

FINAL

Design Traffic Analysis

Downtown Links

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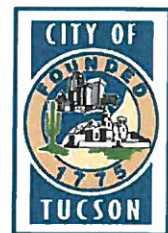


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INTRODUCTION

Background

The Downtown Links Project is intended to reduce the volume of through traffic on Congress Street/Broadway Boulevard in the downtown. The improvements will include a four-lane bypass (Stevens Ave) located north of the UPRR which extends the Barraza Aviation Parkway (BAP) from Broadway Boulevard to 6th Street. The by-pass route is illustrated in Figure 1. As part of the design concept phase for this project, a traffic analysis was performed to determine the volume of downtown through traffic that could potentially be diverted by the proposed by-pass, evaluate bypass alternatives to determine intersection lane configuration and turn lane storage requirements. These roadway and intersection capacity requirements were based on traffic projections developed for 2030 by the Pima Association of Governments (PAG). Since the 2030 projections substantially exceeded the capacity of the planned 4-lane by-pass, intersection capacity was determined based on approximately 60% of the projected volumes. Additional roadway capacity would be needed to accommodate the full 2030 projected demand.

Scope of Design Traffic Analysis

The scope of this analysis is to update the required intersection lane configurations and storage requirements to reflect the current 2040 traffic estimates developed by PAG. The analyses performed include intersection capacity analysis and queuing estimation. Considering that the section of the Downtown Links improvements between Granada Avenue and the WB I-10 ramps is about to begin construction, only the following intersections were evaluated in this analysis.

- Broadway Boulevard/BAP/Stevens Avenue,
- 6th Street/Stevens Avenue,
- 6th Street/Stone Avenue,
- 6th Street/Church Avenue,

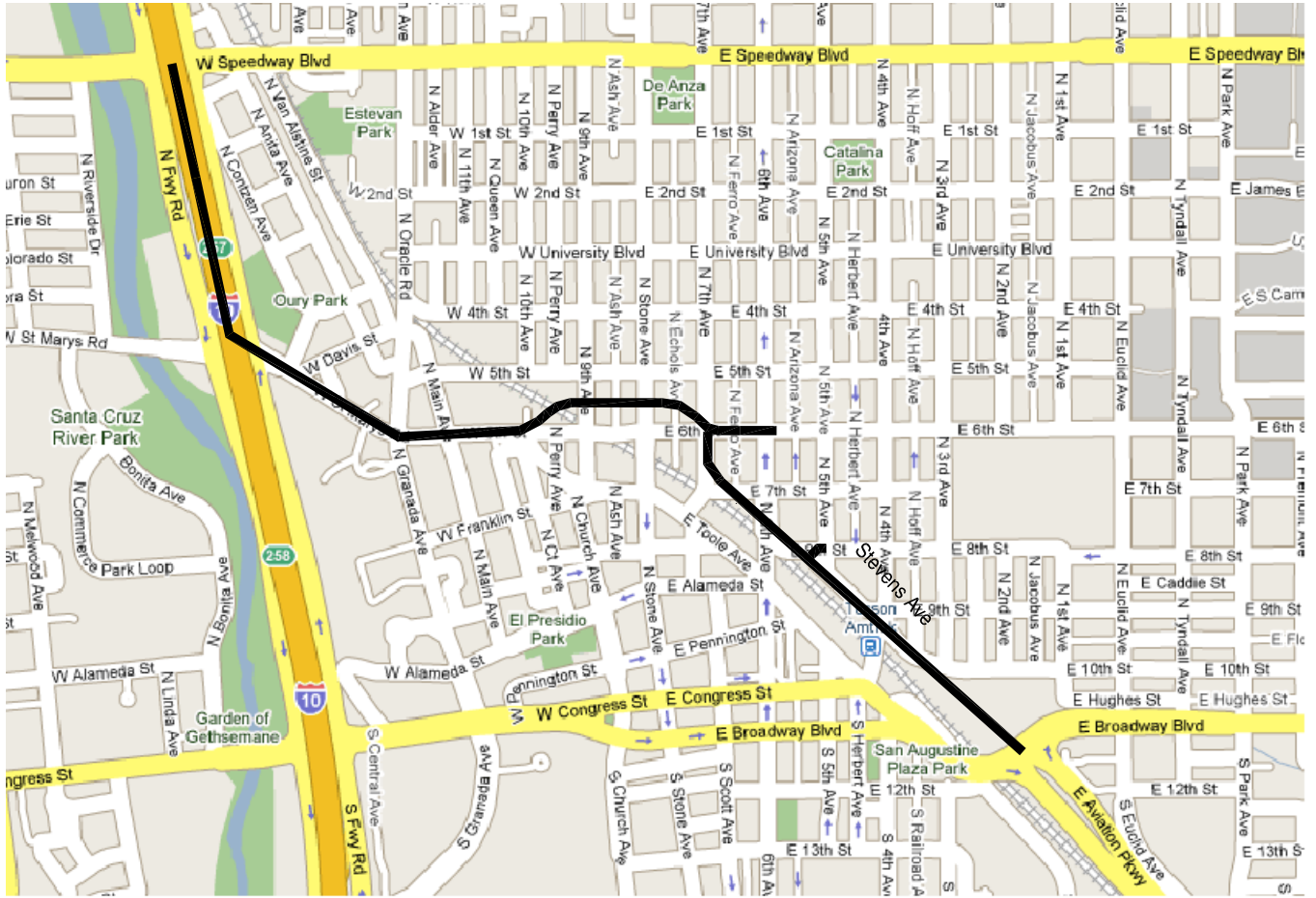
DESIGN TRAFFIC DATA

Design traffic data was developed based on current traffic volumes and factors, and future 2040 traffic projections generated by PAG. Current 24-hour roadway and peak period intersection traffic counts were collected in early May 2012 when school was still in session. Twenty-four hour directional counts were collected on St. Mary's Rd, Broadway Blvd, and BAP. Detailed count data, including vehicle classification data, is provided in Appendix A. Table 1 presents the traffic factors developed from the 24-hour count data.





(NO SCALE)



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DOWNTOWN LINKS ROUTE

FIGURE

1

Table 1. Traffic Factors

Roadway Segment	K AM/PM	D AM/PM	%HV
St Mary's Rd., Granada Ave to I-10	0.10/0.07	0.64/0.66	2.3%
Broadway Blvd, Euclid Ave to BAP	0.07/0.07	0.58/0.52	2.4%
BAP, south of Broadway Blvd.	0.10/0.07	0.57/0.61	1.6%

Table 2 summarizes the current traffic volumes, the projected future traffic demand, and the traffic volumes estimated for use in the final design phase of the Downtown Links project. Existing volumes include daily counts taken by PAG in 2010, as well as the 2012 counts taken for this analysis.

Traffic volume projections generated by the 2030 model used for the initial Downtown Links traffic study and the current 2040 model show a substantial drop in projected demand on nearly all of the roadway segments. The drop in projected demand on the Downtown Links segments ranges from approximately 30% to 50%. These lower volumes reflect revisions to the land use assumptions and travel behavior factors that are included in the PAG travel demand model.

Considering the existing volumes and 2040 projections, design traffic volumes for the Downtown Links segments were estimated based on the following assumptions and logic.

- The volume on 6th Street, east of the Stevens Ave connection should not be lower than the existing volume since there is no logical reason for the volumes to drop from 20,500 to 13,000 vpd. In fact, it would be reasonable to expect an increase in demand based on recent and planned redevelopment along 6th Street and the University of Arizona main gate.
- The combined traffic from Stevens Ave and 6th Street to the east should be reasonably close to the traffic volume on 6th Street between Stevens Ave and Stone Ave. Based on the traffic projections, this volume should be approximately 41,000 vpd rather than 31,000 vpd. Given the existing 21,000 vpd on 6th Street, the estimated design volume on the Stevens Ave connection is 20,000 vpd, rather than 30,000 vpd.
- Estimated design traffic volumes on 6th Ave segments between Stone Ave and I-10 were adjusted to reflect the 41,000 vpd to the east of Stone Ave.

Table 2. Projected Daily Traffic Volumes

Roadway	Segment	Existing (2010)	PAG 2030 (1)	PAG 2040 (2)	Design Traffic Volume
Broadway Blvd	West of BAP	35,000	56,000	39,000	39,000
	East of BAP	22,000 (2012)	51,000	33,000	33,000
6 th Ave	North of 6 th St	6,000	14,000	13,000	13,000
	South of 6 th St	5,500	19,000	11,000	11,000
Stone Ave	North of 6 th St	21,000	48,000	31,000	31,000
	South of 6 th St	20,000	36,500	24,000	24,000
Church Ave	South of 6 th St	8,500	16,000	10,000	10,000
Granada Ave	North of 6 th St	11,000	19,000	18,000	18,000
	South of 6 th St	10,000	16,000	12,000	12,000
BAP	South of Broadway Blvd	17,000 19,500 (2012)	55,500	37,000	37,000
Stevens Ave	Broadway Blvd to 6 th St	N/A	41,000	30,000	20,000
6 th St/St. Mary's Rd	East of 6 th Ave	21,000	23,000	16,000	21,000
	6 th Ave-Stevens Ave	20,500	18,000	13,000	21,000
	Stevens Ave – Stone Ave	20,500	53,000	31,000	41,000
	Stone Ave – Church Ave	21,500	37,000	17,000	28,000
	Church Ave – Granada Ave	21,500	52,000	26,000	38,000
	Granada Ave – I-10 East FR	29,000 23,000 (2012)	50,000	32,000	41,000

1. Traffic projections generated by the PAG 2030 travel demand model available in 2007.
2. Traffic projections generated by the current PAG 2040 travel demand model.

Peak-hour intersection design traffic volumes were developed by applying current traffic factors and turning volume distributions to the future daily traffic volumes, adjusting as necessary to provide for balanced volumes between intersections. The estimated peak-hour intersection design traffic volumes are presented in Figure 2.

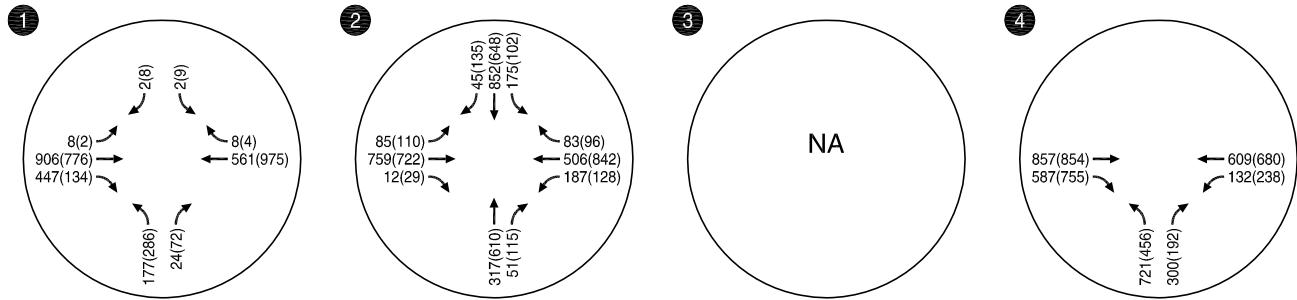
CAPACITY ANALYSIS

Intersection capacity analysis was performed using Synchro 7 to evaluate storage requirements based on the design traffic volumes. At each intersection, signal phasing and timing were optimized based on a 90 second cycle length. The analysis worksheets are provided in Appendix B.

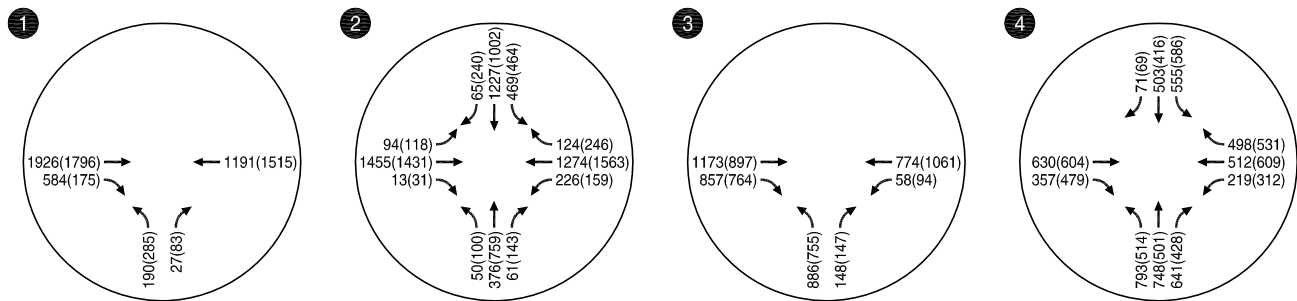




EXISTING (2012)



DESIGN YEAR (2040)



LEGEND

XX - AM PEAK
 (XX) - PM PEAK

EXISTING AND DESIGN PEAK-HOUR INTERSECTION TRAFFIC VOLUMES

FIGURE 2

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The lane configurations included in the 30% Downtown Links design were evaluated and the results are summarized in Figure 3. These results show that the 6th St/Stone Ave and 6th St/Stevens Ave intersections will operate with substantial congestion during both peak-hours. The current design will essentially provide sufficient capacity to accommodate 60%-70% of the projected design traffic volumes. The capacity analysis results for this lower demand are provided in Figure 4. These results are consistent with those produced in the Downtown Links traffic study. Although overall intersection operations will be at or below LOS E, several movements during the morning and evening peak hours will fail. Insufficient left-turn capacity on southbound Stone Ave at 6th St will create lengthy backups. Adding dual left-turn lanes for this movement is not possible due to limited right-of-way.

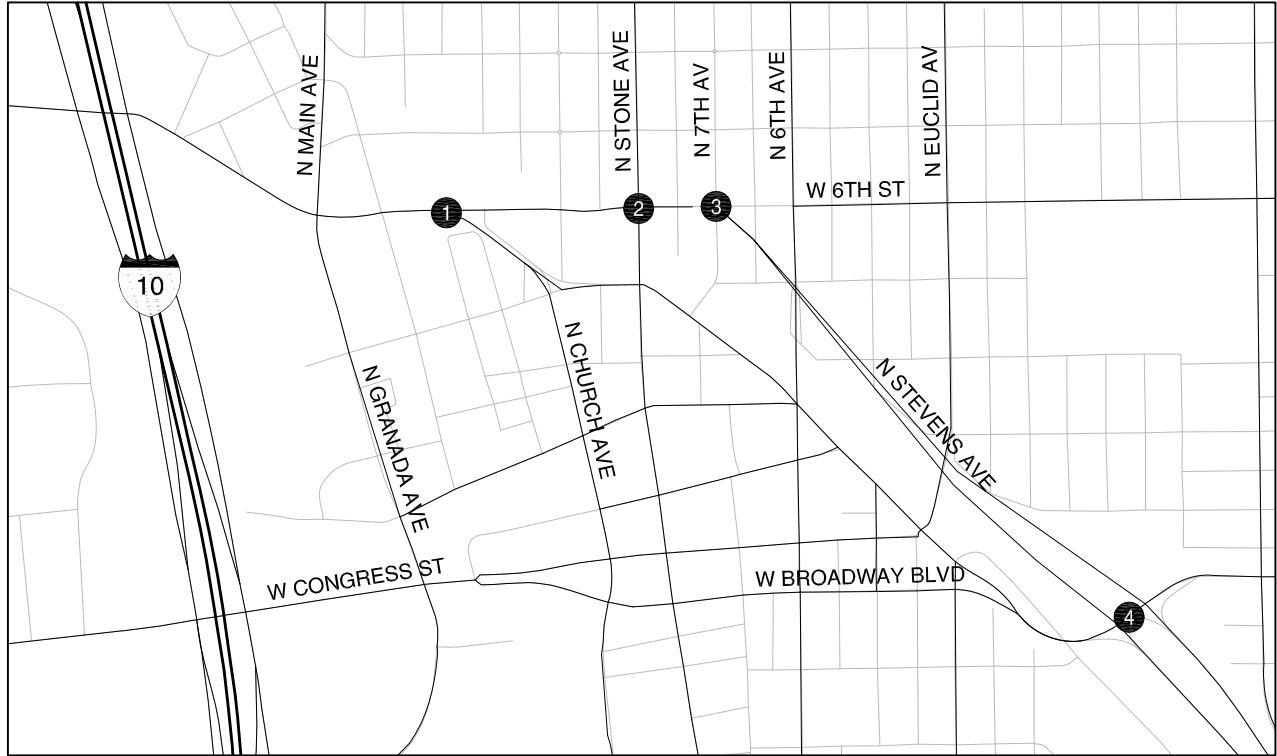
Queuing estimates for each intersection lane group were generated by Synchro. Queue estimates specific to the turn-bays included in the 30% design are summarized in Table 3. Based on the 30% design, turn-lane storage will be insufficient for several movements, including the westbound and southbound left-turns at 6th Ave/Stone Ave and the southbound left-turn on Stevens Ave at Broadway Blvd. Adding left-turn capacity at 6th Ave/Stone Ave is constrained, however dual southbound left-turn lanes at Broadway Blvd should be considered and can be easily accommodated within the median.

