	Max	Avg				Max	Avg	Max							Avg	Max	Avg
290	University Av/Richmond St		10862	61	59	35	12	18	739	12	10	6	15	18	25	33	17	13	16	12	11	8	11	14	.	.	2,536			
300	University Av/Vermont St		11254	61	89	63	13	18	765	12	9	9	15	18	25	50	36	14	16	12	21	13	11	15	.	.	2,536			
310	University Av/9th Av		10852	61	14	25	12	19	754	12	3	6	15	19	25	6	10	14	16	12	3	5	11	14	.	.	2,536			
320	University Av/7th Av		10847	61	34	31	12	19	757	12	6	4	15	19	25	17	17	14	16	12	7	8	11	14	.	.	2,536			
330	University Av/6th Av		11245	61	70	119	12	18	708	12	7	24	13	18	25	38	60	13	16	12	17	19	11	14	.	.	2,536			
340	4th Av/University Av		12027	61	104	69	12	18	743	12	15	13	14	18	25	54	38	14	16	12	23	14	12	14	.	.	2,536			
350	4th Av/Robinson Av		12025	61	32	12	13	18	763	12	5	3	14	18	25	15	6	14	17	12	7	2	12	15	.	.	2,536			
360	4th Av/Pennsylvania Av		12026	61	11	6	13	18	768	12	2	1	14	18	25	6	4	14	17	12	2	1	12	15	.	.	2,536			
370	4th Av/Brookes Av		12028	61	13	11	13	19	770	12	3	1	14	19	25	7	6	14	17	12	2	4	12	15	.	.	2,536			
380	4th Av/Upas St		12041	61	25	23	13	19	772	12	5	3	14	19	25	14	13	14	17	12	4	4	12	15	.	.	2,536			
390	4th Av/Spruce St		11645	61	19	17	13	19	775	12	5	2	14	19	25	10	8	14	17	12	3	4	12	15	.	.	2,536			
400	4TH AV/REDWOOD ST		11646	61	.	.	13	19	775	12	.	.	14	19	25	.	.	14	17	12	.	.	12	15	.	.	2,536			
410	4th Av/Palm Av		12037	61	15	22	13	19	768	12	2	6	14	19	25	8	11	14	16	12	4	3	12	15	.	.	2,536			
420	4th Av/Nutmeg St		12040	61	12	21	12	18	759	12	1	5	14	18	25	9	13	14	16	12	2	3	12	15	.	.	2,536			
430	4th Av/Laurel St		11644	61	27	37	12	18	749	12	5	5	14	18	25	14	20	14	16	12	6	7	12	15	.	.	2,536			
440	1st Av/Laurel St		12014	61	33	27	12	19	755	12	7	4	14	19	25	22	12	14	16	12	3	6	12	14	.	.	2,536			
450	1st Av/Juniper St		11636	61	32	27	12	19	761	12	6	3	14	19	25	17	12	14	16	12	5	8	11	14	.	.	2,536			
460	Hawthorn St/2nd Av		12019	61	16	18	12	20	759	12	5	3	15	20	25	6	8	14	16	12	2	4	11	14	.	.	2,536			
470	2nd Av/Fir St		11641	61	14	17	12	20	756	12	4	2	15	20	25	7	8	14	16	12	2	5	11	14	.	.	2,536			
480	2nd Av/Elm St		12020	61	75	39	13	21	792	12	24	13	16	21	25	29	15	15	17	12	12	7	12	14	.	.	2,536			
490	2nd Av/Beech St		11640	61	26	63	12	19	756	12	6	14	15	19	25	13	29	14	16	12	4	13	11	14	.	.	2,536			
500	2nd Av/Ash St		11639	61	19	63	12	16	713	12	5	26	13	16	25	9	26	13	15	12	3	7	11	14	.	.	2,536			
510	Front St/A St		11633	61	74	41	12	17	745	12	5	16	12	15	25	41	19	14	17	12	24	4	12	16	.	.	2,536			
520	Front St/B St		12012	61	18	70	11	16	693	12	1	16	11	13	25	7	34	13	16	12	5	14	11	15	.	.	2,536			
530	Front St/Broadway		99039	61	108	211	10	16	591	12	10	53	7	9	25	53	104	11	15	12	30	30	11	16	.	.	2,536			
540	Front St/F St		96010	61	19	34	9	16	575	12	1	8	7	8	25	10	16	11	15	12	6	7	11	16	.	.	2,536			
550	Market St/3rd Av		13193	61	54	50	9	16	579	12	5	6	7	9	25	27	24	11	15	12	13	14	11	16	.	.	2,536			
560	Market St/6th Av		10474	61	68	32	10	17	615	12	7	5	7	8	25	33	16	12	17	12	15	8	12	17	.	.	2,536			

**SANDAG Passenger Counting Program**  
**Ridership by Route and Stop**

**MTS Bus - Direct**

**FY2010 MTS Directly Operated\_Weekday\_Fall Route 11**

**Route #11 - South**

Sort	Stop	Dir	Stop ID	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips	
				Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board	Alight	Load			Trips	Board				Alight
570	Market St/8th Av		10101	61	19	16	10	17	619	12	3	3	7	8	25	12	8	12	17	12	3	3	12	17	.	.	2,536
580	Market St/10th Av		10105	61	13	26	10	17	605	12	2	3	7	8	25	7	12	12	17	12	2	5	12	17	.	.	2,536
590	10th Av/Island Av		12050	61	10	11	10	17	604	12	1	1	7	8	25	6	6	12	16	12	1	3	11	17	.	.	2,536
600	10th Av/Park Bl (Petco Park)		99005	61	9	6	10	17	608	12	1	2	7	8	25	4	2	12	17	12	2	1	12	17	.	.	2,536
610	12th/Imperial Transit Center		91101	77	968	175	18	34	1,402	12	79	31	11	13	30	425	88	21	34	23	349	37	20	28	.	.	3,140
620	Imperial Av/16th St		10115	77	82	127	18	32	1,358	12	14	18	10	13	30	44	71	20	32	23	17	25	19	27	.	.	3,140
630	Logan Av/Sigsbee St		10117	77	14	20	18	32	1,351	12	2	2	10	13	30	6	10	20	32	23	3	6	19	26	.	.	3,140
640	Logan Av/Beardsley St		10501	77	25	50	17	31	1,326	12	3	9	10	12	30	14	29	20	31	23	7	10	19	26	.	.	3,140
650	Logan Av/Cesar E Chavez Pkwy		10122	77	79	48	18	32	1,358	12	9	8	10	13	30	36	21	20	32	23	25	16	19	26	.	.	3,140
660	Logan Av/Cesar E Chavez Pkwy (Chi		10510	77	23	21	18	32	1,360	12	2	3	10	12	30	10	10	20	32	23	8	6	19	26	.	.	3,140
670	Logan Av/Sampson St		10519	77	36	87	17	30	1,309	12	6	9	10	12	30	14	41	19	30	23	11	29	19	25	.	.	3,140
680	26th St/Sicard St		60220	77	10	23	17	30	1,295	12	1	2	10	12	30	4	11	19	30	23	3	7	18	24	.	.	3,140
690	National Av/27th St		10529	77	11	21	17	29	1,286	12	1	3	9	12	30	5	11	19	29	23	3	6	18	24	.	.	3,140
700	National Av/29th St		10154	77	88	72	17	30	1,302	12	8	10	9	12	30	53	35	19	30	23	21	19	18	25	.	.	3,140
710	National Av/30th St		10544	77	36	103	16	27	1,235	12	5	7	9	11	30	17	50	18	27	23	10	36	17	23	.	.	3,140
720	National Av/32nd St		10552	77	44	78	16	25	1,201	12	6	5	9	11	30	18	37	18	25	23	15	24	17	22	.	.	3,140
730	National Av/33rd St		10555	77	5	11	16	25	1,195	12	1	1	9	11	30	2	5	18	25	23	1	3	17	22	.	.	3,140
740	National Av/35th St		10195	77	26	125	14	22	1,096	12	6	10	9	10	30	11	64	16	22	23	5	42	15	20	.	.	3,140
750	National Av/36th St		10197	77	56	108	14	21	1,044	12	9	8	9	10	30	27	51	15	21	23	15	37	14	19	.	.	3,140
760	National Av/38th St		10205	77	60	199	12	19	905	12	15	18	9	10	30	24	89	13	19	23	13	67	12	16	.	.	3,140
770	National Av/40th St		10214	77	16	62	11	18	860	12	3	4	9	10	30	6	29	12	18	23	4	22	11	16	.	.	3,140
780	National Av/41st St		10220	77	16	43	11	18	832	12	3	4	8	10	30	7	18	12	18	23	4	16	11	15	.	.	3,140
790	43rd St/National Av		12861	77	64	206	9	17	690	12	6	32	6	8	30	30	94	10	14	23	14	54	9	13	.	.	3,140
800	Logan Av/44th St		10613	77	3	11	9	17	684	12	.	1	6	8	30	2	4	9	14	23	1	4	9	13	.	.	3,140
810	Logan Av/45th St		13441	77	16	45	9	18	655	12	3	3	6	8	30	6	20	9	13	23	3	14	8	12	.	.	3,140
820	Logan Av/46th St		10622	77	11	14	8	19	652	12	2	1	6	8	30	4	6	9	13	23	3	5	8	12	.	.	3,140
830	Logan Av/47th St		10235	77	43	56	8	21	639	12	4	7	6	8	30	17	23	9	13	23	12	17	8	11	.	.	3,140
840	Logan Av/49th St		10629	77	21	55	8	23	604	12	2	7	5	8	30	8	25	8	12	23	6	17	8	11	.	.	3,140

**SANDAG Passenger Counting Program**  
**Ridership by Route and Stop**

**MTS Bus - Direct**

**FY2010 MTS Directly Operated\_Weekday\_Fall Route 11**

**Route #11 - South**

Sort	Stop	Dir	Trips	All Day					AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event	Gross Trips	
				Board	Alight	Avg	Max	Total	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max				
850	Olvera Av/Euclid Av	10635	77	128	68	9	24	664	12	16	11	6	8	30	52	29	9	13	23	42	20	8	12	.	.	3,140	
860	Olvera Av/Gwen St	10255	77	2	6	9	24	661	12	.	1	6	8	30	.	3	9	13	23	.	3	8	12	.	.	3,140	
870	Olvera Av/Santa Isabel Dr	10647	77	5	17	8	26	648	12	1	2	6	8	30	1	7	9	13	23	.	5	8	12	.	.	3,140	
880	Olvera Av/San Onofre Ter	10259	77	3	14	8	26	638	12	.	1	6	8	30	.	5	9	12	23	1	6	8	12	.	.	3,140	
890	Olvera Av/Las Flores Ter	10263	77	.	13	8	26	625	12	.	1	6	8	30	.	6	8	12	23	.	3	8	12	.	.	3,140	
900	58th St/Mira Flores Dr	12923	77	3	34	8	26	594	12	.	4	5	8	30	1	15	8	11	23	1	11	7	11	.	.	3,140	
910	Skyline Dr/Radio Dr	10268	77	16	37	7	28	573	12	3	6	5	8	30	7	18	8	10	23	3	9	7	10	.	.	3,140	
920	Skyline Dr/61st St	10672	77	26	66	7	19	533	12	2	8	5	5	30	16	16	8	10	23	3	12	7	10	.	.	3,140	
930	Skyline Dr/O*Meara St	10678	77	9	35	7	19	507	12	3	2	5	6	30	4	17	7	10	23	1	13	6	9	.	.	3,140	
940	Skyline Dr/Detroit Pl	10280	77	5	22	6	19	490	12	1	3	4	5	30	3	9	7	10	23	1	6	6	9	.	.	3,140	
950	Skyline Dr/Woodman St	10287	77	17	30	6	20	477	12	2	5	4	5	30	7	11	7	10	23	5	9	6	9	.	.	3,140	
960	Skyline Dr/Rio Lindo Dr	10690	77	3	16	6	20	464	12	.	1	4	5	30	2	5	7	9	23	1	8	5	8	.	.	3,140	
970	Skyline Dr/69th St	10293	77	49	74	6	18	439	12	1	9	3	4	30	41	22	7	18	23	6	11	5	8	.	.	3,140	
980	Skyline Dr/Buccaneer Dr	10296	77	6	19	6	18	427	12	1	1	3	4	30	3	11	7	18	23	1	4	5	8	.	.	3,140	
990	Skyline Dr/Sychar Rd	10299	77	8	59	5	18	374	12	1	4	3	4	30	3	28	6	18	23	2	19	4	7	.	.	3,140	
1000	Skyline Dr/Lausanne St	10702	77	.	1	5	18	374	12	.	.	3	4	30	.	1	6	18	23	.	.	4	7	.	.	3,140	
1010	Skyline Dr/Siena St	10307	77	4	38	4	17	341	12	1	2	3	4	30	2	17	6	17	23	1	13	4	7	.	.	3,140	
1020	Skyline Dr/Deerock Pl	10713	77	2	13	4	17	330	12	.	1	3	4	30	1	5	6	17	23	.	4	4	6	.	.	3,140	
1030	Meadowbrook Dr/Skyline Dr	12239	77	4	79	3	12	254	12	1	8	2	3	30	2	41	4	12	23	1	20	3	5	.	.	3,140	
1040	Meadowbrook Dr/Shadyglade Ln	11802	77	1	8	3	12	247	12	.	1	2	3	30	.	3	4	12	23	.	3	3	6	.	.	3,140	
1050	Meadowbrook Dr/Brookhaven Rd	11803	77	1	35	3	10	213	12	.	2	2	3	30	.	17	4	10	23	.	12	2	5	.	.	3,140	
1060	Meadowbrook Dr/Brookmeadow Pl	12241	77	.	21	3	9	193	12	.	1	2	3	30	.	10	3	9	23	.	8	2	4	.	.	3,140	
1070	Paradise Valley Rd/Meadowbrook Dr	11465	77	7	199	0	0	1	12	2	27	0	0	30	2	101	0	0	23	2	44	0	0	.	.	3,140	
All Stops			Total	4,598	4,597					694	694				2,132	2,132				1,173	1,173						
			Average	9	9	10				6	6	9			20	20	11			11	11	10					
			Maximum			34						26					34						28				

## **APPENDIX D: BICYCLE COUNTS**

(Refer to Appendix B: Intersection Counts)



## **APPENDIX E: PEDESTRIAN COUNTS**

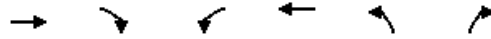
(Refer to Appendix B: Intersection Counts)





**APPENDIX F: INTERSECTION LEVEL OF SERVICE WORKSHEETS**























Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Volume (veh/h)	104	7	58	246	24	185
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	106	7	59	251	24	189
Pedestrians	5			1	11	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				631		
pX, platoon unblocked						
vC, conflicting volume			124		370	69
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			124		370	69
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		96	81
cM capacity (veh/h)			1447		571	971
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	71	43	143	167	24	189
Volume Left	0	0	59	0	24	0
Volume Right	0	7	0	0	0	189
cSH	1700	1700	1447	1700	571	971
Volume to Capacity	0.04	0.03	0.04	0.10	0.04	0.19
Queue Length 95th (ft)	0	0	3	0	3	18
Control Delay (s)	0.0	0.0	3.3	0.0	11.6	9.6
Lane LOS			A		B	A
Approach Delay (s)	0.0		1.5		9.8	
Approach LOS					A	
Intersection Summary						
Average Delay			4.0			
Intersection Capacity Utilization			24.7%		ICU Level of Service	A
Analysis Period (min)			15			

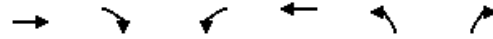
National Ave Master Plan  
2: 28th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	174	24	97	578	62	36	63	15	44	136	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.4		4.0	4.4			4.4			4.6	
Lane Util. Factor	1.00	0.95		1.00	1.00			0.95			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Frt	1.00	0.98		1.00	0.99			0.98			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1770	3458		1770	1827			3375			1688	
Flt Permitted	0.95	1.00		0.95	1.00			0.72			0.95	
Satd. Flow (perm)	1770	3458		1770	1827			2452			1612	
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)	105	189	26	105	628	67	39	68	16	48	148	229
RTOR Reduction (vph)	0	14	0	0	6	0	0	12	0	0	61	0
Lane Group Flow (vph)	105	201	0	105	689	0	0	111	0	0	364	0
Confl. Peds. (#/hr)	24		9	9		24	5		35	35		5
Confl. Bikes (#/hr)			2			6			3			3
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	5.9	31.8		7.4	33.3			18.0			17.8	
Effective Green, g (s)	5.9	31.8		7.4	33.3			18.0			17.8	
Actuated g/C Ratio	0.08	0.45		0.11	0.48			0.26			0.25	
Clearance Time (s)	4.0	4.4		4.0	4.4			4.4			4.6	
Vehicle Extension (s)	2.0	3.4		2.0	3.4			2.0			2.0	
Lane Grp Cap (vph)	149	1571		187	869			631			410	
v/s Ratio Prot	c0.06	0.06		0.06	c0.38							
v/s Ratio Perm								0.05			c0.23	
v/c Ratio	0.70	0.13		0.56	0.79			0.18			0.89	
Uniform Delay, d1	31.2	11.1		29.8	15.5			20.2			25.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	11.7	0.2		2.3	7.4			0.0			19.6	
Delay (s)	42.9	11.2		32.0	22.8			20.3			44.7	
Level of Service	D	B		C	C			C			D	
Approach Delay (s)		21.6			24.0			20.3			44.7	
Approach LOS		C			C			C			D	
<b>Intersection Summary</b>												
HCM Average Control Delay			28.6			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			8.6			
Intersection Capacity Utilization			80.1%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												

National Ave Master Plan  
3: I-5 NB Off Ramp & National Ave

Existing AM  
4/5/2013



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↗
Volume (vph)	207	0	0	517	253	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6			4.6	4.6	4.6
Lane Util. Factor	1.00			1.00	1.00	1.00
Frbp, ped/bikes	1.00			1.00	1.00	0.96
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1863			1863	1770	1518
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1863	1770	1518
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	0	0	574	281	102
RTOR Reduction (vph)	0	0	0	0	0	74
Lane Group Flow (vph)	230	0	0	574	281	28
Confl. Peds. (#/hr)		14	14		2	2
Turn Type	NA			NA	NA	Perm
Protected Phases	2			6	8	
Permitted Phases	2			6	8	8
Actuated Green, G (s)	22.2			22.2	11.8	11.8
Effective Green, g (s)	22.2			22.2	11.8	11.8
Actuated g/C Ratio	0.51			0.51	0.27	0.27
Clearance Time (s)	4.6			4.6	4.6	4.6
Vehicle Extension (s)	7.7			7.7	2.0	2.0
Lane Grp Cap (vph)	957			957	483	415
v/s Ratio Prot	0.12			c0.31	c0.16	
v/s Ratio Perm						0.02
v/c Ratio	0.24			0.60	0.58	0.07
Uniform Delay, d1	5.8			7.4	13.6	11.6
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.5			2.5	1.2	0.0
Delay (s)	6.4			9.8	14.7	11.6
Level of Service	A			A	B	B
Approach Delay (s)	6.4			9.8	13.9	
Approach LOS	A			A	B	




















Intersection Summary

HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	43.2	Sum of lost time (s)	9.2
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

National Ave Master Plan  
4: 29th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	219	1	1	465	78	3	4	0	13	1	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	67	226	1	1	479	80	3	4	0	13	1	23
Pedestrians		8			2			7			13	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		327			669							
pX, platoon unblocked	0.89						0.89	0.89		0.89	0.89	0.89
vC, conflicting volume	573			234			880	942	235	899	902	541
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	456			234			802	872	235	823	827	420
iC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
iC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			99	98	100	94	100	96
cM capacity (veh/h)	971			1326			237	235	798	237	249	553
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	67	227	1	560	7	37						
Volume Left	67	0	1	0	3	13						
Volume Right	0	1	0	80	0	23						
cSH	971	1700	1326	1700	236	365						
Volume to Capacity	0.07	0.13	0.00	0.33	0.03	0.10						
Queue Length 95th (ft)	6	0	0	0	2	8						
Control Delay (s)	9.0	0.0	7.7	0.0	20.8	16.0						
Lane LOS	A		A		C	C						
Approach Delay (s)	2.0		0.0		20.8	16.0						
Approach LOS					C	C						
<b>Intersection Summary</b>												
Average Delay			1.5									
Intersection Capacity Utilization			48.7%		ICU Level of Service					A		
Analysis Period (min)			15									




















National Ave Master Plan  
5: 30th St & National Ave

Existing AM  
4/5/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	189	17	8	405	62	19	15	9	57	12	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.97	
Flpb, ped/bikes	0.98	1.00		0.98	1.00			0.99			0.99	
Frt	1.00	0.99		1.00	0.98			0.97			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.98	
Satd. Flow (prot)	1736	1833		1729	1809			1729			3068	
Flt Permitted	0.40	1.00		0.61	1.00			0.85			0.83	
Satd. Flow (perm)	723	1833		1118	1809			1495			2603	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	40	212	19	9	455	70	21	17	10	64	13	83
RTOR Reduction (vph)	0	5	0	0	8	0	0	7	0	0	62	0
Lane Group Flow (vph)	40	226	0	9	517	0	0	41	0	0	98	0
Confl. Peds. (#/hr)	49		60	60		49	17		17	17		17
Confl. Bikes (#/hr)			2			6			4			2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	31.3	31.3		31.3	31.3			14.0			14.0	
Effective Green, g (s)	31.3	31.3		31.3	31.3			14.0			14.0	
Actuated g/C Ratio	0.57	0.57		0.57	0.57			0.25			0.25	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2			0.2	
Lane Grp Cap (vph)	409	1037		633	1024			378			659	
v/s Ratio Prot		0.12			c0.29							
v/s Ratio Perm	0.06			0.01				0.03			c0.04	
v/c Ratio	0.10	0.22		0.01	0.50			0.11			0.15	
Uniform Delay, d1	5.5	5.9		5.3	7.3			15.9			16.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.0	0.0		0.0	0.1			0.0			0.0	
Delay (s)	5.6	6.0		5.3	7.4			15.9			16.1	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		5.9			7.4			15.9			16.1	
Approach LOS		A			A			B			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			8.8			HCM Level of Service					A	
HCM Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			55.3			Sum of lost time (s)				10.0		
Intersection Capacity Utilization			54.9%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												



















National Ave Master Plan  
6: 31st St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	226	6	3	530	25	10	3	5	6	8	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	37	263	7	3	616	29	12	3	6	7	9	19
Pedestrians		7			19			15			41	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			2			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		673			610							
pX, platoon unblocked	0.90						0.90	0.90		0.90	0.90	0.90
vC, conflicting volume	686			285			1009	1049	300	1043	1038	679
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	599			285			956	1000	300	993	988	590
iC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
iC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			94	98	99	96	95	96
cM capacity (veh/h)	853			1261			181	200	718	175	203	440
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	37	270	3	645	21	35						
Volume Left	37	0	3	0	12	7						
Volume Right	0	7	0	29	6	19						
cSH	853	1700	1261	1700	233	273						
Volume to Capacity	0.04	0.16	0.00	0.38	0.09	0.13						
Queue Length 95th (ft)	3	0	0	0	7	11						
Control Delay (s)	9.4	0.0	7.9	0.0	22.0	20.1						
Lane LOS	A		A		C	C						
Approach Delay (s)	1.1		0.0		22.0	20.1						
Approach LOS					C	C						
<b>Intersection Summary</b>												
Average Delay			1.5									
Intersection Capacity Utilization			44.3%		ICU Level of Service				A			
Analysis Period (min)			15									

National Ave Master Plan  
7: 32nd St & National Ave

Existing AM  
4/5/2013






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	193	28	45	450	31	54	22	15	23	62	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4			4.4			4.4	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			0.99			1.00	
Frt	1.00	0.98		1.00	0.99			0.98			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	
Satd. Flow (prot)	1752	1816		1731	1840			1734			1750	
Flt Permitted	0.41	1.00		0.61	1.00			0.77			0.92	
Satd. Flow (perm)	764	1816		1111	1840			1371			1618	
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)	32	210	30	49	489	34	59	24	16	25	67	33
RTOR Reduction (vph)	0	6	0	0	3	0	0	8	0	0	15	0
Lane Group Flow (vph)	32	234	0	49	520	0	0	91	0	0	110	0
Confl. Peds. (#/hr)	20		29	29		20	32		25	25		32
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	19.2	19.2		19.2	19.2			7.5			7.5	
Effective Green, g (s)	19.2	19.2		19.2	19.2			7.5			7.5	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.21			0.21	
Clearance Time (s)	4.4	4.4		4.4	4.4			4.4			4.4	
Vehicle Extension (s)	2.6	2.6		2.6	2.6			2.0			2.0	
Lane Grp Cap (vph)	413	982		601	995			290			342	
v/s Ratio Prot		0.13			c0.28							
v/s Ratio Perm	0.04			0.04				0.07			c0.07	
v/c Ratio	0.08	0.24		0.08	0.52			0.31			0.32	
Uniform Delay, d1	3.9	4.3		3.9	5.2			11.8			11.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.1		0.0	0.4			0.2			0.2	
Delay (s)	4.0	4.4		4.0	5.6			12.1			12.0	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		4.3			5.5			12.1			12.0	
Approach LOS		A			A			B			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			6.6								A	
HCM Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			35.5							8.8		
Intersection Capacity Utilization			59.9%								B	
ICU Level of Service												
Analysis Period (min)			15									

c Critical Lane Group






















National Ave Master Plan  
8: 33rd St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	242	1	1	551	37	1	0	1	22	2	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	12	295	1	1	672	45	1	0	1	27	2	7
Pedestrians		6			3			14			34	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		649										
pX, platoon unblocked												
vC, conflicting volume	751			310			1022	1087	312	1032	1043	712
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	751			310			1022	1087	312	1032	1043	712
iC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
iC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			99	100	100	86	99	98
cM capacity (veh/h)	834			1236			197	204	718	196	217	418
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	12	295	1	1	672	45	2	37				
Volume Left	12	0	0	1	0	0	1	27				
Volume Right	0	0	1	0	0	45	1	7				
cSH	834	1700	1700	1236	1700	1700	309	221				
Volume to Capacity	0.01	0.17	0.00	0.00	0.40	0.03	0.01	0.17				
Queue Length 95th (ft)	1	0	0	0	0	0	1	15				
Control Delay (s)	9.4	0.0	0.0	7.9	0.0	0.0	16.8	24.5				
Lane LOS	A			A			C	C				
Approach Delay (s)	0.4			0.0			16.8	24.5				
Approach LOS							C	C				
<b>Intersection Summary</b>												
Average Delay			1.0									
Intersection Capacity Utilization			40.8%		ICU Level of Service			A				
Analysis Period (min)			15									



















National Ave Master Plan  
9: 35th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	190	31	13	508	92	45	36	13	27	33	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6		4.6	4.6			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			0.99	
Frt	1.00	0.98		1.00	0.98			0.98			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1752	1815		1755	1805			1766			1692	
Flt Permitted	0.28	1.00		0.59	1.00			0.85			0.89	
Satd. Flow (perm)	507	1815		1096	1805			1530			1530	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	40	232	38	16	620	112	55	44	16	33	40	65
RTOR Reduction (vph)	0	5	0	0	5	0	0	6	0	0	38	0
Lane Group Flow (vph)	40	265	0	16	727	0	0	109	0	0	100	0
Confl. Peds. (#/hr)	37		14	14		37	3		33	33		3
Confl. Bikes (#/hr)			3			2			7			1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	23.4	23.4		23.4	23.4			7.8			7.8	
Effective Green, g (s)	23.4	23.4		23.4	23.4			7.8			7.8	
Actuated g/C Ratio	0.58	0.58		0.58	0.58			0.19			0.19	
Clearance Time (s)	4.6	4.6		4.6	4.6			4.2			4.2	
Vehicle Extension (s)	2.4	2.4		2.4	2.4			2.0			2.0	
Lane Grp Cap (vph)	297	1062		641	1056			298			298	
v/s Ratio Prot		0.15			c0.40							
v/s Ratio Perm	0.08			0.01				c0.07			0.07	
v/c Ratio	0.13	0.25		0.02	0.69			0.36			0.34	
Uniform Delay, d1	3.7	4.0		3.5	5.8			14.0			13.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.1		0.0	1.7			0.3			0.2	
Delay (s)	3.9	4.1		3.5	7.4			14.2			14.1	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		4.1			7.4			14.2			14.1	
Approach LOS		A			A			B			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			7.9		HCM Level of Service					A		
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			40.0		Sum of lost time (s)				8.8			
Intersection Capacity Utilization			54.1%		ICU Level of Service				A			
Analysis Period (min)			15									
c Critical Lane Group												




















National Ave Master Plan  
10: 36th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	205	8	5	567	39	46	39	5	36	28	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.2		4.0	4.5			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00			1.00			0.99	
Frt	1.00	0.99		1.00	0.99			0.99			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.98	
Satd. Flow (prot)	1770	1848		1728	1838			1789			1687	
Flt Permitted	0.95	1.00		0.95	1.00			0.84			0.88	
Satd. Flow (perm)	1770	1848		1728	1838			1534			1513	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	18	250	10	6	691	48	56	48	6	44	34	55
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	20	0
Lane Group Flow (vph)	18	259	0	6	738	0	0	108	0	0	113	0
Confl. Peds. (#/hr)	18		17	17		18	8		32	32		8
Confl. Bikes (#/hr)						4			1			1
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)	1.8	32.9		0.7	32.5			11.7			11.7	
Effective Green, g (s)	1.8	32.9		0.7	32.5			11.7			11.7	
Actuated g/C Ratio	0.03	0.56		0.01	0.56			0.20			0.20	
Clearance Time (s)	4.0	5.2		4.0	4.5			4.0			4.0	
Vehicle Extension (s)	2.0	3.1		2.0	3.1			2.0			2.0	
Lane Grp Cap (vph)	54	1039		21	1021			307			303	
v/s Ratio Prot	c0.01	0.14		0.00	c0.40							
v/s Ratio Perm								0.07			c0.07	
v/c Ratio	0.33	0.25		0.29	0.72			0.35			0.37	
Uniform Delay, d1	27.8	6.5		28.7	9.7			20.1			20.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.3	0.1		2.7	2.6			0.3			0.3	
Delay (s)	29.1	6.6		31.4	12.2			20.4			20.5	
Level of Service	C	A		C	B			C			C	
Approach Delay (s)		8.1			12.4			20.4			20.5	
Approach LOS		A			B			C			C	
<b>Intersection Summary</b>												
HCM Average Control Delay			13.0			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			58.5			Sum of lost time (s)			12.5			
Intersection Capacity Utilization			54.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												



















National Ave Master Plan  
11: 37th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	208	22	12	578	22	14	12	7	6	3	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	17	248	26	14	688	26	17	14	8	7	4	26
Pedestrians		5			3			10			19	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			2	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		646			684							
pX, platoon unblocked	0.80						0.80	0.80		0.80	0.80	0.80
vC, conflicting volume	733			284			1054	1066	274	1048	1066	725
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	542			284			942	957	274	935	957	531
iC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
iC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			90	93	99	96	98	94
cM capacity (veh/h)	809			1268			170	195	757	173	195	430
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	17	274	14	714	39	37						
Volume Left	17	0	14	0	17	7						
Volume Right	0	26	0	26	8	26						
cSH	809	1700	1268	1700	216	306						
Volume to Capacity	0.02	0.16	0.01	0.42	0.18	0.12						
Queue Length 95th (ft)	2	0	1	0	16	10						
Control Delay (s)	9.5	0.0	7.9	0.0	25.4	18.4						
Lane LOS	A		A		D	C						
Approach Delay (s)	0.5		0.2		25.4	18.4						
Approach LOS					D	C						
<b>Intersection Summary</b>												
Average Delay			1.8									
Intersection Capacity Utilization			43.4%		ICU Level of Service				A			
Analysis Period (min)			15									



















National Ave Master Plan  
12: 38th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	155	32	19	485	33	104	52	18	19	36	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.97	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.99			0.99			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	
Satd. Flow (prot)	1759	1796		1716	1841			1768			1740	
Flt Permitted	0.31	1.00		0.62	1.00			0.77			0.91	
Satd. Flow (perm)	572	1796		1125	1841			1404			1610	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	10	180	37	22	564	38	121	60	21	22	42	30
RTOR Reduction (vph)	0	7	0	0	2	0	0	4	0	0	17	0
Lane Group Flow (vph)	10	210	0	22	600	0	0	198	0	0	77	0
Confl. Peds. (#/hr)	13		30	30		13	8		15	15		8
Confl. Bikes (#/hr)			2			2						1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4				8
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	24.1	24.1		24.1	24.1			14.0			14.0	
Effective Green, g (s)	24.1	24.1		24.1	24.1			14.0			14.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.30			0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	5.6	5.6		5.6	5.6			3.9			3.9	
Lane Grp Cap (vph)	299	939		588	962			426			489	
v/s Ratio Prot		0.12			c0.33							
v/s Ratio Perm	0.02			0.02				c0.14			0.05	
v/c Ratio	0.03	0.22		0.04	0.62			0.46			0.16	
Uniform Delay, d1	5.3	5.9		5.4	7.8			13.0			11.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.3		0.1	2.0			1.1			0.2	
Delay (s)	5.5	6.3		5.4	9.8			14.1			11.9	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		6.2			9.6			14.1			11.9	
Approach LOS		A			A			B			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			9.9		HCM Level of Service				A			
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			46.1		Sum of lost time (s)			8.0				
Intersection Capacity Utilization			50.8%		ICU Level of Service			A				
Analysis Period (min)			15									
c Critical Lane Group												




















National Ave Master Plan  
13: 39th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	178	6	8	495	26	2	5	12	18	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	193	7	9	538	28	2	5	13	20	11	33
Pedestrians		4			6			4			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		661										
pX, platoon unblocked												
vC, conflicting volume	575			204			826	822	207	822	811	565
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	575			204			826	822	207	822	811	565
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	98	98	93	96	94
cM capacity (veh/h)	990			1363			257	299	827	274	304	519
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	14	200	9	566	21	63						
Volume Left	14	0	9	0	2	20						
Volume Right	0	7	0	28	13	33						
cSH	990	1700	1363	1700	487	371						
Volume to Capacity	0.01	0.12	0.01	0.33	0.04	0.17						
Queue Length 95th (ft)	1	0	0	0	3	15						
Control Delay (s)	8.7	0.0	7.7	0.0	12.7	16.7						
Lane LOS	A		A		B	C						
Approach Delay (s)	0.6		0.1		12.7	16.7						
Approach LOS					B	C						
<b>Intersection Summary</b>												
Average Delay			1.7									
Intersection Capacity Utilization			42.6%		ICU Level of Service				A			
Analysis Period (min)			15									




















National Ave Master Plan  
14: 40th St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	172	31	39	471	6	41	18	47	8	5	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	3	183	33	41	501	6	44	19	50	9	5	5
Pedestrians		23			33			23			28	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			3			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	535			239			844	847	255	897	861	555
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	535			239			844	847	255	897	861	555
iC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
iC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			83	93	93	96	98	99
cM capacity (veh/h)	1008			1302			250	276	747	206	271	509
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	3	216	41	507	113	19						
Volume Left	3	0	41	0	44	9						
Volume Right	0	33	0	6	50	5						
cSH	1008	1700	1302	1700	363	268						
Volume to Capacity	0.00	0.13	0.03	0.30	0.31	0.07						
Queue Length 95th (ft)	0	0	2	0	32	6						
Control Delay (s)	8.6	0.0	7.9	0.0	19.3	19.4						
Lane LOS	A		A		C	C						
Approach Delay (s)	0.1		0.6		19.3	19.4						
Approach LOS					C	C						
<b>Intersection Summary</b>												
Average Delay			3.2									
Intersection Capacity Utilization			50.3%		ICU Level of Service				A			
Analysis Period (min)			15									