Table 3. Projected Daily Traffic Volumes

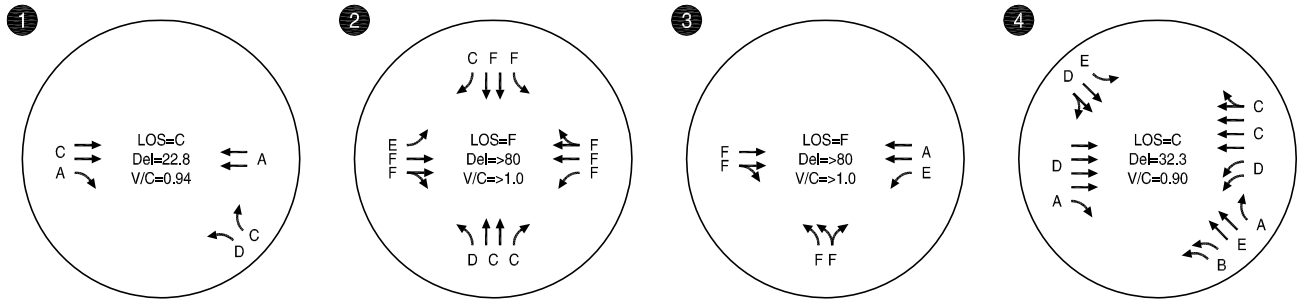
Intersection	Turn Bay	30% Dgn Storage (ft)	95 th %tile Queue (ft)		Comment
			Design Traffic	70% Design Traffic	
6th St/Stone Ave	EB LT	140	105 m (1)	65 m (1)	
	WB LT	140	350	140 m (1)	Storage constrained
	NB LT	70	70	45	
	NB RT	45	85	35	
	SB LT	150 (TWLTL)	640	330	Not possible to add dual LT lanes
	SB RT	80	105	50	
6th St/Stevens Ave	WB LT	140 (TWLTL)	155 m (1)	50	
Broadway Blvd/ Stevens Ave	SB LT	175	500	170	Consider adding dual LT lanes

1. An "m" indicates that the turn volume is metered by an upstream signal. During off-peak hours, it is possible that metering will not occur and queue lengths will be longer than during peak traffic periods.

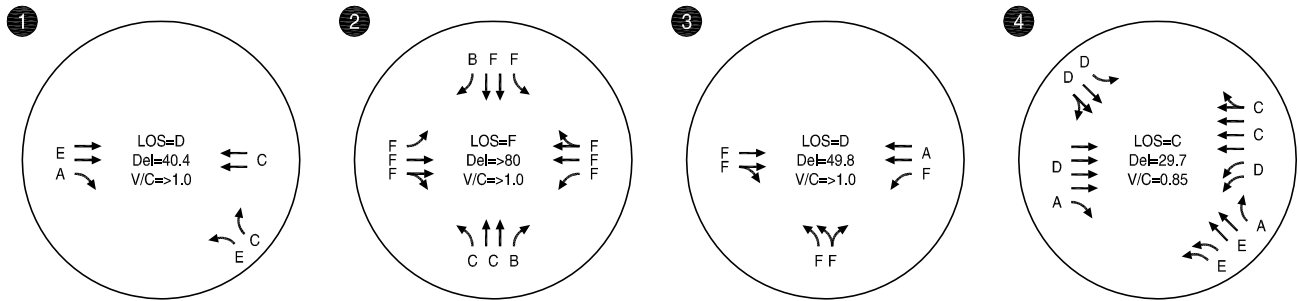




AM PEAK HOUR



PM PEAK HOUR



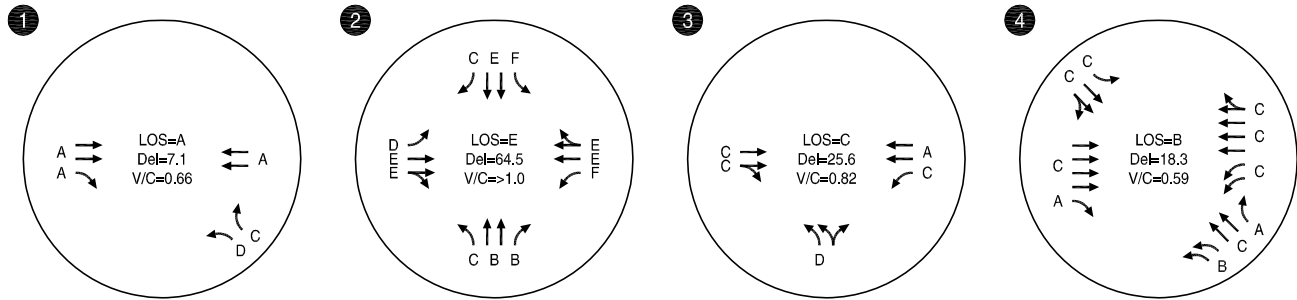
DESIGN TRAFFIC INTERSECTION OPERATIONS FOR 30% DESIGN

FIGURE 3

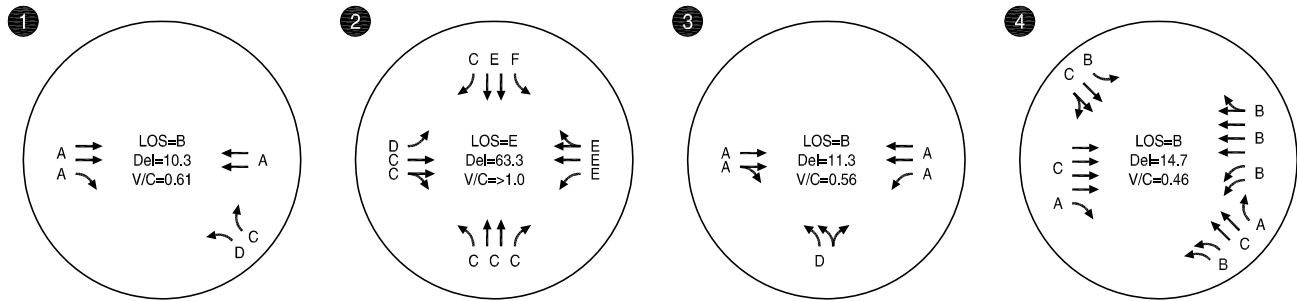
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AM PEAK HOUR



PM PEAK HOUR



70% DESIGN TRAFFIC INTERSECTION OPERATIONS FOR 30% DESIGN

FIGURE

4

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ADDITIONAL SUGGESTED CAPACITY IMPROVEMENTS

While right-of-way and other limitations constrain the intersection lane geometry at 6th Ave/Stone Ave and 6th Ave/Stevens Ave, the following modifications will provide substantial operational benefits.

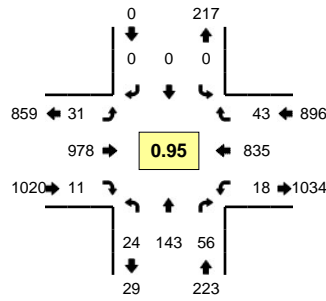
- 6th St/Stone Ave – Westbound right-turn bay with 200 ft storage, if possible. Eastbound right-turn bay with 50 ft storage.
- 6th St/Stevens Ave - Eastbound right-turn slip lane, similar to that at 6th St/Church Ave. to allow free-flow right-turn movement. The eastbound right-turn movement is expected to be heavy. If possible, begin the eastbound right-turn lane-add taper just east of Stone Ave. A lane-add taper is preferred over adding a third eastbound lane on the Stone Ave departure since it will preclude use of the eastbound right-turn lane at Stone Ave by motorists turning right at Stevens Ave downstream. Considering the heavy northbound left-turn movement, add a 100-ft exclusive northbound right-turn lane, if right-of-way is available.
- Broadway Blvd/Stevens Ave – Although a single southbound left-turn lane will provide sufficient capacity, provision of dual left-turn lanes are typically installed when the turning volume exceeds 400 vph and will reduce the impact of the backup that is projected for a single left-turn lane.

Appendix A
Traffic Count Data

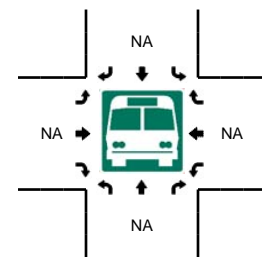
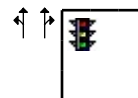
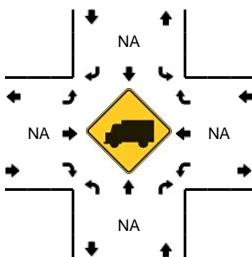
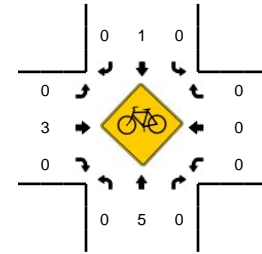
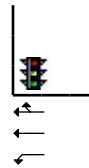
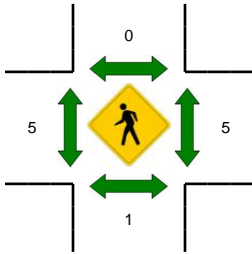
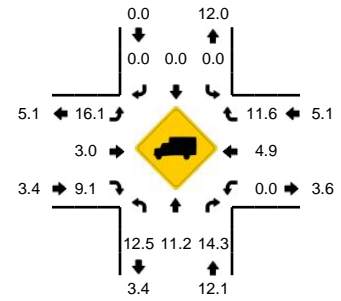


LOCATION: 6th Ave -- 6th St
CITY/STATE: Tucson, AZ

QC JOB #: 10733412
DATE: Wed, Apr 18 2012



Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

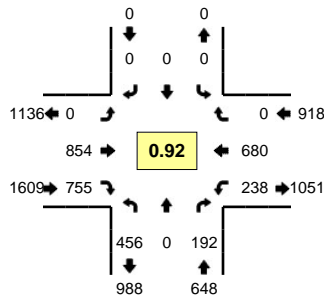


5-Min Count Period Beginning At	6th Ave (Northbound)				6th Ave (Southbound)				6th St (Eastbound)				6th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	1	5	0	0	0	0	0	0	3	20	0	0	0	14	4	0	47	
6:35 AM	1	3	2	0	0	0	0	0	0	29	0	0	0	19	3	0	57	
6:40 AM	1	11	5	0	0	0	0	0	1	34	0	0	0	25	1	0	78	
6:45 AM	0	8	0	0	0	0	0	0	4	53	0	0	1	14	0	0	80	
6:50 AM	0	10	6	0	0	0	0	0	4	29	0	0	0	17	2	0	68	
6:55 AM	0	7	1	0	0	0	0	0	4	30	1	0	1	23	1	0	68	
7:00 AM	1	4	1	0	0	0	0	0	1	45	0	0	0	25	2	0	79	
7:05 AM	1	9	0	0	0	0	0	0	2	35	0	0	0	20	2	0	69	
7:10 AM	3	2	3	0	0	0	0	0	2	53	0	0	0	22	4	0	89	
7:15 AM	0	2	7	0	0	0	0	0	1	56	2	0	0	23	2	0	93	
7:20 AM	1	17	5	0	0	0	0	0	3	68	0	0	0	45	2	0	141	
7:25 AM	0	6	4	0	0	0	0	0	1	76	0	0	0	50	1	0	138	1007
7:30 AM	2	5	3	0	0	0	0	0	7	95	0	0	1	67	1	0	181	1141
7:35 AM	7	12	10	0	0	0	0	0	1	96	2	0	2	64	1	0	195	1279
7:40 AM	0	12	2	0	0	0	0	0	3	94	1	0	1	63	1	0	177	1378
7:45 AM	5	8	1	0	0	0	0	0	3	95	1	0	0	75	5	0	193	1491
7:50 AM	0	15	6	0	0	0	0	0	1	92	1	0	1	68	6	0	190	1613
7:55 AM	0	10	2	0	0	0	0	0	4	78	1	0	5	68	3	0	171	1716
8:00 AM	0	17	2	0	0	0	0	0	0	76	0	0	0	64	6	0	165	1802
8:05 AM	1	12	9	0	0	0	0	0	1	78	1	0	3	68	2	0	175	1908
8:10 AM	3	11	8	0	0	0	0	0	3	73	1	0	1	71	5	0	176	1995
8:15 AM	0	15	4	0	0	0	0	0	3	85	0	0	2	66	4	0	179	2081
8:20 AM	3	14	7	0	0	0	0	0	4	67	1	0	0	79	3	0	178	2118
8:25 AM	3	12	2	0	0	0	0	0	1	49	2	0	2	82	6	0	159	2139
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	48	128	52	0	0	0	0	0	28	1140	16	0	12	808	28	0	2260	
Heavy Trucks	8	28	4		0	0	0		0	40	4		0	32	8		124	
Pedestrians		0				0				4				8			12	
Bicycles	0	1	0		0	0	0		0	2	0		0	0	0		3	
Railroad																		
Stopped Buses																		

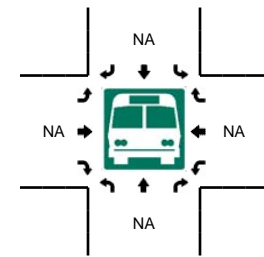
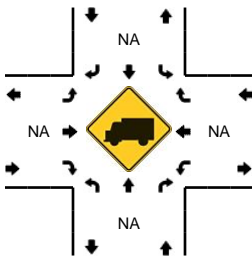
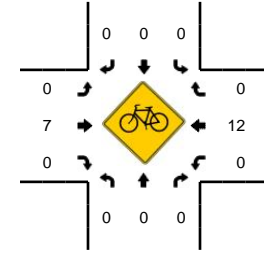
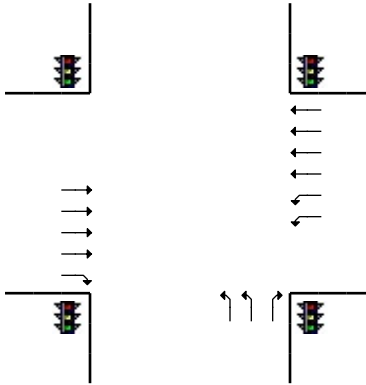
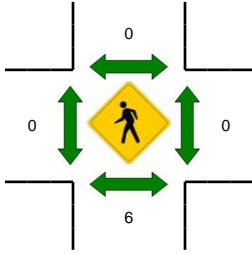
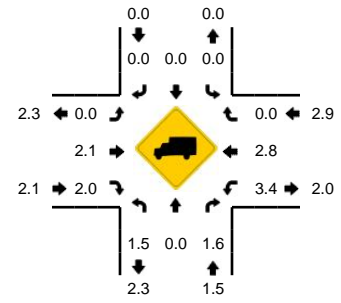
Comments:

LOCATION: Barazza Aviation Pkwy -- Broadway Blvd
CITY/STATE: Tucson, AZ

QC JOB #: 10733413
DATE: Tue, Apr 17 2012



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Peak 15-Min: 5:05 PM -- 5:20 PM

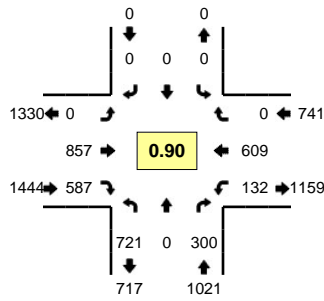


5-Min Count Period Beginning At	Barazza Aviation Pkwy (Northbound)				Barazza Aviation Pkwy (Southbound)				Broadway Blvd (Eastbound)				Broadway Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	27	0	15	0	0	0	0	0	0	72	45	0	22	47	0	4	232	
4:05 PM	44	0	11	0	0	0	0	0	0	69	42	0	16	49	0	1	232	
4:10 PM	43	0	17	0	0	0	0	0	0	80	55	0	14	64	0	2	275	
4:15 PM	34	0	10	0	0	0	0	0	0	87	62	0	12	44	0	0	249	
4:20 PM	44	0	16	0	0	0	0	0	0	72	55	0	18	53	0	2	260	
4:25 PM	39	0	15	0	0	0	0	0	0	63	53	0	14	55	0	0	239	
4:30 PM	32	0	14	0	0	0	0	0	0	59	59	0	19	47	0	1	231	
4:35 PM	42	0	18	0	0	0	0	0	0	71	65	0	12	45	0	0	253	
4:40 PM	32	0	18	0	0	0	0	0	0	86	74	0	9	46	0	0	265	
4:45 PM	43	0	19	0	0	0	0	0	0	63	64	0	15	38	0	1	243	
4:50 PM	55	0	17	0	0	0	0	0	0	76	58	0	22	57	0	0	285	
4:55 PM	38	0	19	0	0	0	0	0	0	63	41	0	16	47	0	0	224	2988
5:00 PM	35	0	15	0	0	0	0	0	0	82	62	0	16	46	0	0	256	3012
5:05 PM	30	0	15	0	0	0	0	0	0	86	82	0	33	48	0	1	295	3075
5:10 PM	40	0	24	0	0	0	0	0	0	73	77	0	23	56	0	0	293	3093
5:15 PM	29	0	16	0	0	0	0	0	0	84	65	0	26	53	0	0	273	3117
5:20 PM	35	0	5	0	0	0	0	0	0	63	80	0	23	65	0	0	271	3128
5:25 PM	39	0	15	0	0	0	0	0	0	56	69	0	12	55	0	2	248	3137
5:30 PM	35	0	19	0	0	0	0	0	0	68	53	0	17	65	0	1	258	3164
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5:45 PM	33	0	19	0	0	0	0	0	0	70	49	0	20	64	0	0	255	3175
5:50 PM	36	0	18	0	0	0	0	0	0	68	37	0	10	49	0	1	219	3109
5:55 PM	26	0	9	0	0	0	0	0	0	56	41	0	10	56	0	0	198	3083
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	396	0	220	0	0	0	0	0	0	972	896	0	328	628	0	4	3444	
Heavy Trucks	4	0	4	0	0	0	0	0	0	24	16	0	8	16	0	0	72	
Pedestrians																	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	
Railroad																		
Stopped Buses																		

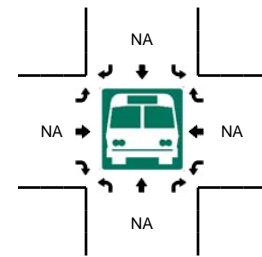
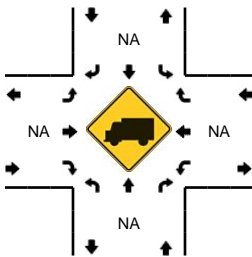
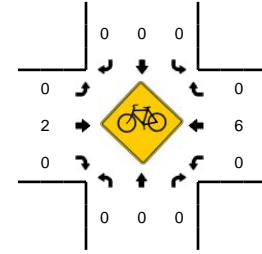
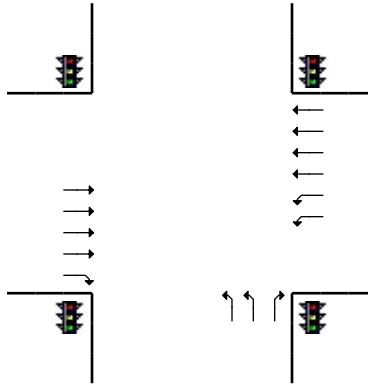
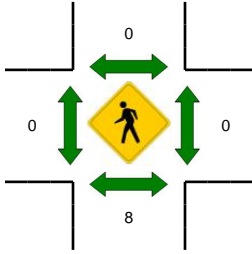
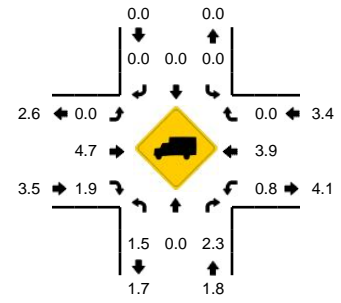
Comments:

LOCATION: Barazza Aviation Pkwy -- Broadway Blvd
CITY/STATE: Tucson, AZ

QC JOB #: 10733414
DATE: Wed, Apr 18 2012



Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

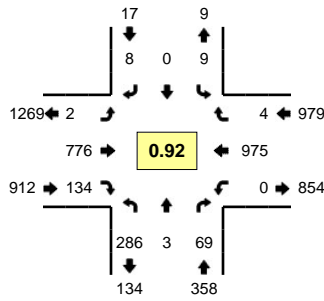


5-Min Count Period Beginning At	Barazza Aviation Pkwy (Northbound)				Barazza Aviation Pkwy (Southbound)				Broadway Blvd (Eastbound)				Broadway Blvd (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
6:30 AM	24	0	11	0	0	0	0	0	0	22	34	0	10	27	0	0	128		
6:35 AM	47	0	11	0	0	0	0	0	0	39	41	0	7	18	0	0	163		
6:40 AM	58	0	6	0	0	0	0	0	0	29	52	0	7	22	0	0	174		
6:45 AM	55	0	10	0	0	0	0	0	0	41	47	0	15	19	0	0	187		
6:50 AM	47	0	14	0	0	0	0	0	0	38	21	0	4	22	0	0	146		
6:55 AM	40	0	7	0	0	0	0	0	0	46	45	0	21	65	0	0	224		
7:00 AM	40	0	20	0	0	0	0	0	0	43	35	0	11	24	0	0	173		
7:05 AM	58	0	13	0	0	0	0	0	0	52	38	1	13	27	0	0	202		
7:10 AM	46	0	9	0	0	0	0	0	0	44	35	0	9	23	0	0	166		
7:15 AM	54	0	19	0	0	0	0	0	0	47	53	0	9	29	0	0	211		
7:20 AM	42	0	20	0	0	0	0	0	0	52	44	0	13	41	0	0	212		
7:25 AM	67	0	16	0	0	0	0	0	0	72	52	0	6	48	0	0	261	2247	
7:30 AM	60	0	14	0	0	0	0	0	0	74	47	0	12	33	0	0	240	2359	
7:35 AM	58	0	26	0	0	0	0	0	0	103	52	0	10	52	0	0	301	2497	
7:40 AM	65	0	31	0	0	0	0	0	0	78	56	0	12	51	0	0	293	2616	
7:45 AM	76	0	32	0	0	0	0	0	0	77	53	0	6	54	0	0	298	2727	
7:50 AM	49	0	21	0	0	0	0	0	0	79	43	0	22	70	0	0	284	2865	
7:55 AM	50	0	29	0	0	0	0	0	0	67	51	0	12	46	0	0	255	2896	
8:00 AM	70	0	28	0	0	0	0	0	0	47	47	0	10	40	0	0	242	2965	
8:05 AM	50	0	23	0	0	0	0	0	0	75	46	0	10	55	0	1	260	3023	
8:10 AM	69	0	29	0	0	0	0	0	0	53	48	0	11	46	0	1	257	3114	
8:15 AM	55	0	21	0	0	0	0	0	0	69	44	0	6	58	0	0	253	3156	
8:20 AM	52	0	30	0	0	0	0	0	0	63	48	0	13	56	0	0	262	3206	
8:25 AM	30	0	25	0	0	0	0	0	0	68	29	0	7	60	0	0	219	3164	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	796	0	356	0	0	0	0	0	0	1032	644	0	112	628	0	0	3568		
Heavy Trucks	4	0	8	0	0	0	0	0	0	48	16	0	0	20	0	0	96		
Pedestrians		24				0				0				0			24		
Bicycles	0	0	0		0	0	0		0	0	0		0	3	0		3		
Railroad																			
Stopped Buses																			

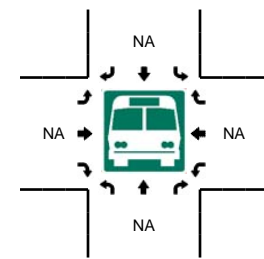
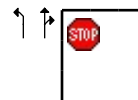
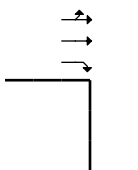
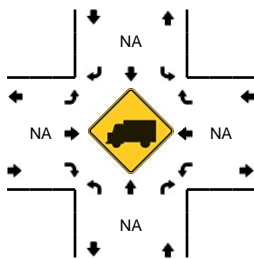
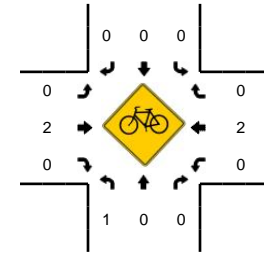
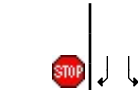
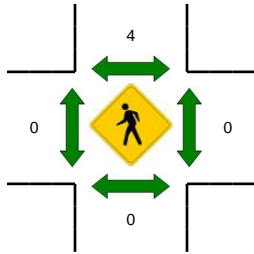
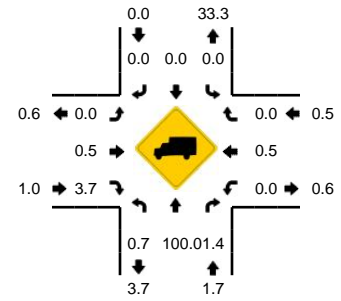
Comments:

LOCATION: Church Ave -- 6th St
CITY/STATE: Tucson, AZ

QC JOB #: 10733407
DATE: Tue, Apr 17 2012



Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

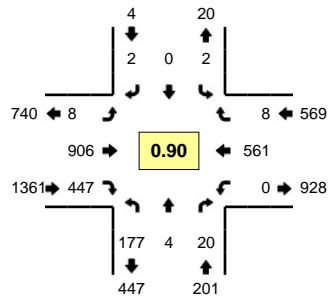


5-Min Count Period Beginning At	Church Ave (Northbound)				Church Ave (Southbound)				6th St (Eastbound)				6th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	23	0	8	0	2	0	0	0	0	69	17	0	0	97	0	0	216	
4:05 PM	21	0	3	0	2	0	1	0	1	46	22	0	0	40	1	0	137	
4:10 PM	24	1	16	0	0	0	0	0	0	36	14	0	0	79	1	0	171	
4:15 PM	27	0	2	0	0	0	0	0	0	54	13	0	0	82	0	0	178	
4:20 PM	26	0	9	0	1	0	0	0	0	39	9	0	0	73	0	0	157	
4:25 PM	24	0	3	0	0	0	0	0	0	49	13	0	0	66	0	0	155	
4:30 PM	33	1	8	0	1	0	0	0	0	58	17	0	0	63	1	0	182	
4:35 PM	26	0	2	0	0	0	3	0	0	49	10	0	0	61	0	0	151	
4:40 PM	21	0	4	0	0	0	0	0	1	63	9	0	0	75	0	0	173	
4:45 PM	26	0	6	0	1	0	1	0	0	78	13	0	0	78	1	0	204	
4:50 PM	27	1	3	0	1	0	0	0	0	54	12	0	0	82	0	0	180	
4:55 PM	18	0	8	0	1	0	0	0	1	57	19	0	0	84	1	0	189	2093
5:00 PM	27	0	3	0	0	0	2	0	0	54	9	0	0	74	0	0	169	2046
5:05 PM	26	0	4	0	2	0	0	0	0	72	10	0	0	76	0	0	190	2099
5:10 PM	22	1	6	0	0	0	1	0	0	68	15	0	0	79	1	0	193	2121
5:15 PM	15	0	8	0	0	0	0	0	0	99	10	0	0	85	0	0	217	2160
5:20 PM	31	0	11	0	1	0	0	0	0	60	11	0	0	93	1	0	208	2211
5:25 PM	29	0	9	0	0	0	0	0	0	55	12	0	0	61	0	0	166	2222
5:30 PM	17	0	4	0	1	0	1	0	0	60	5	0	0	106	0	0	194	2234
5:35 PM	27	1	3	0	2	0	3	0	0	56	9	0	0	82	0	0	183	2266
5:40 PM	31	0	0	0	1	0	0	0	0	46	8	0	0	78	0	0	164	2257
5:45 PM	15	1	1	0	0	0	0	0	0	45	6	0	0	85	0	0	153	2206
5:50 PM	38	0	6	0	0	0	1	0	0	43	15	0	0	45	0	0	148	2174
5:55 PM	30	0	3	0	2	0	0	0	0	37	3	0	0	64	0	0	139	2124
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	272	4	100	0	4	0	4	0	0	908	144	0	0	1028	8	0	2472	
Heavy Trucks	0	4	0	0	0	0	0	0	0	4	4	0	0	8	0	0	20	
Pedestrians		0				0				0				0			0	
Bicycles	1	0	0		0	0	0		0	1	0		0	0	0		2	
Railroad																		
Stopped Buses																		

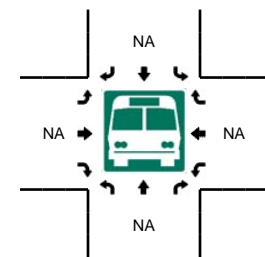
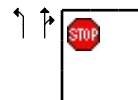
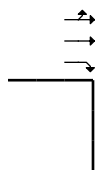
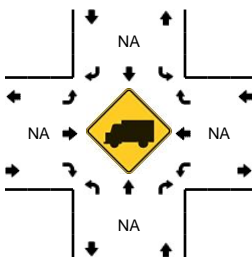
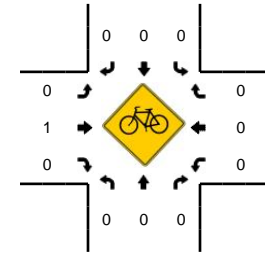
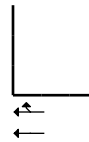
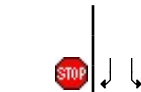
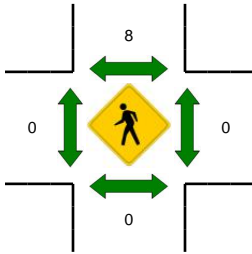
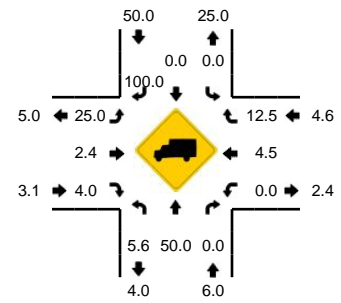
Comments:

LOCATION: Church Ave -- 6th St
CITY/STATE: Tucson, AZ

QC JOB #: 10733408
DATE: Wed, Apr 18 2012



Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

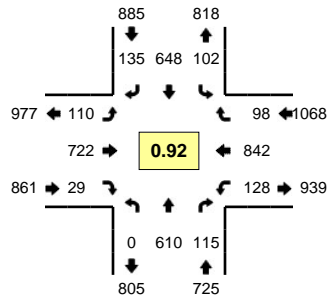


5-Min Count Period Beginning At	Church Ave (Northbound)				Church Ave (Southbound)				6th St (Eastbound)				6th St (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
6:30 AM	10	0	1	0	0	0	0	0	0	18	8	0	0	13	1	0	51		
6:35 AM	13	0	0	0	0	0	0	0	1	30	8	0	0	11	0	0	63		
6:40 AM	13	0	1	0	0	0	0	0	0	34	11	0	0	18	1	0	78		
6:45 AM	16	1	2	0	1	0	0	0	0	40	13	0	0	16	2	0	91		
6:50 AM	12	1	2	0	0	0	0	0	0	38	9	0	0	14	1	0	77		
6:55 AM	13	0	0	0	0	0	0	0	1	32	14	0	0	18	2	0	80		
7:00 AM	12	0	4	0	0	0	0	0	2	33	15	0	0	21	1	0	88		
7:05 AM	4	0	0	0	0	0	0	0	0	40	11	0	0	24	0	0	79		
7:10 AM	14	0	1	0	0	0	0	0	0	52	12	0	0	18	1	0	98		
7:15 AM	10	0	2	0	0	0	0	0	0	43	21	0	0	18	1	0	95		
7:20 AM	11	1	2	0	0	0	0	0	1	74	21	0	0	29	2	0	141		
7:25 AM	7	0	1	0	0	0	0	0	1	73	26	0	0	45	1	0	154	1095	
7:30 AM	11	0	2	0	0	0	0	0	0	90	39	0	0	45	0	0	187	1231	
7:35 AM	12	0	1	0	2	0	2	0	3	91	31	0	0	51	0	0	193	1361	
7:40 AM	15	0	4	0	0	0	0	0	0	101	48	0	0	47	1	0	216	1499	
7:45 AM	18	0	0	0	0	0	0	0	0	72	42	0	0	53	1	0	186	1594	
7:50 AM	18	1	2	0	0	0	0	0	0	71	48	0	0	45	0	0	185	1702	
7:55 AM	12	1	1	0	0	0	0	0	1	70	43	0	0	41	0	0	169	1791	
8:00 AM	15	0	4	0	0	0	0	0	1	52	31	0	0	49	1	0	153	1856	
8:05 AM	15	0	1	0	0	0	0	0	0	90	26	0	0	42	1	0	175	1952	
8:10 AM	21	1	2	0	0	0	0	0	0	57	27	0	0	46	1	0	155	2009	
8:15 AM	17	0	1	0	0	0	0	0	0	79	25	0	0	47	0	0	169	2083	
8:20 AM	16	1	1	0	0	0	0	0	2	60	61	0	0	50	2	0	193	2135	
8:25 AM	25	1	3	0	0	0	0	0	0	39	60	0	0	25	0	0	153	2134	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	152	0	28	0	8	0	8	0	12	1128	472	0	0	572	4	0	2384		
Heavy Trucks	20	0	0	0	0	0	8	0	8	20	20	0	0	40	4	0	120		
Pedestrians	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	20		
Bicycles	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
Railroad																			
Stopped Buses																			

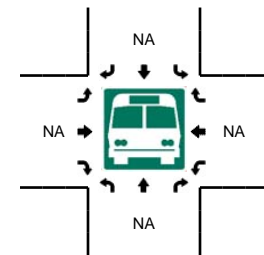
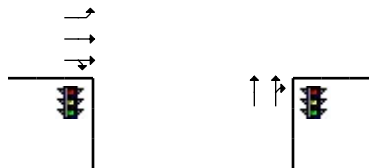
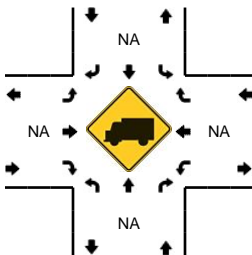
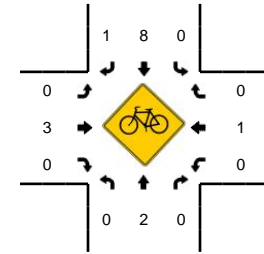
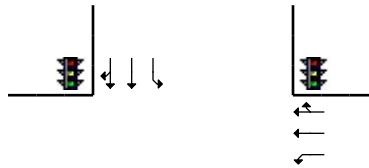
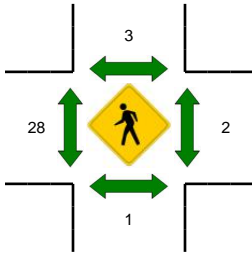
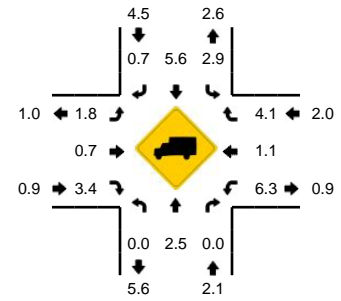
Comments:

LOCATION: Stone Ave -- 6th St
CITY/STATE: Tucson, AZ

QC JOB #: 10733409
DATE: Tue, Apr 17 2012



Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

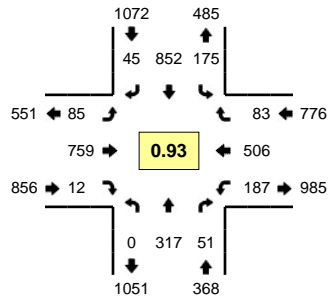


5-Min Count Period Beginning At	Stone Ave (Northbound)				Stone Ave (Southbound)				6th St (Eastbound)				6th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	45	3	0	20	40	5	0	11	32	3	0	9	74	11	0	253	
4:05 PM	0	44	5	0	8	44	5	0	10	55	3	0	11	94	8	0	287	
4:10 PM	0	45	18	0	15	56	4	0	6	24	0	0	13	25	8	0	214	
4:15 PM	0	51	6	0	11	52	6	0	15	48	1	0	3	72	8	0	273	
4:20 PM	0	23	4	0	11	55	14	0	9	59	0	0	9	59	7	0	250	
4:25 PM	0	58	4	0	7	57	13	0	8	33	0	0	11	67	4	0	262	
4:30 PM	0	43	4	0	14	64	5	0	8	43	1	0	9	49	5	0	245	
4:35 PM	0	55	14	0	6	49	3	0	5	36	6	0	18	48	10	0	250	
4:40 PM	0	43	15	0	13	33	6	0	10	57	3	0	9	78	8	0	275	
4:45 PM	0	48	12	0	7	58	11	0	9	68	2	0	9	64	7	0	295	
4:50 PM	0	50	8	0	8	33	11	0	15	56	0	0	9	65	12	0	267	
4:55 PM	0	58	5	0	10	55	10	0	9	52	2	0	9	63	5	0	278	3149
5:00 PM	0	41	9	0	12	49	6	0	6	58	2	0	9	82	5	0	279	3175
5:05 PM	0	56	11	0	10	56	12	0	10	55	0	0	12	60	14	0	296	3184
5:10 PM	0	43	14	0	3	59	14	0	8	58	6	0	17	64	9	0	295	3265
5:15 PM	0	52	9	0	8	56	9	0	15	72	2	0	9	72	5	0	309	3301
5:20 PM	0	66	8	0	8	69	17	0	9	79	2	0	7	70	9	0	344	3395
5:25 PM	0	58	9	0	12	61	12	0	6	59	3	0	6	74	7	0	307	3440
5:30 PM	0	35	7	0	6	54	16	0	6	57	1	0	11	67	10	0	270	3465
5:35 PM	0	60	8	0	5	65	11	0	7	51	6	0	21	83	7	0	324	3539
5:40 PM	0	40	8	0	10	40	13	0	7	48	0	0	16	74	6	0	262	3526
5:45 PM	0	54	4	0	8	45	9	0	1	53	1	0	14	71	6	0	266	3497
5:50 PM	0	36	17	0	8	57	8	0	2	15	2	0	29	52	15	0	241	3471
5:55 PM	0	30	9	0	6	46	12	0	8	64	2	0	5	55	9	0	246	3439
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	704	104	0	112	744	152	0	120	840	28	0	88	864	84	0	3840	
Heavy Trucks	0	16	0	0	0	28	0	0	0	4	0	0	4	12	4	0	68	
Pedestrians		0				4				20				0			24	
Bicycles	0	1	0		0	4	0		0	0	0		0	0	0		5	
Railroad																		
Stopped Buses																		

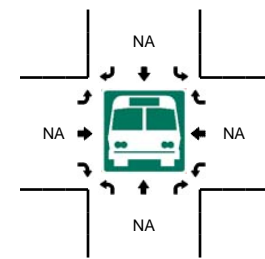
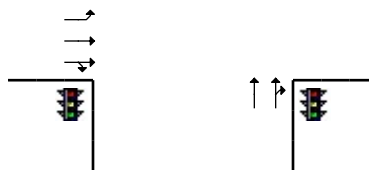
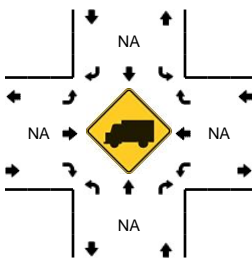
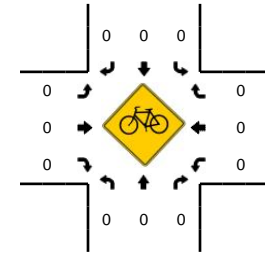
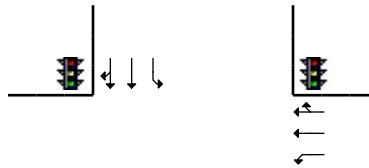
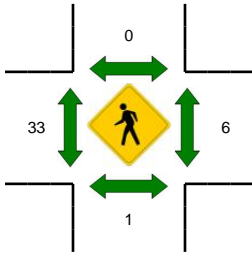
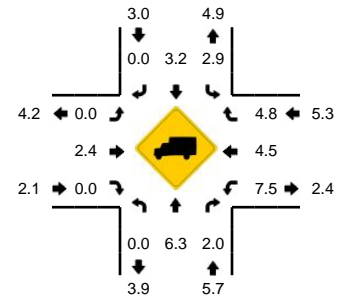
Comments:

LOCATION: Stone Ave -- 6th St
CITY/STATE: Tucson, AZ

QC JOB #: 10733410
DATE: Wed, Apr 18 2012



Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

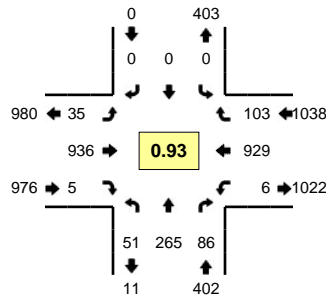


5-Min Count Period Beginning At	Stone Ave (Northbound)				Stone Ave (Southbound)				6th St (Eastbound)				6th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	20	0	0	0	25	4	0	1	24	0	0	2	2	0	0	78	
6:35 AM	0	19	0	0	6	30	2	0	5	18	1	0	3	12	4	0	100	
6:40 AM	0	24	0	0	8	29	3	0	1	15	0	0	6	16	5	0	107	
6:45 AM	0	21	0	0	5	30	4	0	1	46	0	0	8	15	1	0	131	
6:50 AM	0	41	0	0	4	24	4	0	3	31	0	0	4	13	2	0	126	
6:55 AM	0	20	1	0	11	39	2	0	1	31	0	0	2	11	2	0	120	
7:00 AM	0	25	0	0	3	32	3	0	2	29	1	0	5	18	1	0	119	
7:05 AM	0	26	0	0	11	29	4	0	3	37	2	0	6	19	2	0	139	
7:10 AM	0	28	1	0	5	45	5	0	3	31	0	0	3	14	3	0	138	
7:15 AM	0	19	0	0	8	46	2	0	4	47	1	0	5	17	5	0	154	
7:20 AM	0	18	1	0	14	42	4	0	6	57	1	0	6	28	1	0	178	
7:25 AM	0	24	4	0	15	53	3	0	3	54	0	0	4	35	8	0	203	1593
7:30 AM	0	22	4	0	10	73	4	0	2	73	0	0	15	40	7	0	250	1765
7:35 AM	0	26	6	0	14	56	3	0	11	75	0	0	10	53	5	0	259	1924
7:40 AM	0	27	4	0	14	67	5	0	6	81	0	0	5	41	7	0	257	2074
7:45 AM	0	26	2	0	17	55	3	0	10	79	0	0	10	45	10	0	257	2200
7:50 AM	0	19	2	0	16	78	4	0	10	78	0	0	20	52	8	0	287	2361
7:55 AM	0	36	2	0	19	90	2	0	12	57	1	0	18	38	7	0	282	2523
8:00 AM	0	30	3	0	20	79	1	0	5	53	1	0	12	40	5	0	249	2653
8:05 AM	0	32	3	0	10	60	4	0	8	65	0	0	19	41	7	0	249	2763
8:10 AM	0	19	1	0	13	80	6	0	5	58	0	0	24	39	2	0	247	2872
8:15 AM	0	23	4	0	19	72	3	0	4	61	5	0	13	50	5	0	259	2977
8:20 AM	0	24	2	0	11	59	6	0	10	75	3	0	18	54	5	0	267	3066
8:25 AM	0	33	18	0	12	83	4	0	2	4	2	0	23	13	15	0	209	3072
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	324	24	0	208	892	36	0	128	856	4	0	192	540	100	0	3304	
Heavy Trucks	0	24	0	0	4	20	0	0	0	28	0	0	16	16	4	0	112	
Pedestrians		4				0				64				8			76	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

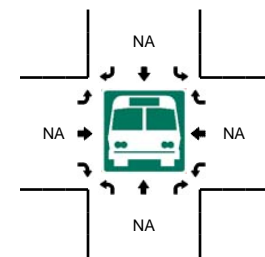
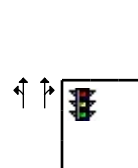
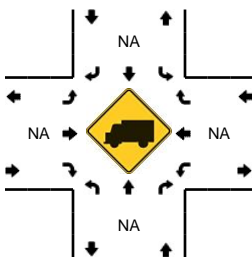
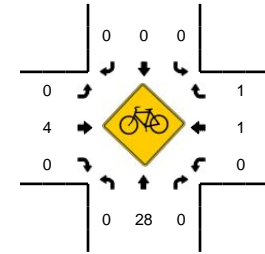
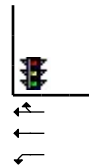
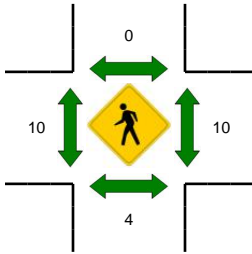
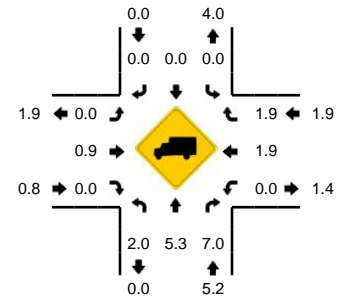
Comments:

LOCATION: 6th Ave -- 6th St
CITY/STATE: Tucson, AZ

QC JOB #: 10733411
DATE: Tue, Apr 17 2012



Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	6th Ave (Northbound)				6th Ave (Southbound)				6th St (Eastbound)				6th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	6	27	6	0	0	0	0	0	2	77	1	0	0	88	2	0	209	
4:05 PM	3	17	6	0	0	0	0	0	5	51	3	0	0	83	10	0	178	
4:10 PM	5	34	7	0	0	0	0	0	0	74	0	0	1	75	6	0	202	
4:15 PM	2	25	12	0	0	0	0	0	2	61	1	0	0	70	4	0	177	
4:20 PM	2	10	4	0	0	0	0	0	2	61	0	0	2	70	7	0	158	
4:25 PM	4	21	12	0	0	0	0	0	0	44	0	0	1	76	6	0	164	
4:30 PM	7	23	6	0	0	0	0	0	1	61	0	0	0	68	9	0	175	
4:35 PM	2	20	12	0	0	0	0	0	3	80	0	0	0	78	9	0	204	
4:40 PM	2	24	6	0	0	0	0	0	3	90	1	0	0	75	4	0	205	
4:45 PM	4	21	9	0	0	0	0	0	2	84	0	0	2	82	7	0	211	
4:50 PM	7	20	7	0	0	0	0	0	0	74	0	0	0	76	9	0	193	
4:55 PM	2	26	4	0	0	0	0	0	3	58	0	0	2	81	6	0	182	2258
5:00 PM	4	23	7	0	0	0	0	0	4	72	0	0	0	73	6	0	189	2238
5:05 PM	7	15	5	0	0	0	0	0	2	90	1	0	0	81	11	0	212	2272
5:10 PM	3	27	10	0	0	0	0	0	2	70	0	0	0	96	6	0	214	2284
5:15 PM	6	25	4	0	0	0	0	0	6	95	1	0	1	80	5	0	223	2330
5:20 PM	5	15	5	0	0	0	0	0	2	81	0	0	0	65	15	0	188	2360
5:25 PM	4	23	9	0	0	0	0	0	6	82	1	0	1	76	15	0	217	2413
5:30 PM	5	26	8	0	0	0	0	0	2	60	1	0	0	66	10	0	178	2416
5:35 PM	3	28	6	0	0	0	0	0	2	73	0	0	1	74	7	0	194	2406
5:40 PM	3	18	5	0	0	0	0	0	0	56	0	0	3	76	15	0	176	2377
5:45 PM	4	16	6	0	0	0	0	0	1	73	0	0	0	68	9	0	177	2343
5:50 PM	9	15	5	0	0	0	0	0	1	56	0	0	1	66	6	0	159	2309
5:55 PM	2	12	8	0	0	0	0	0	2	55	1	0	0	54	6	0	140	2267
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	64	268	76	0	0	0	0	0	40	1020	8	0	4	1028	88	0	2596	
Heavy Trucks	0	8	0	0	0	0	0	0	0	16	0	0	0	12	0	0	36	
Pedestrians		0				0				16				12			28	
Bicycles	0	1	0		0	0	0		0	1	0		0	0	1		3	
Railroad																		
Stopped Buses																		

Comments:

LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ						QC JOB #: 10733417 DIRECTION: EB DATE: Apr 17 2012 - Apr 18 2012				
Start Time	Mon 17-Apr-12	Tue 18-Apr-12	Wed 18-Apr-12	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			40			40			40	
1:00 AM			15			15			15	
2:00 AM		16				16			16	
3:00 AM		12				12			12	
4:00 AM		36				36			36	
5:00 AM		132				132			132	
6:00 AM		430				430			430	
7:00 AM		1072				1072			1072	
8:00 AM		970				970			970	
9:00 AM		635				635			635	
10:00 AM		658				658			658	
11:00 AM		560				560			560	
12:00 PM		647				647			647	
1:00 PM		706				706			706	
2:00 PM		614				614			614	
3:00 PM		710				710			710	
4:00 PM		705				705			705	
5:00 PM		702				702			702	
6:00 PM		457				457			457	
7:00 PM		417				417			417	
8:00 PM		359				359			359	
9:00 PM		210				210			210	
10:00 PM		128				128			128	
11:00 PM		89				89			89	
Day Total		10265	55			10320			10320	
% Weekday Average		99.5%	0.5%							
% Week Average		99.5%	0.5%			100.0%				
AM Peak Volume		7:00 AM 1072	12:00 AM 40			7:00 AM 1072			7:00 AM 1072	
PM Peak Volume		3:00 PM 710				3:00 PM 710			3:00 PM 710	
<i>Comments:</i>										

LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733417 DIRECTION: EB/WB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM	1	51	6	1	1	0	0	0	1	0	0	0	0	0	61
3:00 AM	0	24	11	0	0	0	0	1	0	0	0	0	0	0	36
4:00 AM	1	55	12	1	5	0	0	0	0	0	0	0	0	1	75
5:00 AM	2	150	69	7	17	2	0	1	0	0	0	0	0	3	251
6:00 AM	4	443	123	26	47	4	0	13	0	1	0	0	1	20	682
7:00 AM	29	1107	261	22	50	7	0	30	3	3	3	1	2	166	1684
8:00 AM	17	1158	237	18	54	5	0	18	2	2	0	1	2	116	1630
9:00 AM	18	820	194	11	32	1	0	17	1	5	0	1	2	46	1148
10:00 AM	15	862	221	8	32	5	0	13	2	3	0	0	1	43	1205
11:00 AM	14	816	185	10	46	3	1	21	3	0	2	0	0	59	1160
12:00 PM	16	1011	217	9	44	5	0	27	1	1	1	0	2	72	1406
1:00 PM	14	1038	238	12	68	9	0	27	1	5	4	0	0	69	1485
2:00 PM	18	954	222	21	52	10	1	15	4	0	0	0	3	87	1387
3:00 PM	15	1368	273	16	48	5	0	43	3	11	5	0	1	112	1900
4:00 PM	30	1374	266	17	52	7	1	35	0	3	1	1	2	112	1901
5:00 PM	27	1525	272	13	37	5	0	38	2	6	3	0	2	134	2064
6:00 PM	9	967	179	10	32	3	1	16	3	2	1	1	1	53	1278
7:00 PM	11	812	151	4	16	1	0	6	1	2	1	0	0	30	1035
8:00 PM	9	692	132	3	14	0	0	4	1	0	1	0	1	22	879
9:00 PM	12	505	75	2	6	0	0	2	1	0	0	0	0	16	619
10:00 PM	2	320	59	2	6	0	0	2	0	0	1	0	0	9	401
11:00 PM	1	221	60	1	3	0	0	1	3	1	0	0	0	4	295
Day Total	265	16273	3463	214	662	72	4	330	32	45	23	5	20	1174	22582
Percent	1.2%	72.1%	15.3%	0.9%	2.9%	0.3%	0.0%	1.5%	0.1%	0.2%	0.1%	0.0%	0.1%	5.2%	
AM Peak	7:00 AM	8:00 AM	7:00 AM	6:00 AM	8:00 AM	7:00 AM	11:00 AM	7:00 AM	7:00 AM	9:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Volume	29	1158	261	26	54	7	1	30	3	5	3	1	2	166	1684
PM Peak	4:00 PM	5:00 PM	3:00 PM	2:00 PM	1:00 PM	2:00 PM	2:00 PM	3:00 PM	2:00 PM	3:00 PM	3:00 PM	4:00 PM	2:00 PM	5:00 PM	5:00 PM
Volume	30	1525	273	21	68	10	1	43	4	11	5	1	3	134	2064
<i>Comments:</i>															

LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733417 DIRECTION: EB/WB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	5	118	20	1	6	1	0	1	0	1	0	0	0	1	154
1:00 AM	1	65	17	1	0	1	0	2	0	2	0	0	0	3	92
2:00 AM															
3:00 AM															
4:00 AM															
5:00 AM															
6:00 AM															
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
1:00 PM															
2:00 PM															
3:00 PM															
4:00 PM															
5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	6	183	37	2	6	2	0	3	0	3	0	0	0	4	246
Percent	2.4%	74.4%	15.0%	0.8%	2.4%	0.8%	0.0%	1.2%	0.0%	1.2%	0.0%	0.0%	0.0%	1.6%	
AM Peak	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM		1:00 AM		1:00 AM				1:00 AM	12:00 AM
Volume	5	118	20	1	6	1		2		2				3	154
PM Peak															
Volume															
<i>Comments:</i>															

LOCATION: St Mary's Rd 500' W of Granada Ave													QC JOB #: 10733417		
SPECIFIC LOCATION: 0 ft from													DIRECTION: EB/WB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	271	16456	3500	216	668	74	4	333	32	48	23	5	20	1178	22828
Percent	1.2%	72.1%	15.3%	0.9%	2.9%	0.3%	0.0%	1.5%	0.1%	0.2%	0.1%	0.0%	0.1%	5.2%	
ADT 22828															
<i>Comments:</i>															



LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ						QC JOB #: 10733417 DIRECTION: EB/WB DATE: Apr 17 2012 - Apr 18 2012				
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
		17-Apr-12	18-Apr-12							
12:00 AM			154			154			154	
1:00 AM			92			92			92	
2:00 AM		61				61			61	
3:00 AM		36				36			36	
4:00 AM		75				75			75	
5:00 AM		251				251			251	
6:00 AM		682				682			682	
7:00 AM		1684				1684			1684	
8:00 AM		1630				1630			1630	
9:00 AM		1148				1148			1148	
10:00 AM		1205				1205			1205	
11:00 AM		1160				1160			1160	
12:00 PM		1406				1406			1406	
1:00 PM		1485				1485			1485	
2:00 PM		1387				1387			1387	
3:00 PM		1900				1900			1900	
4:00 PM		1901				1901			1901	
5:00 PM		2064				2064			2064	
6:00 PM		1278				1278			1278	
7:00 PM		1035				1035			1035	
8:00 PM		879				879			879	
9:00 PM		619				619			619	
10:00 PM		401				401			401	
11:00 PM		295				295			295	
Day Total		22582	246			22828			22828	
% Weekday Average		98.9%	1.1%							
% Week Average		98.9%	1.1%			100.0%				
AM Peak Volume		7:00 AM 1684	12:00 AM 154			7:00 AM 1684			7:00 AM 1684	
PM Peak Volume		5:00 PM 2064				5:00 PM 2064			5:00 PM 2064	
<i>Comments:</i>										

LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733417 DIRECTION: WB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM	0	38	4	1	1	0	0	0	1	0	0	0	0	0	45
3:00 AM	0	15	8	0	0	0	0	1	0	0	0	0	0	0	24
4:00 AM	0	29	5	1	3	0	0	0	0	0	0	0	0	1	39
5:00 AM	2	71	32	3	10	1	0	0	0	0	0	0	0	0	119
6:00 AM	1	159	51	6	20	2	0	3	0	1	0	0	0	9	252
7:00 AM	5	416	109	8	27	3	0	12	2	1	1	1	0	27	612
8:00 AM	10	472	86	11	16	3	0	8	2	0	0	1	1	50	660
9:00 AM	5	366	89	7	19	1	0	7	0	4	0	0	0	15	513
10:00 AM	4	384	112	4	13	2	0	6	0	2	0	0	1	19	547
11:00 AM	7	402	108	6	25	2	1	15	3	0	2	0	0	29	600
12:00 PM	4	532	135	5	20	3	0	18	1	1	0	0	1	39	759
1:00 PM	8	540	130	6	37	5	0	14	1	2	2	0	0	34	779
2:00 PM	11	549	110	9	22	3	0	9	2	0	0	0	3	55	773
3:00 PM	9	865	162	10	29	2	0	30	2	9	3	0	1	68	1190
4:00 PM	17	870	171	4	29	5	1	22	0	2	0	1	2	72	1196
5:00 PM	16	1021	176	7	23	4	0	24	2	5	3	0	2	79	1362
6:00 PM	4	636	114	5	18	1	1	10	0	2	1	1	1	27	821
7:00 PM	10	478	94	2	10	0	0	4	0	0	0	0	0	20	618
8:00 PM	5	394	90	1	9	0	0	3	0	0	0	0	1	17	520
9:00 PM	8	335	47	1	5	0	0	0	0	0	0	0	0	13	409
10:00 PM	2	221	38	1	3	0	0	2	0	0	1	0	0	5	273
11:00 PM	0	154	43	1	3	0	0	1	2	1	0	0	0	1	206
Day Total	128	8947	1914	99	342	37	3	189	18	30	13	4	13	580	12317
Percent	1.0%	72.6%	15.5%	0.8%	2.8%	0.3%	0.0%	1.5%	0.1%	0.2%	0.1%	0.0%	0.1%	4.7%	
AM Peak	8:00 AM	8:00 AM	10:00 AM	8:00 AM	7:00 AM	7:00 AM	11:00 AM	11:00 AM	11:00 AM	9:00 AM	11:00 AM	7:00 AM	8:00 AM	8:00 AM	8:00 AM
Volume	10	472	112	11	27	3	1	15	3	4	2	1	1	50	660
PM Peak	4:00 PM	5:00 PM	5:00 PM	3:00 PM	1:00 PM	1:00 PM	4:00 PM	3:00 PM	2:00 PM	3:00 PM	3:00 PM	4:00 PM	2:00 PM	5:00 PM	5:00 PM
Volume	17	1021	176	10	37	5	1	30	2	9	3	1	3	79	1362
<i>Comments:</i>															

LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733417 DIRECTION: WB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	4	92	14	0	3	0	0	1	0	0	0	0	0	0	114
1:00 AM	1	56	14	1	0	1	0	2	0	0	0	0	0	2	77
2:00 AM															
3:00 AM															
4:00 AM															
5:00 AM															
6:00 AM															
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
1:00 PM															
2:00 PM															
3:00 PM															
4:00 PM															
5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	5	148	28	1	3	1	0	3	0	0	0	0	0	2	191
Percent	2.6%	77.5%	14.7%	0.5%	1.6%	0.5%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	
AM Peak	12:00 AM	12:00 AM	12:00 AM	1:00 AM	12:00 AM	1:00 AM		1:00 AM						1:00 AM	12:00 AM
Volume	4	92	14	1	3	1		2						2	114
PM Peak															
Volume															
<i>Comments:</i>															

LOCATION: St Mary's Rd 500' W of Granada Ave													QC JOB #: 10733417		
SPECIFIC LOCATION: 0 ft from													DIRECTION: WB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	133	9095	1942	100	345	38	3	192	18	30	13	4	13	582	12508
Percent	1.1%	72.7%	15.5%	0.8%	2.8%	0.3%	0.0%	1.5%	0.1%	0.2%	0.1%	0.0%	0.1%	4.7%	
ADT 12508															
<i>Comments:</i>															



LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ						QC JOB #: 10733417 DIRECTION: WB DATE: Apr 17 2012 - Apr 18 2012				
Start Time	Mon 17-Apr-12	Tue 18-Apr-12	Wed 18-Apr-12	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			114			114			114	
1:00 AM			77			77			77	
2:00 AM		45				45			45	
3:00 AM		24				24			24	
4:00 AM		39				39			39	
5:00 AM		119				119			119	
6:00 AM		252				252			252	
7:00 AM		612				612			612	
8:00 AM		660				660			660	
9:00 AM		513				513			513	
10:00 AM		547				547			547	
11:00 AM		600				600			600	
12:00 PM		759				759			759	
1:00 PM		779				779			779	
2:00 PM		773				773			773	
3:00 PM		1190				1190			1190	
4:00 PM		1196				1196			1196	
5:00 PM		1362				1362			1362	
6:00 PM		821				821			821	
7:00 PM		618				618			618	
8:00 PM		520				520			520	
9:00 PM		409				409			409	
10:00 PM		273				273			273	
11:00 PM		206				206			206	
Day Total		12317	191			12508			12508	
% Weekday Average		98.5%	1.5%							
% Week Average		98.5%	1.5%			100.0%				
AM Peak Volume		8:00 AM 660	12:00 AM 114			8:00 AM 660			8:00 AM 660	
PM Peak Volume		5:00 PM 1362				5:00 PM 1362			5:00 PM 1362	
<i>Comments:</i>										

LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733415 DIRECTION: EB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM															
3:00 AM															
4:00 AM	0	70	19	1	2	0	0	3	0	0	0	0	0	6	101
5:00 AM	2	108	45	6	9	0	0	5	3	0	1	0	1	7	187
6:00 AM	7	276	105	11	20	0	0	15	0	0	1	0	1	38	474
7:00 AM	22	507	117	7	18	3	0	15	6	2	3	0	2	139	841
8:00 AM	8	460	107	13	23	3	0	16	3	3	3	1	4	74	718
9:00 AM	4	532	136	16	31	1	0	18	5	2	2	0	1	40	788
10:00 AM	10	540	124	6	25	2	0	17	2	2	3	0	3	55	789
11:00 AM	5	535	132	9	24	3	0	15	3	0	3	1	3	48	781
12:00 PM	2	548	145	9	19	2	0	13	1	0	5	0	1	41	786
1:00 PM	9	542	142	8	24	4	1	9	3	2	4	0	1	47	796
2:00 PM	7	529	169	8	26	2	0	20	1	5	3	0	1	54	825
3:00 PM	12	584	131	11	27	3	1	18	0	1	4	1	2	63	858
4:00 PM	10	637	123	9	14	2	0	10	1	1	1	0	0	63	871
5:00 PM	17	629	107	8	14	3	0	12	0	1	1	1	1	62	856
6:00 PM	11	452	82	5	7	3	1	5	2	2	0	1	1	36	608
7:00 PM	5	417	67	6	9	1	0	3	0	0	1	0	1	19	529
8:00 PM	5	315	49	6	7	1	0	1	0	0	0	0	0	11	395
9:00 PM	3	357	54	4	6	0	0	5	1	1	1	1	1	13	447
10:00 PM	4	195	35	6	4	0	0	3	0	3	0	0	0	4	254
11:00 PM	1	128	29	4	2	0	0	1	0	0	0	0	0	3	168
Day Total	144	8361	1918	153	311	33	3	204	31	25	36	6	24	823	12072
Percent	1.2%	69.3%	15.9%	1.3%	2.6%	0.3%	0.0%	1.7%	0.3%	0.2%	0.3%	0.0%	0.2%	6.8%	
AM Peak	7:00 AM	10:00 AM	9:00 AM	9:00 AM	9:00 AM	7:00 AM		9:00 AM	7:00 AM	8:00 AM	7:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM
Volume	22	540	136	16	31	3		18	6	3	3	1	4	139	841
PM Peak	5:00 PM	4:00 PM	2:00 PM	3:00 PM	3:00 PM	1:00 PM	1:00 PM	2:00 PM	1:00 PM	2:00 PM	12:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM
Volume	17	637	169	11	27	4	1	20	3	5	5	1	2	63	871
<i>Comments:</i>															

LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733415 DIRECTION: EB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	2	85	10	0	1	1	0	0	0	0	0	0	0	0	99
1:00 AM	1	40	10	0	0	0	0	0	0	0	0	0	0	0	51
2:00 AM	1	39	9	0	1	0	0	1	1	0	0	0	0	0	52
3:00 AM	0	63	9	0	0	0	0	0	1	0	0	0	0	2	75
4:00 AM															
5:00 AM															
6:00 AM															
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
1:00 PM															
2:00 PM															
3:00 PM															
4:00 PM															
5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	4	227	38	0	2	1	0	1	2	0	0	0	0	2	277
Percent	1.4%	81.9%	13.7%	0.0%	0.7%	0.4%	0.0%	0.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.7%	
AM Peak	12:00 AM	12:00 AM	12:00 AM		12:00 AM	12:00 AM		2:00 AM	2:00 AM					3:00 AM	12:00 AM
Volume	2	85	10		1	1		1	1					2	99
PM Peak															
Volume															
<i>Comments:</i>															

LOCATION: Broadway Blvd 500' W of Euclid Ave													QC JOB #: 10733415		
SPECIFIC LOCATION: 0 ft from													DIRECTION: EB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	148	8588	1956	153	313	34	3	205	33	25	36	6	24	825	12349
Percent	1.2%	69.5%	15.8%	1.2%	2.5%	0.3%	0.0%	1.7%	0.3%	0.2%	0.3%	0.0%	0.2%	6.7%	
ADT 12349															
<i>Comments:</i>															



LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ						QC JOB #: 10733415 DIRECTION: EB DATE: Apr 17 2012 - Apr 18 2012				
Start Time	Mon 17-Apr-12	Tue 18-Apr-12	Wed 18-Apr-12	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			99			99			99	
1:00 AM			51			51			51	
2:00 AM			52			52			52	
3:00 AM			75			75			75	
4:00 AM		101				101			101	
5:00 AM		187				187			187	
6:00 AM		474				474			474	
7:00 AM		841				841			841	
8:00 AM		718				718			718	
9:00 AM		788				788			788	
10:00 AM		789				789			789	
11:00 AM		781				781			781	
12:00 PM		786				786			786	
1:00 PM		796				796			796	
2:00 PM		825				825			825	
3:00 PM		858				858			858	
4:00 PM		871				871			871	
5:00 PM		856				856			856	
6:00 PM		608				608			608	
7:00 PM		529				529			529	
8:00 PM		395				395			395	
9:00 PM		447				447			447	
10:00 PM		254				254			254	
11:00 PM		168				168			168	
Day Total		12072	277			12349			12349	
% Weekday Average		97.8%	2.2%							
% Week Average		97.8%	2.2%			100.0%				
AM Peak Volume		7:00 AM 841	12:00 AM 99			7:00 AM 841			7:00 AM 841	
PM Peak Volume		4:00 PM 871				4:00 PM 871			4:00 PM 871	
<i>Comments:</i>										

LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733415 DIRECTION: EB/WB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM															
3:00 AM															
4:00 AM	1	99	23	2	3	0	0	3	0	0	0	0	0	8	139
5:00 AM	4	217	79	16	13	0	1	6	5	0	1	0	1	10	353
6:00 AM	13	520	162	24	31	2	0	20	0	1	1	0	1	49	824
7:00 AM	30	943	203	18	33	6	0	19	7	3	4	0	2	172	1440
8:00 AM	18	952	185	28	43	6	1	23	4	7	5	1	4	108	1385
9:00 AM	10	966	215	28	45	1	0	21	5	2	2	0	2	60	1357
10:00 AM	19	912	204	15	35	3	0	23	3	3	4	0	3	80	1304
11:00 AM	8	982	213	21	36	6	0	19	4	2	4	2	4	74	1375
12:00 PM	13	1048	234	21	28	2	0	23	1	0	8	0	3	72	1453
1:00 PM	14	1072	230	20	37	6	1	19	4	3	5	0	1	74	1486
2:00 PM	13	1019	253	12	46	6	0	28	3	5	3	0	2	90	1480
3:00 PM	18	1182	217	23	44	6	1	33	2	2	4	1	4	102	1639
4:00 PM	13	1155	210	21	37	2	0	21	2	2	5	0	0	98	1566
5:00 PM	27	1258	191	15	28	8	0	16	1	2	2	1	1	107	1657
6:00 PM	24	971	147	13	14	4	1	8	2	3	1	1	2	58	1249
7:00 PM	12	897	131	11	14	1	0	7	0	2	1	0	1	28	1105
8:00 PM	15	674	106	13	13	2	0	7	0	0	1	0	0	21	852
9:00 PM	3	614	97	9	10	0	0	7	1	2	1	1	1	20	766
10:00 PM	7	388	67	10	7	1	0	4	0	3	0	0	0	8	495
11:00 PM	5	258	41	7	2	0	0	2	0	0	0	0	0	4	319
Day Total	267	16127	3208	327	519	62	5	309	44	42	52	7	32	1243	22244
Percent	1.2%	72.5%	14.4%	1.5%	2.3%	0.3%	0.0%	1.4%	0.2%	0.2%	0.2%	0.0%	0.1%	5.6%	
AM Peak Volume	7:00 AM	11:00 AM	9:00 AM	8:00 AM	9:00 AM	7:00 AM	5:00 AM	8:00 AM	7:00 AM	8:00 AM	8:00 AM	11:00 AM	8:00 AM	7:00 AM	7:00 AM
	30	982	215	28	45	6	1	23	7	7	5	2	4	172	1440
PM Peak Volume	5:00 PM	5:00 PM	2:00 PM	3:00 PM	2:00 PM	5:00 PM	1:00 PM	3:00 PM	1:00 PM	2:00 PM	12:00 PM	3:00 PM	3:00 PM	5:00 PM	5:00 PM
	27	1258	253	23	46	8	1	33	4	5	8	1	4	107	1657
<i>Comments:</i>															

LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733415 DIRECTION: EB/WB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	4	159	19	0	2	1	0	0	0	0	0	0	0	0	185
1:00 AM	4	80	16	0	0	0	0	0	0	0	0	0	0	0	100
2:00 AM	2	81	11	0	3	0	0	1	1	0	0	0	0	0	99
3:00 AM	0	97	13	0	0	0	0	0	1	0	0	0	0	2	113
4:00 AM															
5:00 AM															
6:00 AM															
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
1:00 PM															
2:00 PM															
3:00 PM															
4:00 PM															
5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	10	417	59	0	5	1	0	1	2	0	0	0	0	2	497
Percent	2.0%	83.9%	11.9%	0.0%	1.0%	0.2%	0.0%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	
AM Peak	12:00 AM	12:00 AM	12:00 AM		2:00 AM	12:00 AM		2:00 AM	2:00 AM					3:00 AM	12:00 AM
Volume	4	159	19		3	1		1	1					2	185
PM Peak															
Volume															
<i>Comments:</i>															

LOCATION: Broadway Blvd 500' W of Euclid Ave													QC JOB #: 10733415		
SPECIFIC LOCATION: 0 ft from													DIRECTION: EB/WB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	277	16544	3267	327	524	63	5	310	46	42	52	7	32	1245	22741
Percent	1.2%	72.7%	14.4%	1.4%	2.3%	0.3%	0.0%	1.4%	0.2%	0.2%	0.2%	0.0%	0.1%	5.5%	
ADT 22741															
<i>Comments:</i>															



LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ						QC JOB #: 10733415 DIRECTION: EB/WB DATE: Apr 17 2012 - Apr 18 2012				
Start Time	Mon 17-Apr-12	Tue 18-Apr-12	Wed 18-Apr-12	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			185			185			185	
1:00 AM			100			100			100	
2:00 AM			99			99			99	
3:00 AM			113			113			113	
4:00 AM		139				139			139	
5:00 AM		353				353			353	
6:00 AM		824				824			824	
7:00 AM		1440				1440			1440	
8:00 AM		1385				1385			1385	
9:00 AM		1357				1357			1357	
10:00 AM		1304				1304			1304	
11:00 AM		1375				1375			1375	
12:00 PM		1453				1453			1453	
1:00 PM		1486				1486			1486	
2:00 PM		1480				1480			1480	
3:00 PM		1639				1639			1639	
4:00 PM		1566				1566			1566	
5:00 PM		1657				1657			1657	
6:00 PM		1249				1249			1249	
7:00 PM		1105				1105			1105	
8:00 PM		852				852			852	
9:00 PM		766				766			766	
10:00 PM		495				495			495	
11:00 PM		319				319			319	
Day Total		22244	497			22741			22741	
% Weekday Average		97.8%	2.2%							
% Week Average		97.8%	2.2%			100.0%				
AM Peak Volume		7:00 AM 1440	12:00 AM 185			7:00 AM 1440			7:00 AM 1440	
PM Peak Volume		5:00 PM 1657				5:00 PM 1657			5:00 PM 1657	
<i>Comments:</i>										

LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733415 DIRECTION: WB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM															
3:00 AM															
4:00 AM	1	29	4	1	1	0	0	0	0	0	0	0	0	2	38
5:00 AM	2	109	34	10	4	0	1	1	2	0	0	0	0	3	166
6:00 AM	6	244	57	13	11	2	0	5	0	1	0	0	0	11	350
7:00 AM	8	436	86	11	15	3	0	4	1	1	1	0	0	33	599
8:00 AM	10	492	78	15	20	3	1	7	1	4	2	0	0	34	667
9:00 AM	6	434	79	12	14	0	0	3	0	0	0	0	1	20	569
10:00 AM	9	372	80	9	10	1	0	6	1	1	1	0	0	25	515
11:00 AM	3	447	81	12	12	3	0	4	1	2	1	1	1	26	594
12:00 PM	11	500	89	12	9	0	0	10	0	0	3	0	2	31	667
1:00 PM	5	530	88	12	13	2	0	10	1	1	1	0	0	27	690
2:00 PM	6	490	84	4	20	4	0	8	2	0	0	0	1	36	655
3:00 PM	6	598	86	12	17	3	0	15	2	1	0	0	2	39	781
4:00 PM	3	518	87	12	23	0	0	11	1	1	4	0	0	35	695
5:00 PM	10	629	84	7	14	5	0	4	1	1	1	0	0	45	801
6:00 PM	13	519	65	8	7	1	0	3	0	1	1	0	1	22	641
7:00 PM	7	480	64	5	5	0	0	4	0	2	0	0	0	9	576
8:00 PM	10	359	57	7	6	1	0	6	0	0	1	0	0	10	457
9:00 PM	0	257	43	5	4	0	0	2	0	1	0	0	0	7	319
10:00 PM	3	193	32	4	3	1	0	1	0	0	0	0	0	4	241
11:00 PM	4	130	12	3	0	0	0	1	0	0	0	0	0	1	151
Day Total	123	7766	1290	174	208	29	2	105	13	17	16	1	8	420	10172
Percent	1.2%	76.3%	12.7%	1.7%	2.0%	0.3%	0.0%	1.0%	0.1%	0.2%	0.2%	0.0%	0.1%	4.1%	
AM Peak	8:00 AM	8:00 AM	7:00 AM	8:00 AM	8:00 AM	7:00 AM	5:00 AM	8:00 AM	5:00 AM	8:00 AM	8:00 AM	11:00 AM	9:00 AM	8:00 AM	8:00 AM
Volume	10	492	86	15	20	3	1	7	2	4	2	1	1	34	667
PM Peak	6:00 PM	5:00 PM	12:00 PM	12:00 PM	4:00 PM	5:00 PM		3:00 PM	2:00 PM	7:00 PM	4:00 PM		12:00 PM	5:00 PM	5:00 PM
Volume	13	629	89	12	23	5		15	2	2	4		2	45	801
<i>Comments:</i>															

LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733415 DIRECTION: WB DATE: Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total	
12:00 AM	2	74	9	0	1	0	0	0	0	0	0	0	0	0	86	
1:00 AM	3	40	6	0	0	0	0	0	0	0	0	0	0	0	49	
2:00 AM	1	42	2	0	2	0	0	0	0	0	0	0	0	0	47	
3:00 AM	0	34	4	0	0	0	0	0	0	0	0	0	0	0	38	
4:00 AM																
5:00 AM																
6:00 AM																
7:00 AM																
8:00 AM																
9:00 AM																
10:00 AM																
11:00 AM																
12:00 PM																
1:00 PM																
2:00 PM																
3:00 PM																
4:00 PM																
5:00 PM																
6:00 PM																
7:00 PM																
8:00 PM																
9:00 PM																
10:00 PM																
11:00 PM																
Day Total	6	190	21	0	3	0	0	0	0	0	0	0	0	0	220	
Percent	2.7%	86.4%	9.5%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
AM Peak	1:00 AM	12:00 AM	12:00 AM		2:00 AM											12:00 AM
Volume	3	74	9		2											86
PM Peak																
Volume																
<i>Comments:</i>																

LOCATION: Broadway Blvd 500' W of Euclid Ave													QC JOB #: 10733415		
SPECIFIC LOCATION: 0 ft from													DIRECTION: WB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	129	7956	1311	174	211	29	2	105	13	17	16	1	8	420	10392
Percent	1.2%	76.6%	12.6%	1.7%	2.0%	0.3%	0.0%	1.0%	0.1%	0.2%	0.2%	0.0%	0.1%	4.0%	
ADT 10392															
<i>Comments:</i>															



LOCATION: Broadway Blvd 500' W of Euclid Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ							QC JOB #: 10733415 DIRECTION: WB DATE: Apr 17 2012 - Apr 18 2012			
Start Time	Mon 17-Apr-12	Tue 18-Apr-12	Wed 18-Apr-12	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			86			86			86	
1:00 AM			49			49			49	
2:00 AM			47			47			47	
3:00 AM			38			38			38	
4:00 AM		38				38			38	
5:00 AM		166				166			166	
6:00 AM		350				350			350	
7:00 AM		599				599			599	
8:00 AM		667				667			667	
9:00 AM		569				569			569	
10:00 AM		515				515			515	
11:00 AM		594				594			594	
12:00 PM		667				667			667	
1:00 PM		690				690			690	
2:00 PM		655				655			655	
3:00 PM		781				781			781	
4:00 PM		695				695			695	
5:00 PM		801				801			801	
6:00 PM		641				641			641	
7:00 PM		576				576			576	
8:00 PM		457				457			457	
9:00 PM		319				319			319	
10:00 PM		241				241			241	
11:00 PM		151				151			151	
Day Total		10172	220			10392			10392	
% Weekday Average		97.9%	2.1%							
% Week Average		97.9%	2.1%			100.0%				
AM Peak Volume		8:00 AM 667	12:00 AM 86			8:00 AM 667			8:00 AM 667	
PM Peak Volume		5:00 PM 801				5:00 PM 801			5:00 PM 801	
<i>Comments:</i>										

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733416 DIRECTION: NB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM															
3:00 AM															
4:00 AM															
5:00 AM															
6:00 AM															
7:00 AM	5	624	191	3	42	0	1	20	2	1	0	1	1	31	922
8:00 AM	10	549	161	3	31	4	0	16	1	0	1	0	1	12	789
9:00 AM	5	359	128	3	37	1	0	6	0	0	0	0	1	11	551
10:00 AM	4	299	125	3	39	1	0	7	2	1	0	0	0	8	489
11:00 AM	6	283	109	1	39	1	0	11	2	0	0	0	0	4	456
12:00 PM	4	319	131	2	33	1	0	5	0	0	0	0	0	3	498
1:00 PM	4	284	122	5	38	1	0	8	0	0	1	0	0	6	469
2:00 PM	3	331	147	6	47	3	0	15	0	0	0	0	0	12	564
3:00 PM	6	398	154	4	32	1	0	6	1	1	0	0	0	21	624
4:00 PM	7	438	142	3	44	0	0	6	0	0	0	0	0	15	655
5:00 PM	7	398	142	0	31	2	0	5	0	0	0	0	0	7	592
6:00 PM	3	314	95	2	24	0	0	5	0	0	0	0	0	10	453
7:00 PM	5	236	79	1	14	0	0	1	0	0	1	0	0	1	338
8:00 PM	3	173	65	0	15	0	0	1	0	0	0	0	0	1	258
9:00 PM	0	170	58	1	5	0	0	0	0	0	0	0	0	1	235
10:00 PM	2	118	27	0	6	0	0	2	0	0	0	0	0	1	156
11:00 PM	1	86	33	4	5	0	0	1	1	0	0	0	0	1	132
Day Total	75	5379	1909	41	482	15	1	115	9	3	3	1	3	145	8181
Percent	0.9%	65.7%	23.3%	0.5%	5.9%	0.2%	0.0%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	1.8%	
AM Peak	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Volume	10	624	191	3	42	4	1	20	2	1	1	1	1	31	922
PM Peak	4:00 PM	4:00 PM	3:00 PM	2:00 PM	2:00 PM	2:00 PM		2:00 PM	3:00 PM	3:00 PM	1:00 PM			3:00 PM	4:00 PM
Volume	7	438	154	6	47	3		15	1	1	1			21	655
<i>Comments:</i>															

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733416 DIRECTION: NB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	46	6	0	4	0	0	0	0	0	0	0	0	0	56
1:00 AM	1	33	14	0	4	0	0	1	0	0	0	0	0	0	53
2:00 AM	1	34	9	0	2	0	0	0	1	0	0	0	0	0	47
3:00 AM	0	28	11	0	2	0	0	1	0	0	0	0	0	0	42
4:00 AM	1	62	34	0	12	0	0	0	1	0	0	0	0	0	110
5:00 AM	9	161	82	0	35	0	0	4	0	0	0	0	0	6	297
6:00 AM	8	296	152	7	56	1	1	13	0	0	1	0	0	16	551
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
1:00 PM															
2:00 PM															
3:00 PM															
4:00 PM															
5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	20	660	308	7	115	1	1	19	2	0	1	0	0	22	1156
Percent	1.7%	57.1%	26.6%	0.6%	9.9%	0.1%	0.1%	1.6%	0.2%	0.0%	0.1%	0.0%	0.0%	1.9%	
AM Peak	5:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	2:00 AM		6:00 AM			6:00 AM	6:00 AM
Volume	9	296	152	7	56	1	1	13	1		1			16	551
PM Peak															
Volume															
<i>Comments:</i>															

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd													QC JOB #: 10733416		
SPECIFIC LOCATION: 0 ft from													DIRECTION: NB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	95	6039	2217	48	597	16	2	134	11	3	4	1	3	167	9337
Percent	1.0%	64.7%	23.7%	0.5%	6.4%	0.2%	0.0%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	1.8%	
ADT 9337															
<i>Comments:</i>															



LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ							QC JOB #: 10733416 DIRECTION: NB DATE: Apr 17 2012 - Apr 18 2012			
Start Time	Mon 17-Apr-12	Tue 18-Apr-12	Wed 18-Apr-12	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			56			56			56	
1:00 AM			53			53			53	
2:00 AM			47			47			47	
3:00 AM			42			42			42	
4:00 AM			110			110			110	
5:00 AM			297			297			297	
6:00 AM			551			551			551	
7:00 AM		922				922			922	
8:00 AM		789				789			789	
9:00 AM		551				551			551	
10:00 AM		489				489			489	
11:00 AM		456				456			456	
12:00 PM		498				498			498	
1:00 PM		469				469			469	
2:00 PM		564				564			564	
3:00 PM		624				624			624	
4:00 PM		655				655			655	
5:00 PM		592				592			592	
6:00 PM		453				453			453	
7:00 PM		338				338			338	
8:00 PM		258				258			258	
9:00 PM		235				235			235	
10:00 PM		156				156			156	
11:00 PM		132				132			132	
Day Total		8181	1156			9337			9337	
% Weekday Average		87.6%	12.4%							
% Week Average		87.6%	12.4%			100.0%				
AM Peak Volume		7:00 AM 922	6:00 AM 551			7:00 AM 922			7:00 AM 922	
PM Peak Volume		4:00 PM 655				4:00 PM 655			4:00 PM 655	
<i>Comments:</i>										

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733416 DIRECTION: NB/SB DATE: Apr 17 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total	
12:00 AM																
1:00 AM																
2:00 AM																
3:00 AM																
4:00 AM																
5:00 AM																
6:00 AM																
7:00 AM	12	1085	343	6	65	3	2	32	3	2	0	1	1	52	1607	
8:00 AM	13	964	306	16	63	5	0	20	2	0	1	0	1	23	1414	
9:00 AM	11	654	252	6	62	1	0	10	2	0	0	0	1	19	1018	
10:00 AM	6	581	219	6	60	2	0	11	2	1	0	0	0	12	900	
11:00 AM	14	559	241	8	61	5	0	21	2	0	0	0	0	12	923	
12:00 PM	9	661	250	5	53	2	0	8	2	0	0	0	0	11	1001	
1:00 PM	12	684	252	11	69	4	0	16	3	0	1	0	1	21	1074	
2:00 PM	17	685	301	12	70	4	0	19	1	0	0	0	0	31	1140	
3:00 PM	19	930	310	8	63	1	1	16	1	2	1	0	0	43	1395	
4:00 PM	18	1036	313	16	70	1	0	9	1	1	1	1	1	32	1500	
5:00 PM	16	1066	311	7	60	3	0	17	1	0	1	0	1	26	1509	
6:00 PM	12	690	222	4	31	0	0	9	0	0	0	0	0	19	987	
7:00 PM	8	570	145	1	22	0	0	3	1	0	1	0	0	6	757	
8:00 PM	8	419	128	0	22	1	0	4	0	0	0	0	0	6	588	
9:00 PM	2	427	106	2	14	0	0	4	0	0	0	0	0	3	558	
10:00 PM	7	294	76	0	8	0	0	2	0	0	0	0	0	5	392	
11:00 PM	1	197	53	4	8	0	0	1	1	0	1	0	0	2	268	
Day Total	185	11502	3828	112	801	32	3	202	22	6	7	2	6	323	17031	
Percent	1.1%	67.5%	22.5%	0.7%	4.7%	0.2%	0.0%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	1.9%		
AM Peak	11:00 AM	7:00 AM	7:00 AM	8:00 AM	7:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	
Volume	14	1085	343	16	65	5	2	32	3	2	1	1	1	1	52	1607
PM Peak	3:00 PM	5:00 PM	4:00 PM	4:00 PM	2:00 PM	1:00 PM	3:00 PM	2:00 PM	1:00 PM	3:00 PM	1:00 PM	4:00 PM	1:00 PM	3:00 PM	5:00 PM	
Volume	19	1066	313	16	70	4	1	19	3	2	1	1	1	43	1509	
<i>Comments:</i>																

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733416 DIRECTION: NB/SB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	3	117	15	0	4	0	0	1	2	0	0	0	0	0	142
1:00 AM	1	65	20	0	5	0	0	1	0	0	1	0	0	0	93
2:00 AM	1	65	16	0	2	0	0	0	1	0	0	0	0	0	85
3:00 AM	0	72	22	0	6	0	0	1	1	0	0	0	0	1	103
4:00 AM	3	138	68	1	19	0	0	0	2	0	0	0	0	1	232
5:00 AM	20	399	179	6	52	2	0	10	2	1	0	0	0	11	682
6:00 AM	14	602	279	9	88	3	1	17	1	2	1	0	0	25	1042
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
1:00 PM															
2:00 PM															
3:00 PM															
4:00 PM															
5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	42	1458	599	16	176	5	1	30	9	3	2	0	0	38	2379
Percent	1.8%	61.3%	25.2%	0.7%	7.4%	0.2%	0.0%	1.3%	0.4%	0.1%	0.1%	0.0%	0.0%	1.6%	
AM Peak Volume	5:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	12:00 AM	6:00 AM	1:00 AM			6:00 AM	6:00 AM
	20	602	279	9	88	3	1	17	2	2	1			25	1042
PM Peak Volume															
<i>Comments:</i>															

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd													QC JOB #: 10733416		
SPECIFIC LOCATION: 0 ft from													DIRECTION: NB/SB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	227	12960	4427	128	977	37	4	232	31	9	9	2	6	361	19410
Percent	1.2%	66.8%	22.8%	0.7%	5.0%	0.2%	0.0%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%	1.9%	
ADT 19410															
<i>Comments:</i>															



LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ							QC JOB #: 10733416 DIRECTION: NB/SB DATE: Apr 17 2012 - Apr 18 2012			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
		17-Apr-12	18-Apr-12							
12:00 AM			142			142			142	
1:00 AM			93			93			93	
2:00 AM			85			85			85	
3:00 AM			103			103			103	
4:00 AM			232			232			232	
5:00 AM			682			682			682	
6:00 AM			1042			1042			1042	
7:00 AM		1607				1607			1607	
8:00 AM		1414				1414			1414	
9:00 AM		1018				1018			1018	
10:00 AM		900				900			900	
11:00 AM		923				923			923	
12:00 PM		1001				1001			1001	
1:00 PM		1074				1074			1074	
2:00 PM		1140				1140			1140	
3:00 PM		1395				1395			1395	
4:00 PM		1500				1500			1500	
5:00 PM		1509				1509			1509	
6:00 PM		987				987			987	
7:00 PM		757				757			757	
8:00 PM		588				588			588	
9:00 PM		558				558			558	
10:00 PM		392				392			392	
11:00 PM		268				268			268	
Day Total		17031	2379			19410			19410	
% Weekday Average		87.7%	12.3%							
% Week Average		87.7%	12.3%			100.0%				
AM Peak Volume		7:00 AM 1607	6:00 AM 1042			7:00 AM 1607			7:00 AM 1607	
PM Peak Volume		5:00 PM 1509				5:00 PM 1509			5:00 PM 1509	
<i>Comments:</i>										