National Ave Master Plan  
15: 41st St & National Ave

Existing AM  
4/5/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	198	4	20	523	63	11	4	24	32	1	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	24	213	4	22	562	68	12	4	26	34	1	10
Pedestrians		26			8			8			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					1230							
pX, platoon unblocked												
vC, conflicting volume	638			225			912	951	231	943	920	630
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	638			225			912	951	231	943	920	630
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			95	98	97	84	100	98
cM capacity (veh/h)	939			1334			232	246	797	219	256	468
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	24	217	22	630	42	45						
Volume Left	24	0	22	0	12	34						
Volume Right	0	4	0	68	26	10						
cSH	939	1700	1334	1700	416	248						
Volume to Capacity	0.03	0.13	0.02	0.37	0.10	0.18						
Queue Length 95th (ft)	2	0	1	0	8	16						
Control Delay (s)	8.9	0.0	7.7	0.0	14.6	22.7						
Lane LOS	A		A		B	C						
Approach Delay (s)	0.9		0.3		14.6	22.7						
Approach LOS					B	C						
<b>Intersection Summary</b>												
Average Delay			2.1									
Intersection Capacity Utilization			48.4%		ICU Level of Service				A			
Analysis Period (min)			15									



National Ave Master Plan  
16: 43rd St & National Ave

Existing AM  
4/5/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	123	43	30	234	88	322	178	84	2	54	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4	4.4	4.0	4.0		4.4	4.9	4.9	4.9	4.9	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.97	1.00	0.98	
Flpb, ped/bikes	0.99	1.00	1.00	0.98	1.00		1.00	1.00	1.00	0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1748	3539	1548	1738	3355		3433	1863	1543	1750	1716	
Flt Permitted	0.54	1.00	1.00	0.67	1.00		0.95	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	997	3539	1548	1221	3355		3433	1863	1543	1172	1716	
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)	48	134	47	33	254	96	350	193	91	2	59	40
RTOR Reduction (vph)	0	0	25	0	28	0	0	0	41	0	19	0
Lane Group Flow (vph)	48	134	22	33	322	0	350	193	50	2	80	0
Confl. Peds. (#/hr)	23		24	24		23	29		25	25		29
Confl. Bikes (#/hr)			3			1			1			
Turn Type	Perm	NA	pm+ov	Perm	NA		Prot	NA	Perm	Perm	NA	
Protected Phases		4	5		8		5	2			6	
Permitted Phases	4		4	8					2	6		
Actuated Green, G (s)	11.2	11.2	21.7	11.6	11.6		10.5	25.4	25.4	10.5	10.5	
Effective Green, g (s)	11.2	11.2	21.7	11.6	11.6		10.5	25.4	25.4	10.5	10.5	
Actuated g/C Ratio	0.24	0.24	0.47	0.25	0.25		0.23	0.55	0.55	0.23	0.23	
Clearance Time (s)	4.4	4.4	4.4	4.0	4.0		4.4	4.9	4.9	4.9	4.9	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.3	2.3	2.3	2.3	
Lane Grp Cap (vph)	243	864	880	309	848		785	1031	854	268	393	
v/s Ratio Prot		0.04	0.01		c0.10		c0.10	c0.10			0.05	
v/s Ratio Perm	0.05		0.01	0.03					0.03	0.00		
v/c Ratio	0.20	0.16	0.03	0.11	0.38		0.45	0.19	0.06	0.01	0.20	
Uniform Delay, d1	13.8	13.6	6.5	13.2	14.2		15.2	5.1	4.7	13.7	14.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.0	0.0	0.1	0.1		0.1	0.1	0.0	0.0	0.2	
Delay (s)	13.9	13.7	6.5	13.2	14.3		15.3	5.2	4.7	13.7	14.5	
Level of Service	B	B	A	B	B		B	A	A	B	B	
Approach Delay (s)		12.2			14.2			10.7			14.5	
Approach LOS		B			B			B			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			12.2		HCM Level of Service				B			
HCM Volume to Capacity ratio			0.31									
Actuated Cycle Length (s)			45.9		Sum of lost time (s)				8.4			
Intersection Capacity Utilization			49.0%		ICU Level of Service				A			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	↑
Volume (veh/h)	458	14	32	190	21	221
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	482	15	34	200	22	233
Pedestrians	3			4	11	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	631					
pX, platoon unblocked						
vC, conflicting volume	508			671	263	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	508			671	263	
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			94	68	
cM capacity (veh/h)	1044			373	726	

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	321	175	100	133	22	233
Volume Left	0	0	34	0	22	0
Volume Right	0	15	0	0	0	233
cSH	1700	1700	1044	1700	373	726
Volume to Capacity	0.19	0.10	0.03	0.08	0.06	0.32
Queue Length 95th (ft)	0	0	2	0	5	35
Control Delay (s)	0.0	0.0	3.1	0.0	15.3	12.3
Lane LOS	A			C		B
Approach Delay (s)	0.0		1.3	12.5		
Approach LOS	B					

Intersection Summary						
Average Delay	3.6					
Intersection Capacity Utilization	34.0%			ICU Level of Service	A	
Analysis Period (min)	15					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	465	100	148	309	126	35	70	50	50	163	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.4		4.0	4.4			4.4			4.6	
Lane Util. Factor	1.00	0.95		1.00	1.00			0.95			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	0.98			0.96			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	
Frt	1.00	0.97		1.00	0.96			0.95			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	3412		1770	1745			3196			1723	
Flt Permitted	0.95	1.00		0.95	1.00			0.81			0.92	
Satd. Flow (perm)	1770	3412		1770	1745			2606			1600	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	94	484	104	154	322	131	36	73	52	52	170	106
RTOR Reduction (vph)	0	24	0	0	21	0	0	39	0	0	25	0
Lane Group Flow (vph)	94	564	0	154	432	0	0	122	0	0	303	0
Confl. Peds. (#/hr)	43		16	16		43	23		53	53		23
Confl. Bikes (#/hr)			2			4			1			1
Turn Type	Prot		Prot		Perm			Perm				
Protected Phases	5	2		1	6			8				4
Permitted Phases							8			4		
Actuated Green, G (s)	6.3	30.2		9.7	33.6			17.3			17.1	
Effective Green, g (s)	6.3	30.2		9.7	33.6			17.3			17.1	
Actuated g/C Ratio	0.09	0.43		0.14	0.48			0.25			0.24	
Clearance Time (s)	4.0	4.4		4.0	4.4			4.4			4.6	
Vehicle Extension (s)	2.0	3.4		2.0	3.4			2.0			2.0	
Lane Grp Cap (vph)	159	1472		245	838			644			391	
v/s Ratio Prot	0.05	0.17		c0.09	c0.25							
v/s Ratio Perm								0.05			c0.19	
v/c Ratio	0.59	0.38		0.63	0.52			0.19			0.78	
Uniform Delay, d1	30.6	13.6		28.5	12.6			20.8			24.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	3.9	0.8		3.6	2.3			0.1			8.5	
Delay (s)	34.5	14.3		32.1	14.8			20.9			33.1	
Level of Service	C	B		C	B			C			C	
Approach Delay (s)		17.1			19.2			20.9			33.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↗
Volume (vph)	489	0	0	298	291	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6			4.6	4.6	4.6
Lane Util. Factor	1.00			1.00	1.00	1.00
Frbp, ped/bikes	1.00			1.00	1.00	0.96
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frnt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1863			1863	1770	1517
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1863	1770	1517
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	509	0	0	310	303	144
RTOR Reduction (vph)	0	0	0	0	0	102
Lane Group Flow (vph)	509	0	0	310	303	42
Confl. Peds. (#/hr)		20	20		4	2
Confl. Bikes (#/hr)						1
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases	2			6	8	8
Actuated Green, G (s)	20.8			20.8	12.2	12.2
Effective Green, g (s)	20.8			20.8	12.2	12.2
Actuated g/C Ratio	0.49			0.49	0.29	0.29
Clearance Time (s)	4.6			4.6	4.6	4.6
Vehicle Extension (s)	7.7			7.7	2.0	2.0
Lane Grp Cap (vph)	918			918	512	439
v/s Ratio Prot	c0.27			0.17	c0.17	
v/s Ratio Perm						0.03
v/c Ratio	0.55			0.34	0.59	0.09
Uniform Delay, d1	7.5			6.5	12.9	11.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	2.1			0.9	1.2	0.0
Delay (s)	9.6			7.4	14.1	11.0
Level of Service	A			A	B	B
Approach Delay (s)	9.6			7.4	13.1	
Approach LOS	A			A	B	

**Intersection Summary**

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	42.2	Sum of lost time (s)	9.2
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	517	20	6	267	26	9	3	5	28	3	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	66	539	21	6	278	27	9	3	5	29	3	36
Pedestrians		15			4			14			25	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			1			2	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		327			669							
pX, platoon unblocked				0.84			0.84	0.84	0.84	0.84	0.84	
vC, conflicting volume	330			573			1038	1037	567	1010	1034	332
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	330			392			947	946	384	914	943	332
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			95	98	99	85	98	95
cM capacity (veh/h)	1204			964			171	199	546	189	200	686

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	66	559	6	305	18	69
Volume Left	66	0	6	0	9	29
Volume Right	0	21	0	27	5	36
cSH	1204	1700	964	1700	221	308
Volume to Capacity	0.05	0.33	0.01	0.18	0.08	0.22
Queue Length 95th (ft)	4	0	0	0	6	21
Control Delay (s)	8.2	0.0	8.8	0.0	22.7	20.0
Lane LOS	A		A		C	C
Approach Delay (s)	0.9		0.2		22.7	20.0
Approach LOS					C	C

**Intersection Summary**

Average Delay	2.3
Intersection Capacity Utilization	50.2%
ICU Level of Service	A
Analysis Period (min)	15

National Avenue Master Plan  
5: National Ave & 30th St

Existing PM  
4/4/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	427	25	6	220	60	24	7	11	89	25	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			0.99	
Frt	1.00	0.99		1.00	0.97			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1727	1844		1749	1781			1714			3169	
Flt Permitted	0.57	1.00		0.41	1.00			0.81			0.81	
Satd. Flow (perm)	1037	1844		748	1781			1430			2625	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	99	445	26	6	229	62	25	7	11	93	26	75
RTOR Reduction (vph)	0	3	0	0	17	0	0	7	0	0	51	0
Lane Group Flow (vph)	99	468	0	6	274	0	0	36	0	0	143	0
Confl. Peds. (#/hr)	37		41	41		37	11		16	16		11
Confl. Bikes (#/hr)			2			3			2			3
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		4		8		8	
Permitted Phases	2		6		6		4		8		8	
Actuated Green, G (s)	30.0	30.0		30.0	30.0			19.0			19.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			19.0			19.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51			0.32			0.32	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2			0.2	
Lane Grp Cap (vph)	527	938		380	906			461			845	
v/s Ratio Prot	c0.25				0.15							
v/s Ratio Perm	0.10			0.01				0.02			c0.05	
v/c Ratio	0.19	0.50		0.02	0.30			0.08			0.17	
Uniform Delay, d1	7.9	9.5		7.2	8.4			13.9			14.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.2		0.0	0.1			0.0			0.0	
Delay (s)	7.9	9.7		7.2	8.5			13.9			14.4	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		9.4			8.5			13.9			14.4	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	498	11	11	275	17	3	2	8	14	5	18
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	25	524	12	12	289	18	3	2	8	15	5	19
Pedestrians		11			28			11			16	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			2			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		673			610							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	323			547			937	938	569	950	935	325
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	323			411			856	858	436	871	854	325
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			99	99	98	93	98	97
cM capacity (veh/h)	1220			996			219	244	525	214	245	700

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	25	536	12	307	14	39
Volume Left	25	0	12	0	3	15
Volume Right	0	12	0	18	8	19
cSH	1220	1700	996	1700	350	332
Volume to Capacity	0.02	0.32	0.01	0.18	0.04	0.12
Queue Length 95th (ft)	2	0	1	0	3	10
Control Delay (s)	8.0	0.0	8.7	0.0	15.7	17.3
Lane LOS	A		A		C	C
Approach Delay (s)	0.4		0.3		15.7	17.3
Approach LOS					C	C

**Intersection Summary**

Average Delay	1.3
Intersection Capacity Utilization	43.0%
ICU Level of Service	A
Analysis Period (min)	15

National Avenue Master Plan  
7: National Ave & 32nd St

Existing PM  
4/4/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	428	58	38	192	50	61	30	71	59	86	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4			4.4			4.4	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	0.99			0.98			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.97			0.94			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.98	
Satd. Flow (prot)	1757	1819		1747	1794			1689			1765	
Flt Permitted	0.60	1.00		0.40	1.00			0.84			0.87	
Satd. Flow (perm)	1101	1819		729	1794			1447			1557	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	60	470	64	42	211	55	67	33	78	65	95	41
RTOR Reduction (vph)	0	6	0	0	11	0	0	32	0	0	10	0
Lane Group Flow (vph)	60	528	0	42	255	0	0	146	0	0	191	0
Confl. Peds. (#/hr)	9		27	27		9	11		19	19		11
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	19.2	19.2		19.2	19.2			8.4			8.4	
Effective Green, g (s)	19.2	19.2		19.2	19.2			8.4			8.4	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.23			0.23	
Clearance Time (s)	4.4	4.4		4.4	4.4			4.4			4.4	
Vehicle Extension (s)	2.6	2.6		2.6	2.6			2.0			2.0	
Lane Grp Cap (vph)	581	959		385	946			334			359	
v/s Ratio Prot		c0.29			0.14							
v/s Ratio Perm	0.05			0.06				0.10			c0.12	
v/c Ratio	0.10	0.55		0.11	0.27			0.44			0.53	
Uniform Delay, d1	4.3	5.7		4.3	4.7			12.0			12.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.6		0.1	0.1			0.3			0.8	
Delay (s)	4.4	6.3		4.4	4.9			12.3			13.0	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		6.1			4.8			12.3			13.0	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	36.4	Sum of lost time (s)	8.8
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



National Avenue Master Plan  
8: National Ave & 33rd St

Existing PM  
4/4/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	526	1	0	298	18	0	1	1	28	0	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	19	578	1	0	327	20	0	1	1	31	0	12
Pedestrians		6			8			15			35	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		649										
pX, platoon unblocked				0.96			0.96	0.96	0.96	0.96	0.96	
vC, conflicting volume	382			594			976	1013	601	988	994	368
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	382			552			952	990	559	964	970	368
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	100	85	100	98
cM capacity (veh/h)	1142			961			211	222	495	206	228	654

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	19	578	1	0	327	20	2	43
Volume Left	19	0	0	0	0	0	0	31
Volume Right	0	0	1	0	0	20	1	12
cSH	1142	1700	1700	1700	1700	1700	307	255
Volume to Capacity	0.02	0.34	0.00	0.00	0.19	0.01	0.01	0.17
Queue Length 95th (ft)	1	0	0	0	0	0	1	15
Control Delay (s)	8.2	0.0	0.0	0.0	0.0	0.0	16.8	21.9
Lane LOS	A						C	C
Approach Delay (s)	0.3			0.0			16.8	21.9
Approach LOS							C	C

Intersection Summary

Average Delay	1.1
Intersection Capacity Utilization	44.2%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	430	60	18	251	47	29	39	26	112	50	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6		4.6	4.6			4.2			4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.98			1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			0.97	
Frt	1.00	0.98		1.00	0.98			0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1739	1820		1757	1805			1723			1706	
Flt Permitted	0.57	1.00		0.40	1.00			0.87			0.77	
Satd. Flow (perm)	1050	1820		738	1805			1522			1356	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	71	443	62	19	259	48	30	40	27	115	52	39
RTOR Reduction (vph)	0	5	0	0	7	0	0	14	0	0	9	0
Lane Group Flow (vph)	71	500	0	19	300	0	0	83	0	0	197	0
Confl. Peds. (#/hr)	26		15	15		26	3		58	58		3
Confl. Bikes (#/hr)			2			4			5			1
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases		2			6			4				8
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	19.3	19.3		19.3	19.3			11.2			11.2	
Effective Green, g (s)	19.3	19.3		19.3	19.3			11.2			11.2	
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.28			0.28	
Clearance Time (s)	4.6	4.6		4.6	4.6			4.2			4.2	
Vehicle Extension (s)	2.4	2.4		2.4	2.4			2.0			2.0	
Lane Grp Cap (vph)	516	894		362	886			434			386	
v/s Ratio Prot		c0.27			0.17							
v/s Ratio Perm	0.07			0.03				0.05			c0.15	
v/c Ratio	0.14	0.56		0.05	0.34			0.19			0.51	
Uniform Delay, d1	5.5	7.0		5.2	6.1			10.6			11.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.6		0.0	0.1			0.1			0.5	
Delay (s)	5.5	7.6		5.3	6.3			10.7			12.2	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		7.3			6.2			10.7			12.2	
Approach LOS		A			A			B			B	

**Intersection Summary**

HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	39.3	Sum of lost time (s)	8.8
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	566	25	14	284	28	27	26	13	105	37	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.2		4.0	4.5			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00			0.99			0.99	
Frt	1.00	0.99		1.00	0.99			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	
Satd. Flow (prot)	1770	1845		1730	1825			1750			1716	
Flt Permitted	0.95	1.00		0.95	1.00			0.85			0.79	
Satd. Flow (perm)	1770	1845		1730	1825			1520			1395	
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)	30	615	27	15	309	30	29	28	14	114	40	47
RTOR Reduction (vph)	0	1	0	0	3	0	0	7	0	0	8	0
Lane Group Flow (vph)	30	641	0	15	336	0	0	64	0	0	193	0
Confl. Peds. (#/hr)	30		28	28		30	19		16	16		19
Confl. Bikes (#/hr)			3			4			1			2
Turn Type	Prot		Prot		Perm			Perm				
Protected Phases	5	2		1	6			4				8
Permitted Phases							4			8		
Actuated Green, G (s)	2.2	28.5		0.8	27.8			15.7			15.7	
Effective Green, g (s)	2.2	28.5		0.8	27.8			15.7			15.7	
Actuated g/C Ratio	0.04	0.49		0.01	0.48			0.27			0.27	
Clearance Time (s)	4.0	5.2		4.0	4.5			4.0			4.0	
Vehicle Extension (s)	2.0	3.1		2.0	3.1			2.0			2.0	
Lane Grp Cap (vph)	67	903		24	872			410			376	
v/s Ratio Prot	c0.02	c0.35		0.01	0.18							
v/s Ratio Perm								0.04			c0.14	
v/c Ratio	0.45	0.71		0.62	0.39			0.16			0.51	
Uniform Delay, d1	27.4	11.6		28.6	9.7			16.2			18.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.7	2.6		31.2	0.3			0.1			0.5	
Delay (s)	29.1	14.2		59.8	10.0			16.3			18.5	
Level of Service	C	B		E	B			B			B	
Approach Delay (s)		14.9			12.1			16.3			18.5	
Approach LOS		B			B			B			B	

**Intersection Summary**

HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

National Avenue Master Plan  
11: National Ave & 37th St

Existing PM  
4/4/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	587	60	11	277	12	21	9	15	16	7	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	645	66	12	304	13	23	10	16	18	8	12
Pedestrians		10			5			23			33	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		646			684							
pX, platoon unblocked				0.73			0.73	0.73	0.73	0.73	0.73	
vC, conflicting volume	351			734			1099	1120	706	1084	1146	354
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	351			448			950	978	410	928	1014	354
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			85	94	96	88	95	98
cM capacity (veh/h)	1175			794			151	168	457	152	160	665

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	22	711	12	318	49	37
Volume Left	22	0	12	0	23	18
Volume Right	0	66	0	13	16	12
cSH	1175	1700	794	1700	200	205
Volume to Capacity	0.02	0.42	0.02	0.19	0.25	0.18
Queue Length 95th (ft)	1	0	1	0	23	16
Control Delay (s)	8.1	0.0	9.6	0.0	28.9	26.4
Lane LOS	A		A		D	D
Approach Delay (s)	0.2		0.4		28.9	26.4
Approach LOS					D	D

Intersection Summary

Average Delay	2.4
Intersection Capacity Utilization	47.6%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	485	99	29	240	39	49	50	42	70	92	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.98	
Satd. Flow (prot)	1738	1802		1757	1812			1742			1790	
Flt Permitted	0.57	1.00		0.29	1.00			0.85			0.84	
Satd. Flow (perm)	1036	1802		537	1812			1510			1524	
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)	32	527	108	32	261	42	53	54	46	76	100	24
RTOR Reduction (vph)	0	7	0	0	6	0	0	16	0	0	5	0
Lane Group Flow (vph)	32	628	0	32	297	0	0	137	0	0	195	0
Confl. Peds. (#/hr)	20		16	16		20	3		4	4		3
Confl. Bikes (#/hr)			2			2						2
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		4		8		8	
Permitted Phases	2		6		6		4		8		8	
Actuated Green, G (s)	24.9	24.9		24.9	24.9			13.7			13.7	
Effective Green, g (s)	24.9	24.9		24.9	24.9			13.7			13.7	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.29			0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	5.6	5.6		5.6	5.6			3.9			3.9	
Lane Grp Cap (vph)	554	963		287	968			444			448	
v/s Ratio Prot	c0.35				0.16							
v/s Ratio Perm	0.03			0.06				0.09			c0.13	
v/c Ratio	0.06	0.65		0.11	0.31			0.31			0.44	
Uniform Delay, d1	5.2	7.8		5.4	6.0			12.8			13.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	2.4		0.4	0.5			0.5			0.9	
Delay (s)	5.3	10.1		5.8	6.5			13.3			14.2	
Level of Service	A	B		A	A			B			B	
Approach Delay (s)		9.9			6.4			13.3			14.2	
Approach LOS		A			A			B			B	

**Intersection Summary**

HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

National Avenue Master Plan  
13: National Ave & 39th St

Existing PM  
4/4/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	568	24	19	291	19	3	5	7	37	12	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	631	27	21	323	21	3	6	8	41	13	21
Pedestrians		5			4			14			14	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		661										
pX, platoon unblocked				0.83			0.83	0.83	0.83	0.83	0.83	
vC, conflicting volume	358			672			1079	1081	662	1058	1084	353
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	358			504			994	997	493	969	1000	353
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			98	97	98	77	93	97
cM capacity (veh/h)	1186			872			161	192	472	176	191	680

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	11	658	21	344	17	76
Volume Left	11	0	21	0	3	41
Volume Right	0	27	0	21	8	21
cSH	1186	1700	872	1700	252	226
Volume to Capacity	0.01	0.39	0.02	0.20	0.07	0.33
Queue Length 95th (ft)	1	0	2	0	5	35
Control Delay (s)	8.1	0.0	9.2	0.0	20.3	28.8
Lane LOS	A		A		C	D
Approach Delay (s)	0.1		0.5		20.3	28.8
Approach LOS					C	D

Intersection Summary

Average Delay		2.5				
Intersection Capacity Utilization		47.7%		ICU Level of Service		A
Analysis Period (min)		15				

National Avenue Master Plan  
14: National Ave & 40th St

Existing PM  
4/4/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	526	73	20	274	6	36	9	36	8	6	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	572	79	22	298	7	39	10	39	9	7	8
Pedestrians		14			17			25			19	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	323			676			1016	1016	653	1009	1053	334
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	323			676			1016	1016	653	1009	1053	334
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			80	96	91	95	97	99
cM capacity (veh/h)	1217			896			192	222	451	178	212	688

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	7	651	22	304	88	23
Volume Left	7	0	22	0	39	9
Volume Right	0	79	0	7	39	8
cSH	1217	1700	896	1700	263	252
Volume to Capacity	0.01	0.38	0.02	0.18	0.33	0.09
Queue Length 95th (ft)	0	0	2	0	35	7
Control Delay (s)	8.0	0.0	9.1	0.0	25.4	20.7
Lane LOS	A		A		D	C
Approach Delay (s)	0.1		0.6		25.4	20.7
Approach LOS					D	C

Intersection Summary

Average Delay	2.7
Intersection Capacity Utilization	48.9%
ICU Level of Service	A
Analysis Period (min)	15

National Avenue Master Plan  
15: National Ave & 41st St

Existing PM  
4/4/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	521	6	23	299	33	4	10	30	43	3	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	33	620	7	27	356	39	5	12	36	51	4	14
Pedestrians		37			6			12			4	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			1			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					1230							
pX, platoon unblocked												
vC, conflicting volume	399			639			1166	1156	642	1169	1140	417
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	399			639			1166	1156	642	1169	1140	417
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			97	93	92	63	98	98
cM capacity (veh/h)	1156			935			149	183	467	140	187	614

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	33	627	27	395	52	69
Volume Left	33	0	27	0	5	51
Volume Right	0	7	0	39	36	14
cSH	1156	1700	935	1700	302	169
Volume to Capacity	0.03	0.37	0.03	0.23	0.17	0.41
Queue Length 95th (ft)	2	0	2	0	15	45
Control Delay (s)	8.2	0.0	9.0	0.0	19.4	40.1
Lane LOS	A		A		C	E
Approach Delay (s)	0.4		0.6		19.4	40.1
Approach LOS					C	E

Intersection Summary

Average Delay		3.6				
Intersection Capacity Utilization		47.0%		ICU Level of Service		A
Analysis Period (min)		15				





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	213	326	93	145	27	171	157	111	25	206	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4	4.4	4.0	4.0		4.4	4.9	4.9	4.9	4.9	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	0.98	1.00	1.00	0.98	1.00		1.00	1.00	1.00	0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1733	3539	1546	1743	3429		3433	1863	1549	1756	1813	
Flt Permitted	0.64	1.00	1.00	0.61	1.00		0.95	1.00	1.00	0.65	1.00	
Satd. Flow (perm)	1161	3539	1546	1119	3429		3433	1863	1549	1204	1813	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	40	227	347	99	154	29	182	167	118	27	219	37
RTOR Reduction (vph)	0	0	202	0	11	0	0	0	52	0	4	0
Lane Group Flow (vph)	40	227	145	99	172	0	182	167	66	27	252	0
Confl. Peds. (#/hr)	29		23	23		29	17		17	17		17
Confl. Bikes (#/hr)						1			2			
Turn Type	Perm		pm+ov	Perm			Prot		Perm	Perm		
Protected Phases		4	5		8		5	2				6
Permitted Phases	4		4	8					2	6		
Actuated Green, G (s)	11.6	11.6	19.7	12.0	12.0		8.1	26.4	26.4	13.9	13.9	
Effective Green, g (s)	11.6	11.6	19.7	12.0	12.0		8.1	26.4	26.4	13.9	13.9	
Actuated g/C Ratio	0.25	0.25	0.42	0.25	0.25		0.17	0.56	0.56	0.29	0.29	
Clearance Time (s)	4.4	4.4	4.4	4.0	4.0		4.4	4.9	4.9	4.9	4.9	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.3	2.3	2.3	2.3	
Lane Grp Cap (vph)	285	868	788	284	870		588	1040	865	354	533	
v/s Ratio Prot		0.06	0.03		0.05		c0.05	0.09				c0.14
v/s Ratio Perm	0.03		0.06	c0.09					0.04	0.02		
v/c Ratio	0.14	0.26	0.18	0.35	0.20		0.31	0.16	0.08	0.08	0.47	
Uniform Delay, d1	14.0	14.4	8.7	14.5	13.9		17.2	5.1	4.8	12.1	13.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.0	0.3	0.0		0.1	0.0	0.0	0.1	0.4	
Delay (s)	14.0	14.5	8.8	14.7	13.9		17.3	5.1	4.8	12.1	14.1	
Level of Service	B	B	A	B	B		B	A	A	B	B	
Approach Delay (s)		11.2			14.2			9.8			13.9	
Approach LOS		B			B			A			B	

**Intersection Summary**

HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	13.3
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

**APPENDIX G: TRANSIT LEVEL OF SERVICE WORKSHEETS**



## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	1	4	52%	0%	100%	0.30	No
2	0	0	00%	0%	0%	0.00	No
3	1	4	52%	0%	100%	0.30	No
4	0	0	00%	0%	0%	0.00	No
5	1	4	52%	0%	0%	0.28	No
6	0	0	00%	0%	0%	0.00	No
7	1	4	52%	0%	100%	0.28	No
8	2	4	52%	0%	100%	0.28	No
9	1	4	52%	0%	0%	0.25	No
10	0	0	00%	0%	0%	0.00	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrsectn (sec)	Transit Travel Speed (mph)
1	653	18.7	6.9	20.0	5.0	31.9	55.6	7.4	7.1
2	294	16.4	6.0	0.0	0.0	6.0	12.2	3.3	12.9
3	382	6.6	2.4	20.0	5.0	27.4	66.6	4.3	3.7
4	651	28.1	10.3	0.0	0.0	10.3	15.8	7.4	19.2
5	684	19.8	7.3	20.0	5.0	32.3	55.8	7.8	7.3
6	599	27.1	9.9	0.0	0.0	9.9	15.1	6.8	18.7
7	672	19.4	7.1	20.0	5.0	32.1	55.7	7.6	7.2
8	1307	18.7	6.9	20.0	5.0	31.9	111.3	14.9	7.1
9	683	19.8	7.2	20.0	5.0	32.2	55.8	7.8	7.3
10	657	34.0	12.5	0.0	0.0	12.5	13.2	7.5	21.7
Total/Avg	6582								8.4

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	2.7951	0.6585	1.8407	2.02	3.54	D
2	0	NaN	0.0000	2.16	6.32	F
3	2.7951	0.5766	1.6118	1.65	3.83	D
4	0	NaN	0.0000	1.59	6.24	F
5	2.7951	0.6626	1.8522	1.46	3.44	C
6	0	NaN	0.0000	0.99	6.15	F
7	2.7951	0.6618	1.8499	2.01	3.53	D
8	2.7951	0.6586	1.8409	2.18	3.57	D
9	2.7951	0.6625	1.8517	2.22	3.56	D
10	0	NaN	0.0000	1.85	6.28	F
Average					4.45	E

## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	1	4	52%	0%	0%	0.25	No
2	0	0	00%	0%	0%	0.00	No
3	1	4	52%	0%	0%	0.25	No
4	1	4	52%	0%	0%	0.25	No
5	0	0	00%	0%	0%	0.00	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrsctn (sec)	Transit Travel Speed (mph)
1	657	18.9	3.6	10.4	5.0	19.0	42.7	7.5	8.9
2	673	33.7	12.4	0.0	0.0	12.4	13.6	7.6	21.6
3	665	19.1	0.0	0.0	5.0	5.0	28.7	7.6	12.5
4	651	18.6	0.0	0.0	5.0	5.0	28.8	7.4	12.3
5	1058	32.7	12.0	0.0	0.0	12.0	22.0	12.0	21.2
Total/Avg	3704								14.2

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	2.7951	0.6899	1.9284	1.54	3.34	C
2	0	NaN	0.0000	1.68	6.25	F
3	2.7951	0.7376	2.0618	1.37	3.11	C
4	2.7951	0.7348	2.0538	2.11	3.24	C
5	0	NaN	0.0000	1.97	6.30	F
Average					4.65	E

## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	1	8	56%	0%	100%	0.60	No
2	0	0	00%	0%	0%	0.00	No
3	1	8	56%	0%	100%	0.63	No
4	0	0	00%	0%	0%	0.00	No
5	1	8	56%	0%	0%	0.58	No
6	0	0	00%	0%	0%	0.00	No
7	1	8	56%	0%	100%	0.55	No
8	2	8	56%	0%	100%	0.53	No
9	1	8	56%	0%	0%	0.48	No
10	0	0	00%	0%	0%	0.00	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrscn (sec)	Transit Travel Speed (mph)
1	653	18.7	6.9	20.0	5.0	31.9	55.6	7.4	7.1
2	294	16.2	5.9	0.0	0.0	5.9	12.4	3.3	12.8
3	382	6.6	2.4	20.0	5.0	27.4	66.6	4.3	3.7
4	651	27.4	10.1	0.0	0.0	10.1	16.2	7.4	18.8
5	684	19.8	7.3	20.0	5.0	32.3	55.8	7.8	7.3
6	599	26.3	9.6	0.0	0.0	9.6	15.5	6.8	18.3
7	672	19.4	7.1	20.0	5.0	32.1	55.7	7.6	7.2
8	1307	18.7	6.9	20.0	5.0	31.9	111.3	14.9	7.1
9	683	19.8	7.2	20.0	5.0	32.2	55.8	7.8	7.3
10	657	33.1	12.1	0.0	0.0	12.1	13.5	7.5	21.3
Total/Avg	6582								8.4

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	3.3437	0.6702	2.2410	2.39	3.00	C
2	0	NaN	0.0000	2.53	6.38	F
3	3.3437	0.5814	1.9440	2.15	3.41	C
4	0	NaN	0.0000	2.05	6.31	F
5	3.3437	0.6748	2.2562	2.11	2.93	C
6	0	NaN	0.0000	1.71	6.26	F
7	3.3437	0.6739	2.2531	2.57	3.01	C
8	3.3437	0.6703	2.2413	2.87	3.07	C
9	3.3437	0.6746	2.2556	3.01	3.07	C
10	0	NaN	0.0000	2.71	6.41	F
Average					4.15	D

## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	1	8	56%	0%	0%	0.40	No
2	0	0	00%	0%	0%	0.00	No
3	1	8	56%	0%	0%	0.40	No
4	1	8	56%	0%	0%	0.38	No
5	0	0	00%	0%	0%	0.00	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrsctn (sec)	Transit Travel Speed (mph)
1	657	18.9	3.7	10.6	5.0	19.3	43.0	7.5	8.9
2	673	32.2	11.8	0.0	0.0	11.8	14.3	7.6	21.0
3	665	19.1	0.0	0.0	5.0	5.0	28.7	7.6	12.5
4	651	18.6	0.0	0.0	5.0	5.0	28.8	7.4	12.3
5	1058	32.4	11.9	0.0	0.0	11.9	22.2	12.0	21.1
Total/Avg	3704								14.1

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	3.3437	0.7043	2.3548	2.37	2.82	C
2	0	NaN	0.0000	2.56	6.38	F
3	3.3437	0.7591	2.5383	2.13	2.51	B
4	3.3437	0.7559	2.5274	2.76	2.62	B
5	0	NaN	0.0000	2.18	6.33	F
Average					4.38	E

## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	1	6.5	52%	0%	100%	0.75	No
2	1	6.5	52%	100%	100%	0.85	No
3	0	0	00%	0%	0%	0.00	No
4	1	6.5	52%	0%	0%	0.85	No
5	1	6.5	52%	0%	100%	0.88	No
6	0	0	00%	0%	0%	0.00	No
7	2	6.5	52%	50%	50%	0.93	No
8	0	0	00%	0%	0%	0.00	No
9	1	6.5	52%	0%	100%	0.93	No
10	1	6.5	52%	0%	100%	0.93	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrsrctn (sec)	Transit Travel Speed (mph)
1	665	19.1	3.9	11.2	5.0	20.1	43.8	7.6	8.8
2	661	19.0	0.0	0.0	5.0	5.0	28.7	7.5	12.4
3	1318	36.0	13.2	0.0	0.0	13.2	24.9	15.0	22.5
4	650	18.6	6.8	20.0	5.0	31.8	55.6	7.4	7.0
5	619	17.5	6.4	20.0	5.0	31.4	55.6	7.0	6.7
6	649	27.5	5.8	0.0	0.0	5.8	16.1	7.4	18.9
7	680	4.7	0.0	0.0	5.0	5.0	108.8	7.7	4.0
8	294	16.2	3.0	0.0	0.0	3.0	12.4	3.3	12.7
9	357	5.5	1.0	9.6	5.0	15.6	60.1	4.1	3.8
10	668	19.3	7.1	0.0	5.0	12.1	35.7	7.6	10.5
Total/Avg	6561								8.7

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	3.2082	0.6898	2.2131	2.63	3.08	C
2	3.2082	0.7454	2.3915	2.40	2.77	C
3	0	NaN	0.0000	2.97	6.44	F
4	3.2082	0.6506	2.0872	2.56	3.25	C
5	3.2082	0.6423	2.0605	2.31	3.26	C
6	0	NaN	0.0000	1.92	6.29	F
7	3.2082	0.5739	1.8413	2.42	3.60	D
8	0	NaN	0.0000	2.10	6.31	F
9	3.2082	0.5676	1.8211	2.74	3.68	D
10	3.2082	0.6982	2.2398	2.11	2.96	C
Average					4.29	E

## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	2	6.5	52%	0%	0%	0.48	No
2	1	6.5	52%	0%	0%	0.53	No
3	0	0	00%	0%	0%	0.00	No
4	0	0	00%	0%	0%	0.00	No
5	1	6.5	52%	100%	100%	0.68	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrsctn (sec)	Transit Travel Speed (mph)
1	1124	15.1	0.0	0.0	5.0	5.0	60.6	12.8	10.4
2	656	18.8	0.0	0.0	5.0	5.0	28.8	7.5	12.4
3	665	33.4	12.3	0.0	0.0	12.3	13.6	7.6	21.5
4	653	27.7	10.2	0.0	0.0	10.2	16.1	7.4	19.0
5	665	19.1	7.0	0.0	0.0	7.0	30.7	7.6	11.9
Total/Avg	3763								13.3