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733416 DIRECTION: SB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM															
3:00 AM															
4:00 AM															
5:00 AM															
6:00 AM															
7:00 AM	7	461	152	3	23	3	1	12	1	1	0	0	0	21	685
8:00 AM	3	415	145	13	32	1	0	4	1	0	0	0	0	11	625
9:00 AM	6	295	124	3	25	0	0	4	2	0	0	0	0	8	467
10:00 AM	2	282	94	3	21	1	0	4	0	0	0	0	0	4	411
11:00 AM	8	276	132	7	22	4	0	10	0	0	0	0	0	8	467
12:00 PM	5	342	119	3	20	1	0	3	2	0	0	0	0	8	503
1:00 PM	8	400	130	6	31	3	0	8	3	0	0	0	1	15	605
2:00 PM	14	354	154	6	23	1	0	4	1	0	0	0	0	19	576
3:00 PM	13	532	156	4	31	0	1	10	0	1	1	0	0	22	771
4:00 PM	11	598	171	13	26	1	0	3	1	1	1	1	1	17	845
5:00 PM	9	668	169	7	29	1	0	12	1	0	1	0	1	19	917
6:00 PM	9	376	127	2	7	0	0	4	0	0	0	0	0	9	534
7:00 PM	3	334	66	0	8	0	0	2	1	0	0	0	0	5	419
8:00 PM	5	246	63	0	7	1	0	3	0	0	0	0	0	5	330
9:00 PM	2	257	48	1	9	0	0	4	0	0	0	0	0	2	323
10:00 PM	5	176	49	0	2	0	0	0	0	0	0	0	0	4	236
11:00 PM	0	111	20	0	3	0	0	0	0	0	1	0	0	1	136
Day Total	110	6123	1919	71	319	17	2	87	13	3	4	1	3	178	8850
Percent	1.2%	69.2%	21.7%	0.8%	3.6%	0.2%	0.0%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	2.0%	
AM Peak	11:00 AM	7:00 AM	7:00 AM	8:00 AM	8:00 AM	11:00 AM	7:00 AM	7:00 AM	9:00 AM	7:00 AM				7:00 AM	7:00 AM
Volume	8	461	152	13	32	4	1	12	2	1				21	685
PM Peak	2:00 PM	5:00 PM	4:00 PM	4:00 PM	1:00 PM	1:00 PM	3:00 PM	5:00 PM	1:00 PM	3:00 PM	3:00 PM	4:00 PM	1:00 PM	3:00 PM	5:00 PM
Volume	14	668	171	13	31	3	1	12	3	1	1	1	1	22	917
<i>Comments:</i>															

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733416 DIRECTION: SB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	3	71	9	0	0	0	0	1	2	0	0	0	0	0	86
1:00 AM	0	32	6	0	1	0	0	0	0	0	1	0	0	0	40
2:00 AM	0	31	7	0	0	0	0	0	0	0	0	0	0	0	38
3:00 AM	0	44	11	0	4	0	0	0	1	0	0	0	0	1	61
4:00 AM	2	76	34	1	7	0	0	0	1	0	0	0	0	1	122
5:00 AM	11	238	97	6	17	2	0	6	2	1	0	0	0	5	385
6:00 AM	6	306	127	2	32	2	0	4	1	2	0	0	0	9	491
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
1:00 PM															
2:00 PM															
3:00 PM															
4:00 PM															
5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	22	798	291	9	61	4	0	11	7	3	1	0	0	16	1223
Percent	1.8%	65.2%	23.8%	0.7%	5.0%	0.3%	0.0%	0.9%	0.6%	0.2%	0.1%	0.0%	0.0%	1.3%	
AM Peak	5:00 AM	6:00 AM	6:00 AM	5:00 AM	6:00 AM	5:00 AM		5:00 AM	12:00 AM	6:00 AM	1:00 AM			6:00 AM	6:00 AM
Volume	11	306	127	6	32	2		6	2	2	1			9	491
PM Peak															
Volume															
<i>Comments:</i>															

LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd											QC JOB #: 10733416				
SPECIFIC LOCATION: 0 ft from											DIRECTION: SB				
CITY/STATE: Tucson, AZ											DATE: Apr 17 2012 - Apr 18 2012				
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	132	6921	2210	80	380	21	2	98	20	6	5	1	3	194	10073
Percent	1.3%	68.7%	21.9%	0.8%	3.8%	0.2%	0.0%	1.0%	0.2%	0.1%	0.0%	0.0%	0.0%	1.9%	
ADT 10073															
<i>Comments:</i>															



LOCATION: Barazza Aviation Pkwy 1000' S of Broadway Blvd SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ						QC JOB #: 10733416 DIRECTION: SB DATE: Apr 17 2012 - Apr 18 2012				
Start Time	Mon 17-Apr-12	Tue 18-Apr-12	Wed 18-Apr-12	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			86			86			86	
1:00 AM			40			40			40	
2:00 AM			38			38			38	
3:00 AM			61			61			61	
4:00 AM			122			122			122	
5:00 AM			385			385			385	
6:00 AM			491			491			491	
7:00 AM		685				685			685	
8:00 AM		625				625			625	
9:00 AM		467				467			467	
10:00 AM		411				411			411	
11:00 AM		467				467			467	
12:00 PM		503				503			503	
1:00 PM		605				605			605	
2:00 PM		576				576			576	
3:00 PM		771				771			771	
4:00 PM		845				845			845	
5:00 PM		917				917			917	
6:00 PM		534				534			534	
7:00 PM		419				419			419	
8:00 PM		330				330			330	
9:00 PM		323				323			323	
10:00 PM		236				236			236	
11:00 PM		136				136			136	
Day Total		8850	1223			10073			10073	
% Weekday Average		87.9%	12.1%							
% Week Average		87.9%	12.1%			100.0%				
AM Peak Volume		7:00 AM 685	6:00 AM 491			7:00 AM 685			7:00 AM 685	
PM Peak Volume		5:00 PM 917				5:00 PM 917			5:00 PM 917	
<i>Comments:</i>										

LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733417 DIRECTION: EB DATE: Apr 17 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
1:00 AM															
2:00 AM	1	13	2	0	0	0	0	0	0	0	0	0	0	0	16
3:00 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	0	12
4:00 AM	1	26	7	0	2	0	0	0	0	0	0	0	0	0	36
5:00 AM	0	79	37	4	7	1	0	1	0	0	0	0	0	3	132
6:00 AM	3	284	72	20	27	2	0	10	0	0	0	0	1	11	430
7:00 AM	24	691	152	14	23	4	0	18	1	2	2	0	2	139	1072
8:00 AM	7	686	151	7	38	2	0	10	0	2	0	0	1	66	970
9:00 AM	13	454	105	4	13	0	0	10	1	1	0	1	2	31	635
10:00 AM	11	478	109	4	19	3	0	7	2	1	0	0	0	24	658
11:00 AM	7	414	77	4	21	1	0	6	0	0	0	0	0	30	560
12:00 PM	12	479	82	4	24	2	0	9	0	0	1	0	1	33	647
1:00 PM	6	498	108	6	31	4	0	13	0	3	2	0	0	35	706
2:00 PM	7	405	112	12	30	7	1	6	2	0	0	0	0	32	614
3:00 PM	6	503	111	6	19	3	0	13	1	2	2	0	0	44	710
4:00 PM	13	504	95	13	23	2	0	13	0	1	1	0	0	40	705
5:00 PM	11	504	96	6	14	1	0	14	0	1	0	0	0	55	702
6:00 PM	5	331	65	5	14	2	0	6	3	0	0	0	0	26	457
7:00 PM	1	334	57	2	6	1	0	2	1	2	1	0	0	10	417
8:00 PM	4	298	42	2	5	0	0	1	1	0	1	0	0	5	359
9:00 PM	4	170	28	1	1	0	0	2	1	0	0	0	0	3	210
10:00 PM	0	99	21	1	3	0	0	0	0	0	0	0	0	4	128
11:00 PM	1	67	17	0	0	0	0	0	1	0	0	0	0	3	89
Day Total	137	7326	1549	115	320	35	1	141	14	15	10	1	7	594	10265
Percent	1.3%	71.4%	15.1%	1.1%	3.1%	0.3%	0.0%	1.4%	0.1%	0.1%	0.1%	0.0%	0.1%	5.8%	
AM Peak Volume	7:00 AM	7:00 AM	7:00 AM	6:00 AM	8:00 AM	7:00 AM		7:00 AM	10:00 AM	7:00 AM	7:00 AM	9:00 AM	7:00 AM	7:00 AM	7:00 AM
	24	691	152	20	38	4		18	2	2	2	1	2	139	1072
PM Peak Volume	4:00 PM	4:00 PM	2:00 PM	4:00 PM	1:00 PM	2:00 PM	2:00 PM	5:00 PM	6:00 PM	1:00 PM	1:00 PM		12:00 PM	5:00 PM	3:00 PM
	13	504	112	13	31	7	1	14	3	3	2		1	55	710
<i>Comments:</i>															

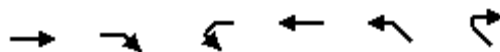
LOCATION: St Mary's Rd 500' W of Granada Ave SPECIFIC LOCATION: 0 ft from CITY/STATE: Tucson, AZ														QC JOB #: 10733417 DIRECTION: EB DATE: Apr 18 2012	
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	1	26	6	1	3	1	0	0	0	1	0	0	0	1	40
1:00 AM	0	9	3	0	0	0	0	0	0	2	0	0	0	1	15
2:00 AM															
3:00 AM															
4:00 AM															
5:00 AM															
6:00 AM															
7:00 AM															
8:00 AM															
9:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
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5:00 PM															
6:00 PM															
7:00 PM															
8:00 PM															
9:00 PM															
10:00 PM															
11:00 PM															
Day Total	1	35	9	1	3	1	0	0	0	3	0	0	0	2	55
Percent	1.8%	63.6%	16.4%	1.8%	5.5%	1.8%	0.0%	0.0%	0.0%	5.5%	0.0%	0.0%	0.0%	3.6%	
AM Peak	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM				1:00 AM				12:00 AM	12:00 AM
Volume	1	26	6	1	3	1				2				1	40
PM Peak															
Volume															
<i>Comments:</i>															

LOCATION: St Mary's Rd 500' W of Granada Ave													QC JOB #: 10733417		
SPECIFIC LOCATION: 0 ft from													DIRECTION: EB		
CITY/STATE: Tucson, AZ													DATE: Apr 17 2012 - Apr 18 2012		
Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	138	7361	1558	116	323	36	1	141	14	18	10	1	7	596	10320
Percent	1.3%	71.3%	15.1%	1.1%	3.1%	0.3%	0.0%	1.4%	0.1%	0.2%	0.1%	0.0%	0.1%	5.8%	
ADT 10320															
<i>Comments:</i>															

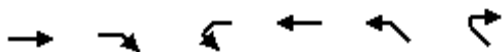


Appendix B
Synchro Worksheets





Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑	↑	↑
Volume (vph)	1926	584	0	1191	190	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	3185	1425	0	3185	1593	1425
Fl _t Permitted					0.950	
Satd. Flow (perm)	3185	1425	0	3185	1593	1425
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		687				6
Link Speed (mph)	30			30	25	
Link Distance (ft)	460			1057	685	
Travel Time (s)	10.5			24.0	18.7	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.80	0.80
Adj. Flow (vph)	2266	687	0	1401	238	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2266	687	0	1401	238	34
Turn Type		Perm				Perm
Protected Phases	8			4	6	
Permitted Phases		8				6
Detector Phase	8	8		4	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.5	21.5		21.5	21.5	21.5
Total Split (s)	60.0	60.0	0.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	0.0%	66.7%	33.3%	33.3%
Maximum Green (s)	54.5	54.5		54.5	24.5	24.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		C-Max	Min	Min
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	60.6	60.6		60.6	18.4	18.4
Actuated g/C Ratio	0.67	0.67		0.67	0.20	0.20
v/c Ratio	1.06	0.58		0.65	0.73	0.11
Control Delay	54.1	2.9		11.3	46.2	24.0
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	54.1	2.9		11.3	46.2	24.0
LOS	D	A		B	D	C



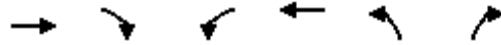
Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Approach Delay	42.1			11.3	43.4	
Approach LOS	D			B	D	
Queue Length 50th (ft)	~753	0		216	127	13
Queue Length 95th (ft)	#869	29		314	165	30
Internal Link Dist (ft)	380			977	605	
Turn Bay Length (ft)		300				
Base Capacity (vph)	2145	1184		2145	434	392
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	1.06	0.58		0.65	0.55	0.09

Intersection Summary

Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 4:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 32.9 Intersection LOS: C
 Intersection Capacity Utilization 80.0% ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 23: 6th St. #4 & Church Ave





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	
Volume (vph)	1173	857	58	774	886	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	300		0	150
Storage Lanes		0	1		2	0
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Fr _t	0.937				0.979	
Fl _t Protected			0.950		0.959	
Satd. Flow (prot)	2985	0	1593	3185	3054	0
Fl _t Permitted			0.075		0.959	
Satd. Flow (perm)	2985	0	126	3185	3054	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	360				21	
Link Speed (mph)	30			30	25	
Link Distance (ft)	434			512	539	
Travel Time (s)	9.9			11.6	14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1275	932	63	841	963	161
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2207	0	63	841	1124	0
Turn Type			Perm			
Protected Phases	8			4	6	
Permitted Phases			4			
Detector Phase	8		4	4	6	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	21.5		21.5	21.5	21.5	
Total Split (s)	59.0	0.0	59.0	59.0	31.0	0.0
Total Split (%)	65.6%	0.0%	65.6%	65.6%	34.4%	0.0%
Maximum Green (s)	53.5		53.5	53.5	25.5	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	5.5	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	Max	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	53.5		53.5	53.5	25.5	
Actuated g/C Ratio	0.59		0.59	0.59	0.28	
v/c Ratio	1.15		0.84	0.44	1.28	
Control Delay	92.0		79.4	6.0	163.1	
Queue Delay	40.8		0.0	0.0	0.0	
Total Delay	132.7		79.4	6.0	163.1	
LOS	F		E	A	F	

39: 6th St. #4 & Stevens Ave #4

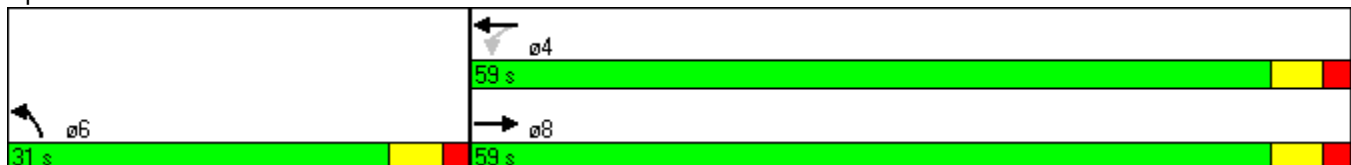


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach Delay	132.7			11.1	163.1	
Approach LOS	F			B	F	
Queue Length 50th (ft)	~740		22	5	~420	
Queue Length 95th (ft)	#881		m#53	11	#547	
Internal Link Dist (ft)	354			432	459	
Turn Bay Length (ft)			300			
Base Capacity (vph)	1920		75	1893	880	
Starvation Cap Reductn	142		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	1.24		0.84	0.44	1.28	

Intersection Summary























Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 28 (31%), Referenced to phase 4:WBTL and 8:EBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.28
 Intersection Signal Delay: 114.8 Intersection LOS: F
 Intersection Capacity Utilization 109.0% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

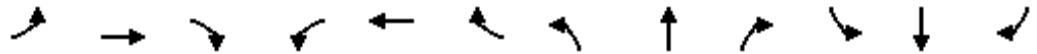
Splits and Phases: 39: 6th St. #4 & Stevens Ave #4



Downtown Links_Design Traffic Analysis
500: 6th St. #4 & Stone Ave.