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	3.2082	0.7121	2.2846	2.98	3.02	C
2	3.2082	0.7358	2.3607	2.36	2.81	C
3	0	NaN	0.0000	2.59	6.39	F
4	0	NaN	0.0000	2.41	6.36	F
5	3.2082	0.7451	2.3905	2.77	2.83	C
Average					4.13	D



## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	1	4	56%	0%	100%	0.45	No
2	1	4	56%	100%	100%	0.48	No
3	0	0	00%	0%	0%	0.00	No
4	1	4	56%	0%	0%	0.50	No
5	1	4	56%	0%	100%	0.50	No
6	0	0	00%	0%	0%	0.00	No
7	2	4	56%	50%	50%	0.53	No
8	0	0	00%	0%	0%	0.00	No
9	1	4	56%	0%	100%	0.50	No
10	1	4	56%	0%	100%	0.50	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrsctn (sec)	Transit Travel Speed (mph)
1	665	19.1	3.4	9.6	5.0	18.0	41.6	7.6	9.2
2	661	19.0	3.4	9.8	5.0	18.2	41.9	7.5	9.1
3	1318	36.6	13.4	0.0	0.0	13.4	24.5	15.0	22.7
4	650	18.6	6.8	20.0	5.0	31.8	55.6	7.4	7.0
5	619	17.5	6.4	20.0	5.0	31.4	55.6	7.0	6.7
6	649	28.0	5.2	0.0	0.0	5.2	15.8	7.4	19.1
7	680	4.7	0.0	0.0	5.0	5.0	108.8	7.7	4.0
8	294	16.4	2.9	0.0	0.0	2.9	12.2	3.3	12.9
9	357	5.5	1.0	9.6	5.0	15.6	60.1	4.1	3.8
10	668	19.3	7.1	0.0	5.0	12.1	35.7	7.6	10.5
Total/Avg	6561								8.5

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	2.7951	0.7119	1.9898	1.97	3.31	C
2	2.7951	0.7215	2.0167	1.72	3.23	C
3	0	NaN	0.0000	2.35	6.35	F
4	2.7951	0.6684	1.8683	1.73	3.46	C
5	2.7951	0.6632	1.8538	1.69	3.47	C
6	0	NaN	0.0000	1.49	6.22	F
7	2.7951	0.5926	1.6563	1.78	3.78	D
8	0	NaN	0.0000	1.56	6.23	F
9	2.7951	0.5853	1.6360	2.09	3.86	D
10	2.7951	0.7332	2.0494	2.09	3.24	C
Average					4.43	E

## C. Compute Transit LOS

Street: National Avenue

## 1. Input Data

Segment	Bus Stops (#)	Transit Frequency (bus/hr)	On-Time Performance (%)	Stops with Shelter (%)	Stops with Bench (%)	Pk Load Factor (p/seat)	Central Business District
1	2	4	56%	0%	0%	0.40	No
2	1	4	56%	0%	0%	0.43	No
3	0	0	00%	0%	0%	0.00	No
4	0	0	00%	0%	0%	0.00	No
5	1	4	56%	100%	100%	0.48	No

Population 5 million or more: No

## 2. Compute Average Transit Travel Speed

Segment	Segment Length (ft)	Transit Running Speed (mph)	Accel Decel Delay (sec)	Passenger Service Delay (sec)	Re-entry Delay (sec)	Total Stop Delay (sec)	Transit Running Time (sec)	Delay at Intrscn (sec)	Transit Travel Speed (mph)
1	1124	15.1	0.0	0.0	5.0	5.0	60.6	12.8	10.4
2	656	18.8	0.0	0.0	5.0	5.0	28.8	7.5	12.4
3	665	33.9	12.4	0.0	0.0	12.4	13.4	7.6	21.7
4	653	28.2	10.3	0.0	0.0	10.3	15.8	7.4	19.2
5	665	19.1	7.0	20.0	5.0	32.0	55.7	7.6	7.2
Total/Avg	3763								11.8

## 3. Compute Transit Level of Service

Segment	Headway Factor	Perceived Trvl Time Factor	Transit Wait-Ride Score	Pedestrian Link LOS Score	Transit LOS Score	Transit LOS
1	2.7951	0.7301	2.0407	2.44	3.31	C
2	2.7951	0.7571	2.1161	2.08	3.14	C
3	0	NaN	0.0000	2.25	6.34	F
4	0	NaN	0.0000	1.62	6.24	F
5	2.7951	0.6810	1.9035	1.84	3.42	C
Average					4.34	E

**APPENDIX H: BICYCLE LEVEL OF SERVICE WORKSHEETS**



## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream	Outside Lane Width	Bike/Shldr Lane Width	Segment Through Lanes	Intrsrctn Through Lanes	Divided/ Undivided	Signal I/S Cross Dist	Unsig Conf Per Mile	Shldr Width	Bike Lane Width
Signal	(ft)	(ft)	(One-Dir)	(One-Dir)	(D / UD)	(ft)	(conf/mi)	(ft)	(ft)
1	13.0	0.0	2	2	UD	82.0	0.0	0.0	0.0
2	9.0	0.0	2	1	D	76.0	0.0	0.0	0.0
3	13.0	8.0	1	1	D	44.0	0.0	8.0	0.0
4	12.0	8.0	1	1	D	63.0	0.0	8.0	0.0
5	13.0	8.0	1	1	D	42.0	0.0	8.0	0.0
6	12.0	8.0	1	1	D	49.0	0.0	8.0	0.0
7	11.0	8.0	1	1	D	56.0	0.0	8.0	0.0
8	13.0	8.0	1	1	D	44.0	0.0	8.0	0.0
9	13.0	8.0	1	1	D	43.0	0.0	8.0	0.0
10	11.0	8.0	1	1	D	43.0	0.0	8.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream	Traffic Volume	Heavy Vehicle	Percent On-street Parking	Pavement Rating
Signal	(vph pk 15)	(%)	(%)	(#)
1	233	2%	0%	3.0
2	302	2%	0%	4.0
3	233	2%	0%	4.0
4	256	2%	35%	4.0
5	239	2%	60%	3.0
6	235	2%	100%	4.0
7	265	2%	35%	4.0
8	228	2%	25%	3.0
9	249	2%	5%	3.0
10	225	2%	50%	4.0

Pavement Rating: 1=Poor, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream Intrsrctn	Bicycle Running Speed	Bicycle Delay at Intrsrctn	Bicycle Running Time	Bicycle Travel Speed	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
	(mph)	(sec)	(sec)	(mph)		
1	15.0	10.6	29.7	11.1	2.7919	C
2	15.0	5.2	13.4	10.8	3.8638	D
3	15.0	0.0	17.4	15.0	0.0000	A
4	15.0	5.1	29.6	12.8	2.9451	C
5	15.0	0.0	31.1	15.0	0.0000	A
6	15.0	3.8	27.2	13.2	2.6965	B
7	15.0	0.0	30.5	15.0	0.0000	A
8	15.0	20.0	59.4	11.2	2.3940	B
9	15.0	5.7	31.0	12.7	2.4132	B
10	15.0	0.0	29.9	15.0	0.0000	A
Average				12.8		

Segment &	Outside	Paved	Outside	Tot Width	Eff Width	Adjstd	Thru Cntrl	Link	Segment
-----------	---------	-------	---------	-----------	-----------	--------	------------	------	---------

Downstream Intrscn	Lane Width (ft)	Shoulder Wos (ft)	Th+BL+Shldr Wt (ft)	Th+BL+Shldr Wv (ft)	OS Thru We (ft)	HV % (%)	Delay (sec)	LOS Score	National Ave (EB) AM Peak		
									Link LOS	Score	Segment LOS
1	13.0	0.0	13.0	13.0	13.0	2.0%	9.3	3.3460	C	3.5648	D
2	9.0	0.0	9.0	9.0	9.0	2.0%	9.6	2.8726	C	4.4623	E
3	13.0	6.5	19.5	19.5	26.0	2.0%	Infinity	0.8606	A	3.4715	C
4	12.0	6.5	12.0	12.0	11.5	2.0%	4.3	3.5647	D	3.9134	D
5	13.0	6.5	13.0	13.0	7.5	2.0%	Infinity	4.4250	E	3.5580	D
6	12.0	6.5	12.0	12.0	0.0	2.0%	4.8	4.1392	D	3.9839	D
7	11.0	6.5	11.0	11.0	10.5	2.0%	Infinity	3.8701	D	3.4692	C
8	13.0	6.5	13.0	13.0	14.5	2.0%	Infinity	3.6590	D	3.5560	D
9	13.0	6.5	13.0	13.0	18.5	2.0%	7.2	2.8459	C	3.6988	D
10	11.0	6.5	11.0	11.0	7.5	2.0%	Infinity	4.0573	D	3.4992	C
Average										3.6672	D

E. HCM 2010 LOS Summary

Street: National Avenue

Segment & Downstream Intrscn	Auto Segment LOS	Transit Segment LOS	Bicycle		Pedestrian			
			Link LOS	Intrscn LOS	Link LOS	Intrscn LOS	Segment LOS	
1	A	D	C	C	D	B	B	C
2	A	F	C	D	E	B	A	B
3	F	D	A	A	C	A	A	B
4	A	F	D	C	D	A	A	B
5	F	C	E	A	D	A	A	B
6	A	F	D	B	D	A	A	A
7	F	D	D	A	C	B	A	B
8	F	D	D	B	D	B	A	B
9	A	D	C	B	D	B	A	B
10	F	F	D	A	C	A	A	B
Facility	F	E			D			B
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream	Outside Lane Width (ft)	Bike/Shldr Lane Width (ft)	Segment Through Lanes (One-Dir)	Intrsrctn Through Lanes (One-Dir)	Divided/Undivided (D / UD)	Signal I/S Cross Dist (ft)	Unsig Conf Per Mile (conf/mi)	Shldr Width (ft)	Bike Lane Width (ft)
1	13.0	8.0	1	1	D	46.0	0.0	8.0	0.0
2	12.0	8.0	1	1	D	40.0	0.0	8.0	0.0
3	10.0	8.0	1	1	D	40.0	0.0	8.0	0.0
4	10.0	8.0	1	1	D	43.0	0.0	8.0	0.0
5	15.0	8.0	1	2	D	81.0	0.0	8.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream	Traffic Volume (vph pk 15)	Heavy Vehicle (%)	Percent On-street Parking	Pavement Rating (#)
1	190	2%	50%	3.0
2	206	2%	20%	4.0
3	230	2%	60%	4.0
4	258	2%	40%	3.0
5	208	2%	25%	3.0

Pavement Rating: 1=Poor, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream	Bicycle Running Speed (mph)	Bicycle Delay at Intrsrctn (sec)	Bicycle Running Time (sec)	Bicycle Travel Speed (mph)	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
1	15.0	5.3	29.9	12.7	2.3617	B
2	15.0	0.0	30.6	15.0	0.0000	A
3	15.0	0.0	30.2	15.0	0.0000	A
4	15.0	0.0	29.6	15.0	0.0000	A
5	15.0	13.3	48.1	11.8	2.3269	B
Average				13.5		

Segment & Downstream	Outside Lane Width (ft)	Paved Shoulder Wos (ft)	Outside Th+BL+Shldr Wt (ft)	Tot Width Th+BL+Shldr Wv (ft)	Eff Width OS Thru We (ft)	Adjstd HV % (%)	Thru Cntrl Delay (sec)	Link LOS Score	Link LOS	Segment LOS Score	Segment LOS
1	13.0	6.5	13.0	13.0	9.5	2.0%	6.3	3.9922	D	3.6055	D
2	12.0	6.5	12.0	12.0	14.5	2.0%	Infinity	3.2361	C	3.6424	D
3	10.0	6.5	10.0	10.0	4.5	2.0%	Infinity	4.2503	E	3.5300	D
4	10.0	6.5	10.0	10.0	8.5	2.0%	Infinity	4.3877	E	3.5520	D
5	15.0	6.5	15.0	15.0	16.5	2.0%	13.8	3.2478	C	3.4824	C
Average										3.5541	D

## E. HCM 2010 LOS Summary

Street: National Avenue

Segment & Downstream Intrscn	Auto Segment LOS	Transit Segment LOS	----- Bicycle ----- Link LOS	Intrscn LOS	----- Segment LOS	----- Pedestrian ----- Link LOS	Intrscn LOS	----- Segment LOS
1	A	C	D	B	D	A	A	B
2	F	F	C	A	D	A	A	B
3	F	C	E	A	D	A	A	B
4	F	C	E	A	D	B	A	B
5	B	F	C	B	C	A	B	B
Facility	F	E			D			B
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream	Outside Lane Width	Bike/Shldr Lane Width	Segment Through Lanes (One-Dir)	Intrsrctn Through Lanes (One-Dir)	Divided/Undivided (D / UD)	Signal I/S Cross Dist (ft)	Unsig Conf Per Mile (conf/mi)	Shldr Width (ft)	Bike Lane Width (ft)
1	13.0	0.0	2	2	UD	82.0	0.0	0.0	0.0
2	9.0	0.0	2	1	D	76.0	0.0	0.0	0.0
3	13.0	8.0	1	1	D	44.0	0.0	8.0	0.0
4	12.0	8.0	1	1	D	63.0	0.0	8.0	0.0
5	13.0	8.0	1	1	D	42.0	0.0	8.0	0.0
6	12.0	8.0	1	1	D	49.0	0.0	8.0	0.0
7	11.0	8.0	1	1	D	56.0	0.0	8.0	0.0
8	13.0	8.0	1	1	D	44.0	0.0	8.0	0.0
9	13.0	8.0	1	1	D	43.0	0.0	8.0	0.0
10	11.0	8.0	1	1	D	43.0	0.0	8.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream	Traffic Volume (vph pk 15)	Heavy Vehicle (%)	Percent On-street Parking	Pavement Rating (#)
1	563	2%	0%	3.0
2	629	2%	0%	4.0
3	552	2%	35%	4.0
4	528	2%	55%	4.0
5	518	2%	55%	3.0
6	561	2%	100%	4.0
7	557	2%	45%	4.0
8	566	2%	30%	3.0
9	687	2%	20%	3.0
10	615	2%	50%	4.0

Pavement Rating: 1=Poort, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream	Bicycle Running Speed (mph)	Bicycle Delay at Intrsrctn (sec)	Bicycle Running Time (sec)	Bicycle Travel Speed (mph)	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
1	15.0	11.4	29.7	10.8	3.0639	C
2	15.0	5.5	13.4	10.6	4.4035	E
3	15.0	0.0	17.4	15.0	0.0000	A
4	15.0	7.1	29.6	12.1	3.3954	C
5	15.0	0.0	31.1	15.0	0.0000	A
6	15.0	4.0	27.2	13.1	3.2357	C
7	15.0	0.0	30.5	15.0	0.0000	A
8	15.0	5.1	59.4	13.8	2.9519	C
9	15.0	7.6	31.0	12.1	3.1363	C
10	15.0	0.0	29.9	15.0	0.0000	A
Average				13.2		

Segment & Downstream	Outside Lane Width	Paved Shoulder	Outside Th+BL+Shldr	Tot Width Th+BL+Shldr	Eff Width OS Thru	Adjstd HV %	Thru Cntrl Delay	Link LOS	Link	Segment LOS	Segment
----------------------	--------------------	----------------	---------------------	-----------------------	-------------------	-------------	------------------	----------	------	-------------	---------



Intrsectn	(ft)	Wos (ft)	Wt (ft)	Wv (ft)	We (ft)	(% )	(sec)	Score	National Ave (EB) PM Peak		
									LOS	Score	LOS
1	13.0	0.0	13.0	13.0	13.0	2.0%	11.4	3.7836	D	3.6909	D
2	9.0	0.0	9.0	9.0	9.0	2.0%	116.1	3.2447	C	4.8968	E
3	13.0	6.5	13.0	13.0	12.5	2.0%	Infinity	3.8501	D	3.9498	D
4	12.0	6.5	12.0	12.0	7.5	2.0%	9.4	4.2835	E	4.1473	D
5	13.0	6.5	13.0	13.0	8.5	2.0%	Infinity	4.7225	E	3.6056	D
6	12.0	6.5	12.0	12.0	0.0	2.0%	7.9	4.5407	E	4.1647	D
7	11.0	6.5	11.0	11.0	8.5	2.0%	Infinity	4.4207	E	3.5573	D
8	13.0	6.5	13.0	13.0	13.5	2.0%	9.9	4.2444	D	3.7397	D
9	13.0	6.5	13.0	13.0	15.5	2.0%	21.2	3.8143	D	3.9841	D
10	11.0	6.5	11.0	11.0	7.5	2.0%	Infinity	4.5443	E	3.5771	D
Average										3.8543	D

E. HCM 2010 LOS Summary

Street: National Avenue

Segment & Downstream Intrsectn	Auto	Transit	Bicycle		Pedestrian			
	Segment LOS	Segment LOS	Link LOS	Intrsectn LOS	Segment LOS	Link LOS	Intrsectn LOS	Segment LOS
1	A	C	D	C	D	B	B	C
2	F	F	C	E	E	B	A	B
3	F	C	D	A	D	B	A	B
4	A	F	E	C	D	B	A	B
5	F	C	E	A	D	B	A	B
6	A	F	E	C	D	A	A	B
7	F	C	E	A	D	B	A	C
8	B	C	D	C	D	C	A	B
9	A	C	D	C	D	C	A	B
10	F	F	E	A	D	B	A	C
Facility	F	D			D			B
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream	Outside Lane Width	Bike/Shldr Lane Width	Segment Through Lanes	Intrsrctn Through Lanes	Divided/Undivided	Signal I/S Cross Dist	Unsig Conf Per Mile	Shldr Width	Bike Lane Width
Signal	(ft)	(ft)	(One-Dir)	(One-Dir)	(D / UD)	(ft)	(conf/mi)	(ft)	(ft)
1	13.0	8.0	1	1	D	46.0	0.0	8.0	0.0
2	12.0	8.0	1	1	D	40.0	0.0	8.0	0.0
3	10.0	8.0	1	1	D	40.0	0.0	8.0	0.0
4	10.0	8.0	1	1	D	43.0	0.0	8.0	0.0
5	15.0	8.0	1	2	D	81.0	0.0	8.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream	Traffic Volume	Heavy Vehicle	Percent On-street Parking	Pavement Rating
Signal	(vph pk 15)	(%)	(%)	(#)
1	597	2%	60%	3.0
2	612	2%	20%	4.0
3	574	2%	60%	4.0
4	598	2%	50%	3.0
5	350	2%	35%	3.0

Pavement Rating: 1=Poor, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream	Bicycle Running Speed	Bicycle Delay at Intrsrctn	Bicycle Running Time	Bicycle Travel Speed	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
Intrsrctn	(mph)	(sec)	(sec)	(mph)	Score	LOS
1	15.0	5.1	29.9	12.8	3.0345	C
2	15.0	0.0	30.6	15.0	0.0000	A
3	15.0	0.0	30.2	15.0	0.0000	A
4	15.0	0.0	29.6	15.0	0.0000	A
5	15.0	13.3	48.1	11.7	2.4444	B
Average				13.5		

Segment & Downstream	Outside Lane Width	Paved Shoulder	Outside Th+BL+Shldr	Tot Width Th+BL+Shldr	Eff Width OS Thru	Adjstd HV %	Thru Cntrl Delay	Link LOS Score	Link LOS	Segment LOS Score	Segment LOS
Intrsrctn	(ft)	Wos (ft)	Wt (ft)	Wv (ft)	We (ft)	(%)	(sec)	Score	LOS	Score	LOS
1	13.0	6.5	13.0	13.0	7.5	2.0%	9.9	4.7170	E	3.8334	D
2	12.0	6.5	12.0	12.0	14.5	2.0%	Infinity	3.7485	D	3.7244	D
3	10.0	6.5	10.0	10.0	4.5	2.0%	Infinity	4.6935	E	3.6010	D
4	10.0	6.5	10.0	10.0	6.5	2.0%	Infinity	4.9437	E	3.6410	D
5	15.0	6.5	15.0	15.0	14.5	2.0%	14.1	3.8155	D	3.5872	D
Average										3.6677	D

## E. HCM 2010 LOS Summary

Street: National Avenue

Segment &	Auto	Transit	----- Bicycle -----	----- Pedestrian -----
-----------	------	---------	---------------------	------------------------

Downstream Intrscn	Segment LOS	Segment LOS	Link LOS	Intrscn LOS	Segment LOS	Link LOS	Intrscn LOS	Segment LOS
1	A	C	E	C	D	B	A	B
2	F	F	D	A	D	B	A	C
3	F	B	E	A	D	B	A	B
4	F	B	E	A	D	C	A	C
5	B	F	D	B	D	B	B	B
Facility	F	E			D			B
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream Signal	Outside Lane Width (ft)	Bike/Shldr Lane Width (ft)	Segment Through Lanes (One-Dir)	Intrsrctn Through Lanes (One-Dir)	Divided/ Undivided (D / UD)	Signal I/S Cross Dist (ft)	Unsig Conf Per Mile (conf/mi)	Shldr Width (ft)	Bike Lane Width (ft)
1	13.0	8.0	1	1	D	43.0	0.0	8.0	0.0
2	13.0	8.0	1	1	D	53.0	0.0	8.0	0.0
3	13.0	8.0	1	1	D	44.0	0.0	8.0	0.0
4	13.0	8.0	1	1	D	48.0	0.0	8.0	0.0
5	11.0	8.0	1	1	D	47.0	0.0	8.0	0.0
6	13.0	8.0	1	1	D	60.0	0.0	8.0	0.0
7	14.0	8.0	1	1	D	47.0	0.0	8.0	0.0
8	11.0	8.0	1	1	D	76.0	0.0	8.0	0.0
9	19.0	0.0	1	1	D	49.0	0.0	0.0	0.0
10	13.0	0.0	2	2	UD	0.0	0.0	0.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream Signal	Traffic Volume (vph pk 15)	Heavy Vehicle (%)	Percent On-street Parking	Pavement Rating (#)
1	629	2%	45%	3.0
2	628	2%	10%	4.0
3	560	2%	25%	3.0
4	541	2%	30%	4.0
5	574	2%	40%	4.0
6	481	2%	45%	4.0
7	543	2%	15%	4.0
8	636	2%	35%	4.0
9	851	2%	0%	4.0
10	194	2%	0%	3.0

Pavement Rating: 1=Poor, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream Intrsrctn	Bicycle Running Speed (mph)	Bicycle Delay at Intrsrctn (sec)	Bicycle Running Time (sec)	Bicycle Travel Speed (mph)	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
1	15.0	5.7	30.2	12.6	3.0410	C
2	15.0	29.0	30.0	7.6	3.1920	C
3	15.0	0.0	59.9	15.0	0.0000	A
4	15.0	3.8	29.5	13.3	2.9722	C
5	15.0	0.0	28.1	15.0	0.0000	A
6	15.0	5.1	29.5	12.8	3.0569	C
7	15.0	0.0	30.9	15.0	0.0000	A
8	15.0	5.2	13.4	10.8	3.9857	D
9	15.0	9.5	16.2	9.5	2.2130	B
10	15.0	0.0	30.4	15.0	0.0000	A
Average				12.6		

Segment & Downstream Intrscn	Outside Lane Width (ft)	Paved Shoulder Wos (ft)	Outside Th+BL+Shldr Wt (ft)	Tot Width Th+BL+Shldr Wv (ft)	Eff Width OS Thru We (ft)	Adjstd HV % (%)	Thru Cntrl Delay (sec)	Link LOS Score	National Ave (WB) AM Peak Segment		
									Link LOS	LOS Score	Segment LOS
1	13.0	6.5	13.0	13.0	10.5	2.0%	12.7	4.4760	E	3.7964	D
2	13.0	6.5	13.0	13.0	17.5	2.0%	Infinity	3.0642	C	4.1671	D
3	13.0	6.5	13.0	13.0	14.5	2.0%	Infinity	4.1357	D	3.5117	D
4	13.0	6.5	13.0	13.0	13.5	2.0%	7.7	3.6905	D	3.6554	D
5	11.0	6.5	11.0	11.0	9.5	2.0%	Infinity	4.3224	E	3.5416	D
6	13.0	6.5	13.0	13.0	10.5	2.0%	6.0	3.9703	D	4.0039	D
7	14.0	6.5	14.0	14.0	17.5	2.0%	Infinity	3.2297	C	3.3667	C
8	11.0	6.5	11.0	11.0	10.5	2.0%	272.9	3.4552	C	3.9949	D
9	19.0	0.0	19.0	19.0	19.0	2.0%	26.9	2.3495	B	3.8441	D
10	13.0	0.0	13.0	13.0	13.0	2.0%	Infinity	3.4096	C	3.6722	D
Average										3.7134	D

E. HCM 2010 LOS Summary

Street: National Avenue

Segment & Downstream Intrscn	Auto Segment LOS	Transit Segment LOS	Bicycle			Pedestrian		
			Link LOS	Intrscn LOS	Segment LOS	Link LOS	Intrscn LOS	Segment LOS
1	A	C	E	C	D	B	A	B
2	F	C	C	C	D	B	A	B
3	F	F	D	A	D	C	A	C
4	A	C	D	C	D	B	A	B
5	F	C	E	A	D	B	A	C
6	A	F	D	C	D	A	A	B
7	F	D	C	A	C	B	A	C
8	F	F	C	D	D	B	A	B
9	A	D	B	B	D	B	A	C
10	F	C	C	A	D	B	A	B
Facility	F	E			D			B
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream	Outside Lane Width (ft)	Bike/Shldr Lane Width (ft)	Segment Through Lanes (One-Dir)	Intrsrctn Through Lanes (One-Dir)	Divided/Undivided (D / UD)	Signal I/S Cross Dist (ft)	Unsig Conf Per Mile (conf/mi)	Shldr Width (ft)	Bike Lane Width (ft)
1	12.0	8.0	1	2	D	48.0	0.0	8.0	0.0
2	14.0	8.0	1	1	D	43.0	0.0	8.0	0.0
3	14.0	8.0	1	1	D	48.0	0.0	8.0	0.0
4	13.0	8.0	1	1	D	45.0	0.0	8.0	0.0
5	11.0	8.0	1	1	D	39.0	0.0	8.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream	Traffic Volume (vph pk 15)	Heavy Vehicle (%)	Percent On-street Parking	Pavement Rating (#)
1	537	2%	15%	4.0
2	499	2%	55%	3.0
3	521	2%	35%	4.0
4	600	2%	60%	4.0
5	626	2%	35%	4.0

Pavement Rating: 1=Poor, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream	Bicycle Running Speed (mph)	Bicycle Delay at Intrsrctn (sec)	Bicycle Running Time (sec)	Bicycle Travel Speed (mph)	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
1	15.0	0.0	51.1	15.0	0.0000	A
2	15.0	0.0	29.8	15.0	0.0000	A
3	15.0	0.0	30.2	15.0	0.0000	A
4	15.0	5.3	29.7	12.7	3.0239	C
5	15.0	0.0	30.2	15.0	0.0000	A
Average				14.5		

Segment & Downstream	Outside Lane Width (ft)	Paved Shoulder Wos (ft)	Outside Th+BL+Shldr Wt (ft)	Tot Width Th+BL+Shldr Wv (ft)	Eff Width OS Thru We (ft)	Adjstd HV % (%)	Thru Cntrl Delay (sec)	Link LOS Score	Link LOS	Segment LOS Score	Segment LOS
1	12.0	6.5	12.0	12.0	15.5	2.0%	Infinity	3.5774	D	3.4224	C
2	14.0	6.5	14.0	14.0	9.5	2.0%	Infinity	4.6187	E	3.5890	D
3	14.0	6.5	14.0	14.0	13.5	2.0%	Infinity	3.8386	D	3.4642	C
4	13.0	6.5	13.0	13.0	7.5	2.0%	12.0	4.3595	E	3.7738	D
5	11.0	6.5	11.0	11.0	10.5	2.0%	Infinity	4.2459	D	3.5294	D
Average										3.5387	D

## E. HCM 2010 LOS Summary

Street: National Avenue

Segment & Downstream Intrscn	Auto	Transit	Bicycle		Pedestrian			
	Segment LOS	Segment LOS	Link LOS	Intrscn LOS	Segment LOS	Link LOS	Intrscn LOS	Segment LOS
1	F	C	D	A	C	C	A	C
2	F	C	E	A	D	B	A	C
3	F	F	D	A	C	B	A	C
4	A	F	E	C	D	B	A	B
5	F	C	D	A	D	C	A	C
Facility	F	D			D			C
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream	Outside Lane Width	Bike/Shldr Lane Width	Segment Through Lanes	Intrsrctn Through Lanes	Divided/ Undivided	Signal I/S Cross Dist	Unsig Conf Per Mile	Shldr Width	Bike Lane Width
Signal	(ft)	(ft)	(One-Dir)	(One-Dir)	(D / UD)	(ft)	(conf/mi)	(ft)	(ft)
1	13.0	8.0	1	1	D	43.0	0.0	8.0	0.0
2	13.0	8.0	1	1	D	53.0	0.0	8.0	0.0
3	13.0	8.0	1	1	D	44.0	0.0	8.0	0.0
4	13.0	8.0	1	1	D	48.0	0.0	8.0	0.0
5	11.0	8.0	1	1	D	47.0	0.0	8.0	0.0
6	13.0	8.0	1	1	D	60.0	0.0	8.0	0.0
7	14.0	8.0	1	1	D	47.0	0.0	8.0	0.0
8	11.0	8.0	1	1	D	76.0	0.0	8.0	0.0
9	19.0	0.0	1	1	D	49.0	0.0	0.0	0.0
10	13.0	0.0	2	2	UD	0.0	0.0	0.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream	Traffic Volume	Heavy Vehicle	Percent On-street Parking	Pavement Rating
Signal	(vph pk 15)	(%)	(%)	(#)
1	311	2%	40%	3.0
2	316	2%	10%	4.0
3	307	2%	30%	3.0
4	274	2%	55%	4.0
5	307	2%	45%	4.0
6	302	2%	50%	4.0
7	319	2%	30%	4.0
8	365	2%	25%	4.0
9	562	2%	0%	4.0
10	171	2%	0%	3.0

Pavement Rating: 1=Poor, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream Intrsrctn	Bicycle Running Speed	Bicycle Delay at Intrsrctn	Bicycle Running Time	Bicycle Travel Speed	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
	(mph)	(sec)	(sec)	(mph)		
1	15.0	7.9	30.2	11.9	2.5168	B
2	15.0	5.1	30.0	12.8	2.6770	B
3	15.0	0.0	59.9	15.0	0.0000	A
4	15.0	4.0	29.5	13.2	2.5321	B
5	15.0	0.0	28.1	15.0	0.0000	A
6	15.0	7.1	29.5	12.1	2.7616	C
7	15.0	0.0	30.9	15.0	0.0000	A
8	15.0	5.5	13.4	10.6	3.5398	D
9	15.0	9.5	16.2	9.5	1.7350	A
10	15.0	0.0	30.4	15.0	0.0000	A
Average				13.3		

Segment &	Outside	Paved	Outside	Tot Width	Eff Width	Adjstd	Thru Cntrl	Link	Segment
-----------	---------	-------	---------	-----------	-----------	--------	------------	------	---------



Downstream Intrscn	Lane Width (ft)	Shoulder Wos (ft)	Th+BL+Shldr Wt (ft)	Th+BL+Shldr Wv (ft)	OS Thru We (ft)	HV % (%)	Delay (sec)	LOS Score	National Ave (WB) PM Peak		
									Link LOS	Score	Segment LOS
1	13.0	6.5	13.0	13.0	11.5	2.0%	10.7	4.0316	D	3.6313	D
2	13.0	6.5	13.0	13.0	17.5	2.0%	7.1	2.7744	C	4.0130	D
3	13.0	6.5	13.0	13.0	13.5	2.0%	Infinity	3.9836	D	3.4874	C
4	13.0	6.5	13.0	13.0	8.5	2.0%	5.2	3.9142	D	3.6147	D
5	11.0	6.5	11.0	11.0	8.5	2.0%	Infinity	4.1116	D	3.5079	D
6	13.0	6.5	13.0	13.0	9.5	2.0%	7.1	3.8537	D	3.9254	D
7	14.0	6.5	14.0	14.0	14.5	2.0%	Infinity	3.4537	C	3.4026	C
8	11.0	6.5	11.0	11.0	12.5	2.0%	15.1	2.9445	C	3.7002	D
9	19.0	0.0	19.0	19.0	19.0	2.0%	10.7	2.1386	B	3.7722	D
10	13.0	0.0	13.0	13.0	13.0	2.0%	Infinity	3.3438	C	3.6616	D
Average										3.6468	D

E. HCM 2010 LOS Summary

Street: National Avenue

Segment & Downstream Intrscn	Auto Segment LOS	Transit Segment LOS	Bicycle		Pedestrian			
			Link LOS	Intrscn LOS	Link LOS	Intrscn LOS		
1	A	C	D	B	D	A	A	B
2	A	C	C	B	D	A	A	B
3	F	F	D	A	C	B	A	C
4	A	C	D	B	D	A	A	B
5	F	C	D	A	D	A	A	B
6	A	F	D	C	D	A	A	B
7	F	D	C	A	C	A	A	B
8	A	F	C	D	D	A	A	B
9	A	D	B	A	D	B	A	B
10	F	C	C	A	D	B	A	B
Facility	F	E			D			B
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

## D. Compute Bicycle LOS

Street: National Avenue

## 1. Geometric Input Data

Segment & Downstream	Outside Lane Width (ft)	Bike/Shldr Lane Width (ft)	Segment Through Lanes (One-Dir)	Intrsrctn Through Lanes (One-Dir)	Divided/Undivided (D / UD)	Signal I/S Cross Dist (ft)	Unsig Conf Per Mile (conf/mi)	Shldr Width (ft)	Bike Lane Width (ft)
1	12.0	8.0	1	2	D	48.0	0.0	8.0	0.0
2	14.0	8.0	1	1	D	43.0	0.0	8.0	0.0
3	14.0	8.0	1	1	D	48.0	0.0	8.0	0.0
4	13.0	8.0	1	1	D	45.0	0.0	8.0	0.0
5	11.0	8.0	1	1	D	39.0	0.0	8.0	0.0

## 2. Performance and Other Input Data

Segment & Downstream	Traffic Volume (vph pk 15)	Heavy Vehicle (%)	Percent On-street Parking	Pavement Rating (#)
1	322	2%	20%	4.0
2	313	2%	40%	3.0
3	320	2%	25%	4.0
4	314	2%	80%	4.0
5	322	2%	65%	4.0

Pavement Rating: 1=Poort, 5=Excellent

Mid-segment traffic speed = average of auto free-flow speed, and mean auto speed with intersection delay.

## 3. HCM 2010 Bicycle LOS

Segment & Downstream	Bicycle Running Speed (mph)	Bicycle Delay at Intrsrctn (sec)	Bicycle Running Time (sec)	Bicycle Travel Speed (mph)	Bicycle Intrsrctn LOS Score	Bicycle Intrsrctn LOS
1	15.0	0.0	51.1	15.0	0.0000	A
2	15.0	0.0	29.8	15.0	0.0000	A
3	15.0	0.0	30.2	15.0	0.0000	A
4	15.0	5.1	29.7	12.8	2.5521	B
5	15.0	0.0	30.2	15.0	0.0000	A
Average				14.6		

Segment & Downstream	Outside Lane Width (ft)	Paved Shoulder Wos (ft)	Outside Th+BL+Shldr Wt (ft)	Tot Width Th+BL+Shldr Wv (ft)	Eff Width OS Thru We (ft)	Adjstd HV % (%)	Thru Cntrl Delay (sec)	Link LOS Score	Link LOS	Segment LOS Score	Segment LOS
1	12.0	6.5	12.0	12.0	14.5	2.0%	Infinity	3.4800	C	3.4068	C
2	14.0	6.5	14.0	14.0	12.5	2.0%	Infinity	4.0639	D	3.5002	D
3	14.0	6.5	14.0	14.0	15.5	2.0%	Infinity	3.3133	C	3.3801	C
4	13.0	6.5	13.0	13.0	3.5	2.0%	6.9	4.2724	E	3.6748	D
5	11.0	6.5	11.0	11.0	4.5	2.0%	Infinity	4.3798	E	3.5508	D
Average										3.4903	C

## E. HCM 2010 LOS Summary

Street: National Avenue

Segment & Downstream Intrscn	Auto Segment LOS	Transit Segment LOS	----- Bicycle ----- Link LOS	Intrscn LOS	----- Segment LOS	----- Pedestrian ----- Link LOS	Intrscn LOS	Segment LOS
1	F	C	C	A	C	B	A	C
2	F	C	D	A	D	B	A	B
3	F	F	C	A	C	B	A	C
4	A	F	E	B	D	A	A	B
5	F	C	E	A	D	A	A	B
Facility	F	E			C			B
V/C check	F	auto LOS is F because V/C is > 1.0 at one or more of the intersections						

**APPENDIX I: PEDESTRIAN LEVEL OF SERVICE WORKSHEETS**



## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	10	0	1.000	1.000	0	Infinity
2	6	0	1.000	1.000	0	Infinity
3	10	0	1.000	1.000	0	Infinity
4	5	0	1.000	1.000	0	Infinity
5	6	0	1.000	1.000	0	Infinity
6	7	0	1.000	1.000	0	Infinity
7	6	0	1.000	1.000	0	Infinity
8	5	0	1.000	1.000	0	Infinity
9	5	0	1.000	1.000	0	Infinity
10	5	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)	Pedestrian Delay at Intersection			Ped Travel Speed (ft/s)	Ped Intrscn		Ped Intrscn	
				Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)		Score	LOS	Score	LOS
1	4.40	8.50	4.40	28.4	28.4	170.9	3.69	2.13	B	2.12	B
2	4.40	4.50	4.40	15.2	21.6	8.2	3.59	1.68	A	2.11	B
3	4.40	10.00	4.40	0.0	50.0	8.4	4.40	0.00	A	0.00	A
4	4.40	5.00	4.40	27.7	27.7	8.6	3.71	1.71	A	1.93	A
5	4.40	6.00	4.40	0.0	50.0	9.7	4.40	0.00	A	0.00	A
6	4.40	7.00	4.40	11.4	11.4	7.9	4.06	1.67	A	1.90	A
7	4.40	6.00	4.40	0.0	50.0	10.3	4.40	0.00	A	0.00	A
8	4.40	3.50	4.40	20.0	13.6	10.7	4.12	1.69	A	1.90	A
9	4.40	5.00	4.40	22.7	22.7	10.8	3.84	1.70	A	1.92	A
10	4.40	5.00	4.40	0.0	50.0	10.3	4.40	0.00	A	0.00	A

## 3. Compute Pedestrian Link LOS

Segment	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link LOS Score	Ped Link LOS
2	9.0	0.0	9.0	0.0	0.0	-4.3362	0.1074	0.3434	2.16	B
3	13.0	6.5	19.5	6.5	0.0	-5.2875	0.3564	0.5296	1.65	A
4	12.0	6.5	12.0	10.0	0.0	-5.3558	0.3169	0.5813	1.59	A
5	13.0	6.5	13.0	10.0	0.0	-5.5862	0.4573	0.5426	1.46	A
6	12.0	6.5	12.0	10.0	0.0	-5.8888	0.2942	0.5339	0.99	A
7	11.0	6.5	11.0	10.0	0.0	-5.0997	0.4639	0.6023	2.01	B
8	13.0	6.5	13.0	10.0	0.0	-4.8739	0.4912	0.5178	2.18	B
9	13.0	6.5	13.0	6.5	0.0	-4.7067	0.3178	0.5654	2.22	B
10	11.0	6.5	11.0	10.0	0.0	-5.1708	0.4637	0.5117	1.85	A

## 4. Compute Pedestrian Segment LOS

Segment & Downstream Intrscn	Ped Segment RCDF	Ped Segment LOS Score	Ped Segment LOS
1	1.02	2.76	C
2	0.93	2.48	B

3	1.20	2.56	B
4	1.04	2.58	B
5	1.20	2.48	B
6	0.85	1.94	A
7	1.20	2.70	B
8	0.83	2.21	B
9	0.94	2.54	B
10	1.20	2.63	B
Average		2.46	B

## 5. Non-signalized Pedestrian Crossing Calculations

Segment	Two-stage Crossing	Stage 1							
		Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield (sec)
1	No	51	4	14.59	0.269	0.9804	170.9	174.3	170.9
2	Yes	18	2	7.09	0.084	0.4483	2.6	5.8	2.6
3	Yes	21	1	7.77	0.065	0.3951	2.3	5.9	2.3
4	Yes	20	1	7.55	0.071	0.4146	2.4	5.9	2.4
5	Yes	21	1	7.77	0.066	0.4025	2.4	5.9	2.4
6	Yes	20	1	7.55	0.065	0.3885	2.2	5.7	2.2
7	Yes	19	1	7.32	0.074	0.4162	2.4	5.7	2.4
8	Yes	21	1	7.77	0.063	0.3882	2.3	5.8	2.3
9	Yes	21	1	7.77	0.069	0.4153	2.5	6.1	2.5
10	Yes	19	1	7.32	0.062	0.3669	2.0	5.3	2.0

Segment	Motorist Yield Rate	Stage 2							
		Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	0	0	0.00	0.000	0.0000	0.0	0.0	0.0
2	0.000	19	1	7.32	0.143	0.6483	5.6	8.6	5.6
3	0.000	19	1	7.32	0.151	0.6685	6.0	9.0	6.0
4	0.000	22	1	8.00	0.132	0.6516	6.2	9.5	6.2
5	0.000	21	1	7.77	0.155	0.6992	7.3	10.4	7.3
6	0.000	19	1	7.32	0.145	0.6541	5.7	8.7	5.7
7	0.000	21	1	7.77	0.164	0.7198	7.9	11.0	7.9
8	0.000	21	1	7.77	0.171	0.7351	8.5	11.5	8.5
9	0.000	21	1	7.77	0.169	0.7312	8.3	11.4	8.3
10	0.000	21	1	7.77	0.169	0.7309	8.3	11.4	8.3

## 6. Non-signalized Pedestrian Crossing LOS

Intrsectn	Average Ped Delay (sec)	Pedestrian Intrsectn LOS
1	170.9	F
2	8.2	B
3	8.4	B
4	8.6	B
5	9.7	B
6	7.9	B
7	10.3	C
8	10.7	C
9	10.8	C
10	10.3	C

## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	6	0	1.000	1.000	0	Infinity
2	5	0	1.000	1.000	0	Infinity
3	8	0	1.000	1.000	0	Infinity
4	4	0	1.000	1.000	0	Infinity
5	6	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)	Pedestrian Delay at Intersection			Ped Travel Speed (ft/s)	Ped Intrsrctn		Ped Intrsrctn	
				Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)		Cross Street Xing Score	Xing LOS	Segment Xing Score	Xing LOS
1	4.40	6.00	4.40	16.6	16.6	7.8	3.96	1.68	A	1.91	A
2	4.40	5.00	4.40	0.0	50.0	8.7	4.40	0.00	A	0.00	A
3	4.40	8.00	4.40	0.0	50.0	8.8	4.40	0.00	A	0.00	A
4	4.40	4.00	4.40	0.0	50.0	11.0	4.40	0.00	A	0.00	A
5	4.40	4.50	4.40	16.5	16.5	5.9	4.12	2.42	B	1.91	A

## 3. Compute Pedestrian Link LOS

Segment	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link	
									LOS	Score
1	13.0	6.5	13.0	10.0	0.0	-5.2703	0.3319	0.4312	1.54	A
2	12.0	6.5	12.0	6.5	0.0	-5.2936	0.4550	0.4695	1.68	A
3	10.0	6.5	10.0	10.0	0.0	-5.6613	0.4648	0.5240	1.37	A
4	10.0	6.5	10.0	10.0	0.0	-4.9888	0.4607	0.5870	2.11	B
5	15.0	6.5	15.0	10.0	0.0	-4.9782	0.4283	0.4722	1.97	A

## 4. Compute Pedestrian Segment LOS

Segment & Downstream Intrsrctn	RCDF	Ped Segment LOS Score	Ped Segment LOS
1	0.89	2.20	B
2	1.20	2.57	B
3	1.20	2.45	B
4	1.20	2.73	B
5	0.85	2.35	B
Average		2.45	B

## 5. Non-signalized Pedestrian Crossing Calculations

Segment	Stage 1									
	Two-stage Crossing	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)	
1	Yes	21	1	7.77	0.053	0.3358	1.8	5.5	1.8	
2	Yes	20	1	7.55	0.057	0.3511	1.9	5.4	1.9	
3	Yes	18	1	7.09	0.064	0.3647	1.9	5.2	1.9	
4	Yes	18	1	7.09	0.072	0.3984	2.2	5.4	2.2	

5 Yes 23 1 8.23 0.058 0.3777 2.3 6.1

2.3

Motorist ----- Stage 2 -----

Segment	Yield Rate	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	19	1	7.32	0.150	0.6660	6.0	9.0	6.0
2	0.000	21	1	7.77	0.147	0.6820	6.8	9.9	6.8
3	0.000	22	1	8.00	0.142	0.6799	6.9	10.2	6.9
4	0.000	22	1	8.00	0.167	0.7375	8.8	11.9	8.8
5	0.000	20	1	7.55	0.098	0.5232	3.6	6.9	3.6

6. Non-signalized Pedestrian Crossing LOS

Downstream Intrsctn	Average Ped Delay (sec)	Pedestrian Intrsectn LOS
1	7.8	B
2	8.7	B
3	8.8	B
4	11.0	C
5	5.9	B



## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	10	0	1.000	1.000	0	Infinity
2	6	0	1.000	1.000	0	Infinity
3	10	0	1.000	1.000	0	Infinity
4	5	0	1.000	1.000	0	Infinity
5	6	0	1.000	1.000	0	Infinity
6	7	0	1.000	1.000	0	Infinity
7	6	0	1.000	1.000	0	Infinity
8	5	0	1.000	1.000	0	Infinity
9	5	0	1.000	1.000	0	Infinity
10	5	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)	Pedestrian Delay at Intersection			Ped Travel Speed (ft/s)	Ped Intrsctn Cross Street Xing		Ped Intrsctn Segment Xing	
				Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)		Score	LOS	Score	LOS
1	4.40	8.50	4.40	28.4	28.4	311.2	3.69	2.13	B	2.12	B
2	4.40	4.50	4.40	14.7	21.1	9.7	3.61	1.68	A	2.11	B
3	4.40	10.00	4.40	0.0	50.0	9.9	4.40	0.00	A	0.00	A
4	4.40	5.00	4.40	29.5	29.5	9.4	3.67	1.71	A	1.93	A
5	4.40	6.00	4.40	0.0	50.0	9.8	4.40	0.00	A	0.00	A
6	4.40	7.00	4.40	11.9	11.9	9.3	4.05	1.67	A	1.90	A
7	4.40	6.00	4.40	0.0	50.0	9.6	4.40	0.00	A	0.00	A
8	4.40	3.50	4.40	19.7	13.3	10.8	4.13	1.69	A	1.90	A
9	4.40	5.00	4.40	22.5	22.5	13.5	3.84	1.70	A	1.92	A
10	4.40	5.00	4.40	0.0	50.0	10.5	4.40	0.00	A	0.00	A

## 3. Compute Pedestrian Link LOS

Segment	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link LOS Score	Ped Link LOS
2	9.0	0.0	9.0	0.0	0.0	-4.3362	0.1052	0.7155	2.53	B
3	13.0	6.5	13.0	10.0	0.0	-5.4821	0.3255	1.2555	2.15	B
4	12.0	6.5	12.0	10.0	0.0	-5.5031	0.3011	1.2022	2.05	B
5	13.0	6.5	13.0	10.0	0.0	-5.5533	0.4394	1.1796	2.11	B
6	12.0	6.5	12.0	10.0	0.0	-5.8888	0.2763	1.2773	1.71	A
7	11.0	6.5	11.0	10.0	0.0	-5.1924	0.4447	1.2682	2.57	B
8	13.0	6.5	13.0	10.0	0.0	-4.9305	0.4709	1.2871	2.87	C
9	13.0	6.5	13.0	6.5	0.0	-4.8912	0.2888	1.5625	3.01	C
10	11.0	6.5	11.0	10.0	0.0	-5.1708	0.4380	1.3993	2.71	B

## 4. Compute Pedestrian Segment LOS

Segment & Downstream Intrsctn	Ped Segment RCDF	Ped Segment LOS Score	Ped Segment LOS
1	1.00	2.83	C
2	0.91	2.53	B
3	1.20	2.75	B

4	1.04	2.74	B
5	1.20	2.73	B
6	0.82	2.07	B
7	1.20	2.91	C
8	0.80	2.31	B
9	0.91	2.67	B
10	1.20	2.96	C
Average		2.63	B

## 5. Non-signalized Pedestrian Crossing Calculations

----- Stage 1 -----									
Segment	Two-stage Crossing	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	No	51	4	14.59	0.319	0.9905	311.2	314.2	311.2
2	Yes	18	2	7.09	0.175	0.7103	6.9	9.8	6.9
3	Yes	21	1	7.77	0.153	0.6962	7.2	10.3	7.2
4	Yes	20	1	7.55	0.147	0.6697	6.3	9.4	6.3
5	Yes	21	1	7.77	0.144	0.6735	6.6	9.7	6.6
6	Yes	20	1	7.55	0.156	0.6917	6.8	9.9	6.8
7	Yes	19	1	7.32	0.155	0.6780	6.3	9.3	6.3
8	Yes	21	1	7.77	0.157	0.7052	7.5	10.6	7.5
9	Yes	21	1	7.77	0.191	0.7730	10.1	13.0	10.1
10	Yes	19	1	7.32	0.171	0.7136	7.3	10.2	7.3

----- Stage 2 -----									
Segment	Motorist Yield Rate	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	0	0	0.00	0.000	0.0000	0.0	0.0	0.0
2	0.000	19	1	7.32	0.082	0.4521	2.7	6.0	2.7
3	0.000	19	1	7.32	0.083	0.4534	2.7	6.0	2.7
4	0.000	22	1	8.00	0.079	0.4686	3.2	6.7	3.2
5	0.000	21	1	7.77	0.085	0.4818	3.2	6.7	3.2
6	0.000	19	1	7.32	0.077	0.4300	2.5	5.8	2.5
7	0.000	21	1	7.77	0.087	0.4918	3.3	6.8	3.3
8	0.000	21	1	7.77	0.088	0.4969	3.4	6.8	3.4
9	0.000	21	1	7.77	0.090	0.5023	3.5	6.9	3.5
10	0.000	21	1	7.77	0.084	0.4800	3.2	6.7	3.2

## 6. Non-signalized Pedestrian Crossing LOS

Downstream Intrsectn	Average Ped Delay (sec)	Pedestrian Intrsectn LOS
1	311.2	F
2	9.7	B
3	9.9	B
4	9.4	B
5	9.8	B
6	9.3	B
7	9.6	B
8	10.8	C
9	13.5	C
10	10.5	C

## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	6	0	1.000	1.000	0	Infinity
2	5	0	1.000	1.000	0	Infinity
3	8	0	1.000	1.000	0	Infinity
4	4	0	1.000	1.000	0	Infinity
5	6	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)	Pedestrian Delay at Intersection			Ped Travel Speed (ft/s)	Ped Intrsctn		Ped Intrsctn	
				Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)		Cross Street Xing Score	Xing LOS	Segment Xing Score	Xing LOS
1	4.40	6.00	4.40	16.8	16.8	10.9	3.95	1.69	A	1.91	A
2	4.40	5.00	4.40	0.0	50.0	11.3	4.40	0.00	A	0.00	A
3	4.40	8.00	4.40	0.0	50.0	9.4	4.40	0.00	A	0.00	A
4	4.40	4.00	4.40	0.0	50.0	10.6	4.40	0.00	A	0.00	A
5	4.40	4.50	4.40	17.2	17.2	6.9	4.11	2.42	B	1.91	A

## 3. Compute Pedestrian Link LOS

Segment	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link	
									LOS Score	LOS
1	13.0	6.5	13.0	10.0	0.0	-5.3514	0.3158	1.3589	2.37	B
2	12.0	6.5	12.0	6.5	0.0	-5.2936	0.4147	1.3915	2.56	B
3	10.0	6.5	10.0	10.0	0.0	-5.6613	0.4423	1.3063	2.13	B
4	10.0	6.5	10.0	10.0	0.0	-5.0900	0.4382	1.3602	2.76	C
5	15.0	6.5	15.0	10.0	0.0	-5.0803	0.4210	0.7962	2.18	B

## 4. Compute Pedestrian Segment LOS

Segment & Downstream Intrsctn	RCDF	Ped Segment LOS Score	Ped Segment LOS
1	0.86	2.35	B
2	1.20	2.90	C
3	1.20	2.74	B
4	1.20	2.98	C
5	0.85	2.41	B
Average		2.65	B

## 5. Non-signalized Pedestrian Crossing Calculations

Segment	Stage 1								
	Two-stage Crossing	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	Yes	21	1	7.77	0.166	0.7246	8.1	11.2	8.1
2	Yes	20	1	7.55	0.170	0.7225	7.8	10.8	7.8

									National Ave (EB) PM Peak
3	Yes	18	1	7.09	0.160	0.6773	6.1	9.0	6.1
4	Yes	18	1	7.09	0.166	0.6920	6.4	9.3	6.4
5	Yes	23	1	8.23	0.097	0.5506	4.4	7.9	4.4

Segment	Motorist	Stage 2							
	Yield Rate	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	19	1	7.32	0.085	0.4650	2.8	6.1	2.8
2	0.000	21	1	7.77	0.091	0.5089	3.5	7.0	3.5
3	0.000	22	1	8.00	0.082	0.4817	3.3	6.9	3.3
4	0.000	22	1	8.00	0.098	0.5417	4.1	7.6	4.1
5	0.000	20	1	7.55	0.073	0.4250	2.5	6.0	2.5

6. Non-signalized Pedestrian Crossing LOS

Downstream Intrsctn	Average Ped Delay (sec)	Pedestrian Intrsctn LOS
1	10.9	C
2	11.3	C
3	9.4	B
4	10.6	C
5	6.9	B

## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	5	0	1.000	1.000	0	Infinity
2	15	0	1.000	1.000	0	Infinity
3	5	0	1.000	1.000	0	Infinity
4	5	0	1.000	1.000	0	Infinity
5	5	0	1.000	1.000	0	Infinity
6	5	0	1.000	1.000	0	Infinity
7	8	0	1.000	1.000	0	Infinity
8	5	0	1.000	1.000	0	Infinity
9	5	0	1.000	1.000	0	Infinity
10	11	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)	Pedestrian Delay at Intersection			Ped Travel Speed (ft/s)	Ped Intrscn		Ped Intrscn	
				Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)		Score	LOS	Score	LOS
1	4.40	5.00	4.40	22.7	22.7	11.1	3.83	1.70	A	1.92	A
2	4.40	15.00	4.40	29.0	22.4	11.0	3.69	1.71	A	1.92	A
3	4.40	3.50	4.40	0.0	50.0	9.9	4.40	0.00	A	0.00	A
4	4.40	5.00	4.40	11.4	11.4	9.1	4.08	1.67	A	1.90	A
5	4.40	5.00	4.40	0.0	50.0	8.9	4.40	0.00	A	0.00	A
6	4.40	5.00	4.40	27.7	27.7	8.5	3.71	1.93	A	1.93	A
7	4.40	8.00	4.40	0.0	50.0	9.7	4.40	0.00	A	0.00	A
8	4.40	5.00	4.40	21.6	21.6	11.8	3.33	1.70	A	1.92	A
9	4.40	5.00	4.40	28.4	28.4	14.6	3.26	1.71	A	2.12	B
10	4.40	9.50	4.40	0.0	50.0	20.2	4.40	0.00	A	0.00	A

## 3. Compute Pedestrian Link LOS

Segment	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link LOS Score	Ped Link LOS
2	13.0	6.5	13.0	6.5	0.0	-5.3499	0.2755	1.4282	2.40	B
3	13.0	6.5	13.0	10.0	0.0	-4.8739	0.5192	1.2731	2.97	C
4	13.0	6.5	13.0	10.0	0.0	-5.0364	0.3143	1.2307	2.56	B
5	11.0	6.5	11.0	10.0	0.0	-5.4588	0.4206	1.3059	2.31	B
6	13.0	6.5	13.0	10.0	0.0	-5.5219	0.3033	1.0943	1.92	A
7	14.0	6.5	14.0	6.5	0.0	-5.3006	0.4369	1.2342	2.42	B
8	11.0	6.5	11.0	10.0	0.0	-5.4994	0.1047	1.4461	2.10	B
9	19.0	0.0	19.0	0.0	0.0	-5.3653	0.1214	1.9365	2.74	B
10	13.0	0.0	13.0	0.0	0.0	-4.6172	0.4617	0.2210	2.11	B

## 4. Compute Pedestrian Segment LOS

Segment & Downstream Intrscn	Ped Segment RCDF	Ped Segment LOS Score	Ped Segment LOS
1	0.93	2.61	B
2	0.93	2.56	B

3	1.20	3.06	C
4	0.80	2.23	B
5	1.20	2.81	C
6	1.02	2.69	B
7	1.20	2.85	C
8	0.94	2.47	B
9	1.00	2.85	C
10	1.20	2.73	B
Average		2.73	B

## 5. Non-signalized Pedestrian Crossing Calculations

Segment	Two-stage Crossing	Stage 1							
		Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	Yes	21	1	7.77	0.175	0.7429	8.8	11.8	8.8
2	Yes	21	1	7.77	0.174	0.7422	8.7	11.8	8.7
3	Yes	21	1	7.77	0.155	0.7013	7.3	10.5	7.3
4	Yes	21	1	7.77	0.150	0.6890	7.0	10.1	7.0
5	Yes	19	1	7.32	0.159	0.6887	6.6	9.5	6.6
6	Yes	21	1	7.77	0.134	0.6460	5.9	9.1	5.9
7	Yes	22	1	8.00	0.151	0.7005	7.5	10.7	7.5
8	Yes	19	1	7.32	0.177	0.7253	7.6	10.5	7.6
9	Yes	19	1	7.32	0.236	0.8228	12.3	15.0	12.3
10	No	51	4	14.59	0.106	0.7865	20.2	25.7	20.2

Segment	Motorist Yield Rate	Stage 2							
		Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	19	1	7.32	0.071	0.4068	2.3	5.6	2.3
2	0.000	21	1	7.77	0.065	0.3943	2.3	5.9	2.3
3	0.000	21	1	7.77	0.070	0.4189	2.5	6.1	2.5
4	0.000	19	1	7.32	0.068	0.3898	2.1	5.5	2.1
5	0.000	20	1	7.55	0.068	0.4028	2.3	5.8	2.3
6	0.000	21	1	7.77	0.072	0.4283	2.6	6.2	2.6
7	0.000	20	1	7.55	0.065	0.3857	2.2	5.6	2.2
8	0.000	21	1	7.77	0.104	0.5533	4.2	7.5	4.2
9	0.000	18	2	7.09	0.075	0.4111	2.3	5.5	2.3
10	0.000	0	0	0.00	0.000	0.0000	0.0	0.0	0.0

## 6. Non-signalized Pedestrian Crossing LOS

Intrsectn	Average Ped Delay (sec)	Pedestrian Intrsectn LOS
1	11.1	C
2	11.0	C
3	9.9	B
4	9.1	B
5	8.9	B
6	8.5	B
7	9.7	B
8	11.8	C
9	14.6	C
10	20.2	D

## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	6	0	1.000	1.000	0	Infinity
2	5	0	1.000	1.000	0	Infinity
3	5	0	1.000	1.000	0	Infinity
4	5	0	1.000	1.000	0	Infinity
5	6	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Pedestrian Delay at Intersection										
	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)	Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)	Ped Travel Speed (ft/s)	Ped Intrsctn Cross Street Xing Score	Ped Intrsctn LOS	Ped Intrsctn Segment Xing Score	Ped Intrsctn LOS
1	4.40	4.50	4.40	0.0	50.0	9.0	4.40	0.00	A	0.00	A
2	4.40	5.00	4.40	0.0	50.0	8.5	4.40	0.00	A	0.00	A
3	4.40	5.00	4.40	0.0	50.0	8.7	4.40	0.00	A	0.00	A
4	4.40	5.00	4.40	16.6	16.6	10.1	3.96	1.68	A	1.91	A
5	4.40	6.00	4.40	0.0	50.0	9.8	4.40	0.00	A	0.00	A

## 3. Compute Pedestrian Link LOS

Segment	Pedestrian Link LOS									Ped Link LOS
	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link LOS Score	
1	12.0	6.5	12.0	6.5	0.0	-4.7510	0.4625	1.2214	2.98	C
2	14.0	6.5	14.0	10.0	0.0	-5.2670	0.4456	1.1349	2.36	B
3	14.0	6.5	14.0	10.0	0.0	-5.0861	0.4468	1.1859	2.59	B
4	13.0	6.5	13.0	10.0	0.0	-5.3083	0.3070	1.3653	2.41	B
5	11.0	6.5	11.0	10.0	0.0	-5.0997	0.4009	1.4249	2.77	C

## 4. Compute Pedestrian Segment LOS

Segment & Downstream	Intrscn	Ped Segment RCDF	Ped Segment LOS Score	Ped Segment LOS
1	1	1.20	3.06	C
2	2	1.20	2.83	C
3	3	1.20	2.92	C
4	4	0.86	2.35	B
5	5	1.20	2.99	C
Average			2.86	C

## 5. Non-signalized Pedestrian Crossing Calculations

Segment	Stage 1								
	Two-stage Crossing	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	Yes	20	1	7.55	0.149	0.6755	6.4	9.5	6.4
2	Yes	22	1	8.00	0.139	0.6700	6.6	9.9	6.6
3	Yes	22	1	8.00	0.145	0.6860	7.1	10.3	7.1

									National Ave (WB) AM Peak
4	Yes	21	1	7.77	0.167	0.7263	8.1	11.2	8.1
5	Yes	19	1	7.32	0.174	0.7201	7.5	10.4	7.5

Segment	Motorist	----- Stage 2 -----							
	Yield Rate	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	23	1	8.23	0.064	0.4089	2.6	6.3	2.6
2	0.000	18	1	7.09	0.062	0.3569	1.8	5.1	1.8
3	0.000	18	1	7.09	0.056	0.3292	1.6	4.9	1.6
4	0.000	20	1	7.55	0.059	0.3572	1.9	5.4	1.9
5	0.000	21	1	7.77	0.064	0.3935	2.3	5.9	2.3

6. Non-signalized Pedestrian Crossing LOS

Downstream Intrsctn	Average Ped Delay (sec)	Pedestrian Intrsctn LOS
1	9.0	B
2	8.5	B
3	8.7	B
4	10.1	C
5	9.8	B



## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	5	0	1.000	1.000	0	Infinity
2	15	0	1.000	1.000	0	Infinity
3	5	0	1.000	1.000	0	Infinity
4	5	0	1.000	1.000	0	Infinity
5	5	0	1.000	1.000	0	Infinity
6	5	0	1.000	1.000	0	Infinity
7	8	0	1.000	1.000	0	Infinity
8	5	0	1.000	1.000	0	Infinity
9	5	0	1.000	1.000	0	Infinity
10	11	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)				Ped Travel Speed (ft/s)	Ped Intrscn		Ped Intrscn	
			Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)	Score		LOS	Score	LOS	
1	4.40	5.00	4.40	22.5	22.5	11.4	3.83	1.70	A	1.92	A
2	4.40	15.00	4.40	19.7	13.3	10.7	3.89	1.69	A	1.90	A
3	4.40	3.50	4.40	0.0	50.0	10.3	4.40	0.00	A	0.00	A
4	4.40	5.00	4.40	11.9	11.9	9.1	4.07	1.67	A	1.90	A
5	4.40	5.00	4.40	0.0	50.0	9.0	4.40	0.00	A	0.00	A
6	4.40	5.00	4.40	29.5	29.5	10.5	3.67	1.93	A	1.93	A
7	4.40	8.00	4.40	0.0	50.0	11.0	4.40	0.00	A	0.00	A
8	4.40	5.00	4.40	21.1	21.1	15.9	3.34	1.69	A	1.92	A
9	4.40	5.00	4.40	28.4	28.4	11.9	3.26	1.71	A	2.12	B
10	4.40	9.50	4.40	0.0	50.0	64.1	4.40	0.00	A	0.00	A

## 3. Compute Pedestrian Link LOS

Segment	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link	
									LOS	Score
1	13.0	6.5	13.0	10.0	0.0	-5.1150	0.3305	0.7083	1.97	A
2	13.0	6.5	13.0	6.5	0.0	-5.3499	0.3021	0.7183	1.72	A
3	13.0	6.5	13.0	10.0	0.0	-4.9305	0.5370	0.6986	2.35	B
4	13.0	6.5	13.0	10.0	0.0	-5.2670	0.3248	0.6239	1.73	A
5	11.0	6.5	11.0	10.0	0.0	-5.4943	0.4380	0.6978	1.69	A
6	13.0	6.5	13.0	10.0	0.0	-5.5556	0.3136	0.6872	1.49	A
7	14.0	6.5	14.0	10.0	0.0	-5.4434	0.4516	0.7254	1.78	A
8	11.0	6.5	11.0	10.0	0.0	-5.4278	0.1076	0.8314	1.56	A
9	19.0	0.0	19.0	0.0	0.0	-5.3653	0.1350	1.2774	2.09	B
10	13.0	0.0	13.0	0.0	0.0	-4.6172	0.4612	0.1942	2.09	B

## 4. Compute Pedestrian Segment LOS

Segment & Downstream Intrscn	Ped Segment LOS	Ped Segment LOS	
RCDF	LOS Score	LOS	
1	0.95	2.48	B

2	0.84	2.12	B
3	1.20	2.82	C
4	0.82	2.07	B
5	1.20	2.57	B
6	1.06	2.65	B
7	1.20	2.61	B
8	0.95	2.35	B
9	1.03	2.71	B
10	1.20	2.72	B
Average		2.54	B

## 5. Non-signalized Pedestrian Crossing Calculations

Segment	Two-stage Crossing	Stage 1							
		Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	Yes	21	1	7.77	0.086	0.4894	3.3	6.8	3.3
2	Yes	21	1	7.77	0.088	0.4942	3.4	6.8	3.4
3	Yes	21	1	7.77	0.085	0.4847	3.3	6.7	3.3
4	Yes	21	1	7.77	0.076	0.4468	2.8	6.3	2.8
5	Yes	19	1	7.32	0.085	0.4640	2.8	6.1	2.8
6	Yes	21	1	7.77	0.084	0.4791	3.2	6.7	3.2
7	Yes	22	1	8.00	0.089	0.5076	3.6	7.2	3.6
8	Yes	19	1	7.32	0.102	0.5243	3.5	6.7	3.5
9	Yes	19	1	7.32	0.156	0.6806	6.3	9.3	6.3
10	No	51	4	14.59	0.190	0.9372	64.1	68.4	64.1

Segment	Motorist Yield Rate	Stage 2							
		Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	19	1	7.32	0.184	0.7394	8.1	11.0	8.1
2	0.000	21	1	7.77	0.156	0.7023	7.4	10.5	7.4
3	0.000	21	1	7.77	0.152	0.6923	7.1	10.2	7.1
4	0.000	19	1	7.32	0.155	0.6775	6.3	9.2	6.3
5	0.000	20	1	7.55	0.145	0.6653	6.2	9.3	6.2
6	0.000	21	1	7.77	0.156	0.7021	7.4	10.5	7.4
7	0.000	20	1	7.55	0.164	0.7109	7.4	10.4	7.4
8	0.000	21	1	7.77	0.216	0.8130	12.4	15.2	12.4
9	0.000	18	2	7.09	0.150	0.6544	5.5	8.5	5.5
10	0.000	0	0	0.00	0.000	0.0000	0.0	0.0	0.0

## 6. Non-signalized Pedestrian Crossing LOS

Downstream Intrsctn	Average Ped Delay (sec)	Pedestrian Intrsctn LOS
1	11.4	C
2	10.7	C
3	10.3	C
4	9.1	B
5	9.0	B
6	10.5	C
7	11.0	C
8	15.9	C
9	11.9	C
10	64.1	F

## B. Pedestrian LOS

Street: National Avenue

## 1. Pedestrian Flow and Density

Segment	Sidewalk Width (ft)	Ped Flow (pph)	Glogal Growth Factor	Segment Growth Factor	Adj'd Ped Flow (pph)	Space Per Ped (sqft/ped)
1	6	0	1.000	1.000	0	Infinity
2	5	0	1.000	1.000	0	Infinity
3	5	0	1.000	1.000	0	Infinity
4	5	0	1.000	1.000	0	Infinity
5	6	0	1.000	1.000	0	Infinity

## 2. Compute Pedestrian Intersection LOS

Segment	Free-Flow Walk Speed (ft/sec)	Effective SW Width (ft)	Ped Walk Speed (ft/s)	Pedestrian Delay at Intersection			Ped Travel Speed (ft/s)	Ped Intrsctn		Ped Intrsctn	
				Parallel Path (sec)	Nearest Sig-Cntrl (sec)	Mid-Seg Crossing (sec)		Cross Street Xing Score	Xing LOS	Segment Xing Score	Xing LOS
1	4.40	4.50	4.40	0.0	50.0	11.4	4.40	0.00	A	0.00	A
2	4.40	5.00	4.40	0.0	50.0	10.2	4.40	0.00	A	0.00	A
3	4.40	5.00	4.40	0.0	50.0	10.0	4.40	0.00	A	0.00	A
4	4.40	5.00	4.40	16.8	16.8	11.1	3.95	1.69	A	1.91	A
5	4.40	6.00	4.40	0.0	50.0	12.3	4.40	0.00	A	0.00	A

## 3. Compute Pedestrian Link LOS

Segment	Outside lane (ft)	Wos (ft)	Wv (ft)	Wl BL+Shldr (ft)	Barrier (ft/tree)	Fw	Fs	Fv	Ped Link	
									LOS Score	Link LOS
1	12.0	6.5	12.0	6.5	0.0	-4.8134	0.4770	0.7323	2.44	B
2	14.0	6.5	14.0	10.0	0.0	-5.1339	0.4577	0.7132	2.08	B
3	14.0	6.5	14.0	10.0	0.0	-4.9846	0.4601	0.7286	2.25	B
4	13.0	6.5	13.0	10.0	0.0	-5.4610	0.3185	0.7147	1.62	A
5	11.0	6.5	11.0	10.0	0.0	-5.3593	0.4209	0.7327	1.84	A

## 4. Compute Pedestrian Segment LOS

Segment & Downstream Intrsctn	RCDF	Ped Segment LOS Score	Ped Segment LOS
1	1.20	2.86	C
2	1.20	2.72	B
3	1.20	2.79	C
4	0.89	2.22	B
5	1.20	2.63	B
Average		2.67	B

## 5. Non-signalized Pedestrian Crossing Calculations

Segment	Stage 1								
	Two-stage Crossing	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	Yes	20	1	7.55	0.089	0.4907	3.2	6.6	3.2
2	Yes	22	1	8.00	0.087	0.5017	3.6	7.1	3.6

3	Yes	22	1	8.00	0.089	0.5092	3.7	7.2	National Ave (WB) PM Peak
4	Yes	21	1	7.77	0.087	0.4925	3.3	6.8	3.7
5	Yes	19	1	7.32	0.089	0.4804	3.0	6.3	3.3

Segment	Motorist	----- Stage 2 -----							
	Yield Rate	Crossing Length (ft)	Through Lanes (#)	Critical Headway (sec)	Veh Flow Rate (veh/sec)	Prob of Delayed Crossing	Avg Ped Gap Delay (sec)	Non-zero Gap Delay (sec)	Veh Yield Reduction (sec)
1	0.000	23	1	8.23	0.152	0.7142	8.2	11.5	8.2
2	0.000	18	1	7.09	0.169	0.6983	6.6	9.5	6.6
3	0.000	18	1	7.09	0.165	0.6901	6.4	9.3	6.4
4	0.000	20	1	7.55	0.169	0.7214	7.7	10.7	7.7
5	0.000	21	1	7.77	0.182	0.7563	9.3	12.3	9.3

6. Non-signalized Pedestrian Crossing LOS

Downstream Intrsctn	Average Ped Delay (sec)	Pedestrian Intrsctn LOS
1	11.4	C
2	10.2	C
3	10.0	C
4	11.1	C
5	12.3	C