9/27/2012

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	1455	13	226	1274	124	50	376	61	469	1227	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	0		0	300		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.999			0.987				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	3182	0	1593	3144	0	1593	3185	1425	1593	3185	1425
Flt Permitted	0.108			0.108			0.121			0.367		
Satd. Flow (perm)	181	3182	0	181	3144	0	203	3185	1425	615	3185	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			12				76			47
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1057			434			468			1501	
Travel Time (s)		24.0			9.9			12.8			40.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80	0.94	0.94	0.94
Adj. Flow (vph)	104	1617	14	251	1416	138	62	470	76	499	1305	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	1631	0	251	1554	0	62	470	76	499	1305	69
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		1	2		5	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	1.5	4.0		1.5	4.0		4.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	6.5	21.5		6.5	21.5		9.5	22.0	22.0	9.5	22.0	22.0
Total Split (s)	9.0	42.0	0.0	9.0	42.0	0.0	14.0	37.0	37.0	10.0	33.0	33.0
Total Split (%)	9.2%	42.9%	0.0%	9.2%	42.9%	0.0%	14.3%	37.8%	37.8%	10.2%	33.7%	33.7%
Maximum Green (s)	4.0	37.5		4.0	37.5		8.5	32.5	32.5	4.5	28.5	28.5
Yellow Time (s)	3.0	3.5		3.0	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	1.0		2.0	1.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	-0.5	0.5	0.0	-0.5	0.5	0.0	0.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.5	5.0	4.0	4.5	5.0	4.0	5.5	2.5	4.5	3.5	2.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	42.0	37.0		42.0	37.0		40.3	36.5	34.5	34.7	30.5	28.5
Actuated g/C Ratio	0.43	0.38		0.43	0.38		0.41	0.37	0.35	0.35	0.31	0.29
v/c Ratio	0.73	1.36		1.77	1.30		0.30	0.40	0.14	1.85	1.32	0.15
Control Delay	60.8	194.3		398.3	170.4		31.6	24.6	6.3	420.0	180.2	12.5
Queue Delay	0.0	0.0		0.0	39.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	194.3		398.3	209.4		31.6	24.6	6.3	420.0	180.2	12.5
LOS	E	F		F	F		C	C	A	F	F	B

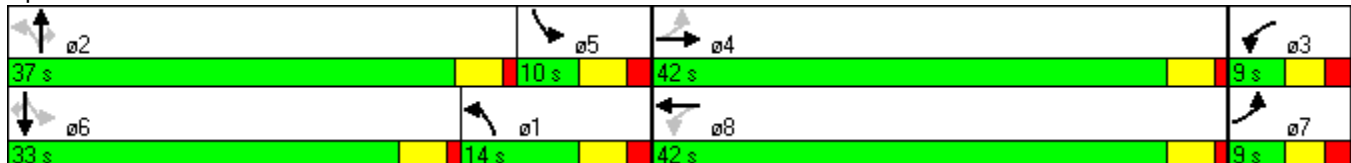


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		186.3			235.7			23.0			237.9	
Approach LOS		F			F			C			F	
Queue Length 50th (ft)	35	~714		~191	~660		23	115	0	~390	~556	10
Queue Length 95th (ft)	#103	#854		#347	#799		43	139	23	#488	#690	42
Internal Link Dist (ft)		977			354			388			1421	
Turn Bay Length (ft)	300			300						300		200
Base Capacity (vph)	142	1202		142	1194		204	1186	551	270	991	448
Starvation Cap Reductn	0	0		0	75		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.73	1.36		1.77	1.39		0.30	0.40	0.14	1.85	1.32	0.15

Intersection Summary

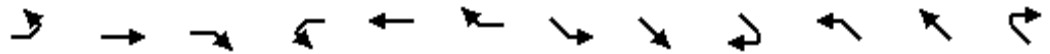
Area Type: CBD
 Cycle Length: 98
 Actuated Cycle Length: 98
 Offset: 18 (18%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.85
 Intersection Signal Delay: 200.7 Intersection LOS: F
 Intersection Capacity Utilization 115.9% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 500: 6th St. #4 & Stone Ave.

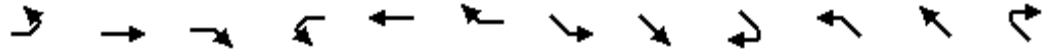


Downtown Links_Design Traffic Analysis
572: Broadway Blvd. & Stevens Ave

9/27/2012



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↗	↘	↑↑↑		↗	↑↑		↘	↑↑	↗
Volume (vph)	0	630	357	219	512	498	555	416	69	793	748	641
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	200		300	300		400	300		600	250		200
Storage Lanes	0		0	2		0	1		1	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.86	1.00	0.97	0.86	0.86	1.00	0.95	0.95	0.97	0.95	1.00
Frt			0.850		0.926			0.979				0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	6071	1500	3252	5621	0	1676	3283	0	3252	3353	1500
Flt Permitted				0.278			0.208			0.283		
Satd. Flow (perm)	0	6071	1500	952	5621	0	367	3283	0	969	3353	1500
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			388		271			21				337
Link Speed (mph)		25			25			25				25
Link Distance (ft)		613			413			848				1240
Travel Time (s)		16.7			11.3			23.1				33.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	685	388	238	557	541	603	452	75	862	813	697
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	685	388	238	1098	0	603	527	0	862	813	697
Turn Type			Free	pm+pt			pm+pt			pm+pt		Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases			Free	6			4			8		Free
Detector Phase		2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)		20.0		9.5	20.0		9.5	20.0		20.0	20.0	
Total Split (s)	0.0	21.1	0.0	9.6	30.7	0.0	33.3	29.3	0.0	30.0	26.0	0.0
Total Split (%)	0.0%	23.4%	0.0%	10.7%	34.1%	0.0%	37.0%	32.6%	0.0%	33.3%	28.9%	0.0%
Maximum Green (s)		16.6		4.1	25.2		27.8	24.8		24.5	21.5	
Yellow Time (s)		3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)		1.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.0	5.5	5.5	4.0	5.5	4.5	4.0	5.5	4.5	4.0
Lead/Lag		Lead		Lag			Lag	Lead		Lag	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode		None		None	Min		None	None		Min	Min	
Act Effct Green (s)		15.2	88.6	23.8	23.8		46.0	19.2		50.2	21.5	88.6
Actuated g/C Ratio		0.17	1.00	0.27	0.27		0.52	0.22		0.57	0.24	1.00
v/c Ratio		0.66	0.26	0.66	0.90dr		1.00	0.73		0.65	1.00	0.46
Control Delay		37.6	0.4	41.3	23.1		66.0	36.8		22.4	66.5	1.0
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		37.6	0.4	41.3	23.1		66.0	36.8		22.4	66.5	1.0
LOS		D	A	D	C		E	D		C	E	A
Approach Delay		24.2			26.4			52.4			31.3	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)		104	0	54	118		~300	141		124	~246	0

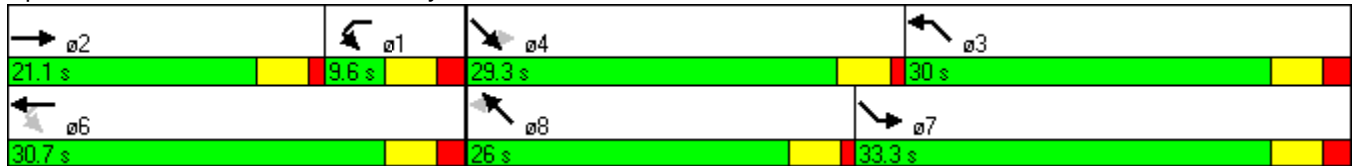


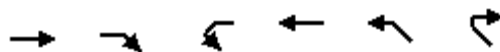
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Queue Length 95th (ft)		136	0	85	154		#500	182		224	#376	0
Internal Link Dist (ft)		533			333			768			1160	
Turn Bay Length (ft)			300	300			300			250		200
Base Capacity (vph)		1138	1500	362	1794		601	935		1326	814	1500
Starvation Cap Reductn		0	0	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.60	0.26	0.66	0.61		1.00	0.56		0.65	1.00	0.46

Intersection Summary

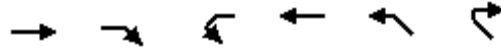
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 88.6
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 32.9 Intersection LOS: C
 Intersection Capacity Utilization 87.2% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 572: Broadway Blvd. & Stevens Ave





Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑	↑	↑
Volume (vph)	1796	175	0	1515	285	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Flt		0.850				0.850
Flt Protected					0.950	
Satd. Flow (prot)	3185	1425	0	3185	1593	1425
Flt Permitted					0.950	
Satd. Flow (perm)	3185	1425	0	3185	1593	1425
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		206				9
Link Speed (mph)	30			30	25	
Link Distance (ft)	460			1057	685	
Travel Time (s)	10.5			24.0	18.7	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.80	0.80
Adj. Flow (vph)	2113	206	0	1782	356	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2113	206	0	1782	356	116
Turn Type		Perm				Perm
Protected Phases	8			4	6	
Permitted Phases		8				6
Detector Phase	8	8		4	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.5	21.5		21.5	21.5	21.5
Total Split (s)	60.0	60.0	0.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	0.0%	66.7%	33.3%	33.3%
Maximum Green (s)	54.5	54.5		54.5	24.5	24.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		C-Max	Min	Min
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	56.2	56.2		56.2	22.8	22.8
Actuated g/C Ratio	0.62	0.62		0.62	0.25	0.25
v/c Ratio	1.06	0.21		0.90	0.88	0.32
Control Delay	58.5	1.7		21.1	56.3	27.0
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	58.5	1.7		21.1	56.3	27.0
LOS	E	A		C	E	C



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Approach Delay	53.4			21.1	49.1	
Approach LOS	D			C	D	
Queue Length 50th (ft)	~722	0		558	190	48
Queue Length 95th (ft)	#778	21		m336	#260	82
Internal Link Dist (ft)	380			977	605	
Turn Bay Length (ft)		300				
Base Capacity (vph)	1989	967		1989	434	394
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	1.06	0.21		0.90	0.82	0.29

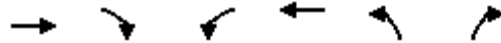
Intersection Summary

Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 4:WBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 40.4
 Intersection LOS: D
 Intersection Capacity Utilization 81.9%
 ICU Level of Service D
 Analysis Period (min) 15

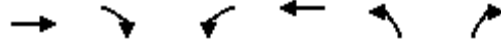
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: 6th St. #4 & Church Ave





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	
Volume (vph)	897	764	94	1061	755	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	300		0	150
Storage Lanes		0	1		2	0
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Fr _t	0.931				0.976	
Fl _t Protected			0.950		0.960	
Satd. Flow (prot)	2966	0	1593	3185	3047	0
Fl _t Permitted			0.071		0.960	
Satd. Flow (perm)	2966	0	119	3185	3047	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	457				25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	434			512	539	
Travel Time (s)	9.9			11.6	14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	975	830	102	1153	821	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1805	0	102	1153	981	0
Turn Type			Perm			
Protected Phases	8			4	6	
Permitted Phases			4			
Detector Phase	8		4	4	6	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	21.5		21.5	21.5	21.5	
Total Split (s)	62.0	0.0	62.0	62.0	28.0	0.0
Total Split (%)	68.9%	0.0%	68.9%	68.9%	31.1%	0.0%
Maximum Green (s)	56.5		56.5	56.5	22.5	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	5.5	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	Max	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	56.5		56.5	56.5	22.5	
Actuated g/C Ratio	0.63		0.63	0.63	0.25	
v/c Ratio	0.89		1.36	0.58	1.26	
Control Delay	5.7		244.6	4.8	156.2	
Queue Delay	84.5		0.0	0.4	556.5	
Total Delay	90.3		244.6	5.2	712.7	
LOS	F		F	A	F	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach Delay	90.3			24.6	712.7	
Approach LOS	F			C	F	
Queue Length 50th (ft)	76		~78	61	~360	
Queue Length 95th (ft)	m16		m#156	73	#483	
Internal Link Dist (ft)	354			432	459	
Turn Bay Length (ft)			300			
Base Capacity (vph)	2032		75	1999	781	
Starvation Cap Reductn	512		0	40	0	
Spillback Cap Reductn	0		0	331	616	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	1.19		1.36	0.69	5.95	

Intersection Summary

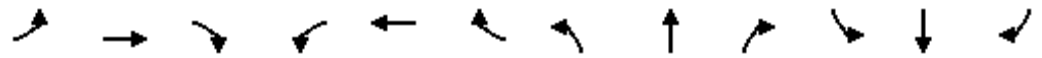
Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:WBTL and 8:EBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.36
 Intersection Signal Delay: 221.0 Intersection LOS: F
 Intersection Capacity Utilization 103.4% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 39: 6th St. #4 & Stevens Ave #4

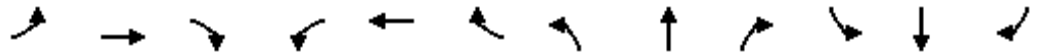


Downtown Links_Design Traffic Analysis
500: 6th St. #4 & Stone Ave.

9/27/2012



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗	↖	↖	↖↗	↖
Volume (vph)	118	1431	31	159	1563	246	100	759	143	464	1002	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	0		0	300		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.997			0.980				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	3176	0	1593	3122	0	1593	3185	1425	1593	3185	1425
Flt Permitted	0.121			0.121			0.167			0.186		
Satd. Flow (perm)	203	3176	0	203	3122	0	280	3185	1425	312	3185	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			22				58			188
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1057			434			468			1501	
Travel Time (s)		24.0			9.9			12.8			40.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80	0.94	0.94	0.94
Adj. Flow (vph)	131	1590	34	177	1737	273	125	949	179	494	1066	255
Shared Lane Traffic (%)												
Lane Group Flow (vph)	131	1624	0	177	2010	0	125	949	179	494	1066	255
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		1	2		5	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	1.5	4.0		1.5	4.0		4.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	6.5	21.5		6.5	21.5		9.5	22.0	22.0	9.5	22.0	22.0
Total Split (s)	7.0	37.0	0.0	7.0	37.0	0.0	22.0	36.2	36.2	9.8	24.0	24.0
Total Split (%)	7.8%	41.1%	0.0%	7.8%	41.1%	0.0%	24.4%	40.2%	40.2%	10.9%	26.7%	26.7%
Maximum Green (s)	2.0	32.5		2.0	32.5		16.5	31.7	31.7	4.3	19.5	19.5
Yellow Time (s)	3.0	3.5		3.0	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	1.0		2.0	1.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	-0.5	0.5	0.0	-0.5	0.5	0.0	0.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.5	5.0	4.0	4.5	5.0	4.0	5.5	2.5	4.5	3.5	2.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	35.0	32.0		35.0	32.0		40.5	33.7	31.7	26.8	21.5	19.5
Actuated g/C Ratio	0.39	0.36		0.39	0.36		0.45	0.37	0.35	0.30	0.24	0.22
v/c Ratio	1.11	1.44		1.50	1.79		0.34	0.80	0.33	2.70	1.40	0.56
Control Delay	90.1	218.9		277.7	381.2		26.7	31.1	16.2	798.3	218.0	14.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.1	218.9		277.7	381.2		26.7	31.1	16.2	798.3	218.0	14.6
LOS	F	F		F	F		C	C	B	F	F	B

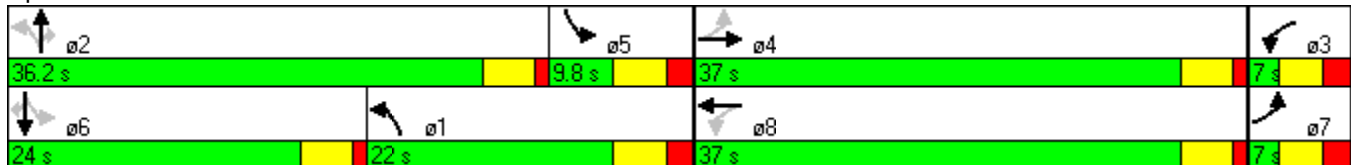


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		209.3			372.8			28.6			347.4	
Approach LOS		F			F			C			F	
Queue Length 50th (ft)	~49	~695		~97	~941		41	248	48	~445	~431	32
Queue Length 95th (ft)	m#44	m#643		m#168	m#929		66	274	84	#640	#556	106
Internal Link Dist (ft)		977			354			388			1421	
Turn Bay Length (ft)	300			300						300		200
Base Capacity (vph)	118	1131		118	1124		367	1193	539	183	761	456
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.11	1.44		1.50	1.79		0.34	0.80	0.33	2.70	1.40	0.56

Intersection Summary

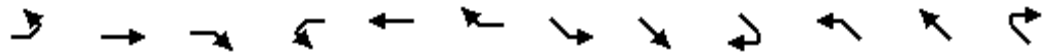
Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.70
 Intersection Signal Delay: 263.7 Intersection LOS: F
 Intersection Capacity Utilization 130.4% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 500: 6th St. #4 & Stone Ave.

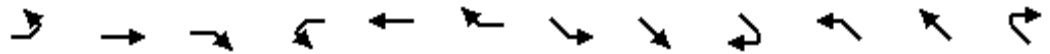


Downtown Links_Design Traffic Analysis
572: Broadway Blvd. & Stevens Ave

9/27/2012



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↗	↘	↑↑↑		↗	↑↑		↘	↑↑	↗
Volume (vph)	0	604	479	372	609	531	566	503	71	514	501	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	200		300	300		400	300		600	250		200
Storage Lanes	0		0	2		0	1		1	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.86	1.00	0.97	0.86	0.86	1.00	0.95	0.95	0.97	0.95	1.00
Fr _t			0.850		0.930			0.981				0.850
Fl _t Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	6071	1500	3252	5646	0	1676	3289	0	3252	3353	1500
Fl _t Permitted				0.299			0.247			0.258		
Satd. Flow (perm)	0	6071	1500	1024	5646	0	436	3289	0	883	3353	1500
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			448		260			17				324
Link Speed (mph)		25			25			25				25
Link Distance (ft)		613			413			848				1240
Travel Time (s)		16.7			11.3			23.1				33.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	657	521	404	662	577	615	547	77	559	545	465
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	657	521	404	1239	0	615	624	0	559	545	465
Turn Type			Free	pm+pt			pm+pt			pm+pt		Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases			Free	6			4			8		Free
Detector Phase		2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)		20.0		9.5	20.0		9.5	20.0		20.0	20.0	
Total Split (s)	0.0	22.4	0.0	12.6	35.0	0.0	35.0	31.0	0.0	24.0	20.0	0.0
Total Split (%)	0.0%	24.9%	0.0%	14.0%	38.9%	0.0%	38.9%	34.4%	0.0%	26.7%	22.2%	0.0%
Maximum Green (s)		17.9		7.1	29.5		29.5	26.5		18.5	15.5	
Yellow Time (s)		3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)		1.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.0	5.5	5.5	4.0	5.5	4.5	4.0	5.5	4.5	4.0
Lead/Lag		Lead		Lag			Lag	Lead		Lag	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode		None		None	Min		None	None		Min	Min	
Act Effct Green (s)		15.1	86.5	26.5	26.5		47.3	21.4		37.6	15.5	86.5
Actuated g/C Ratio		0.17	1.00	0.31	0.31		0.55	0.25		0.43	0.18	1.00
v/c Ratio		0.62	0.35	0.82	0.90dr		0.94	0.76		0.55	0.91	0.31
Control Delay		35.9	0.6	46.8	21.9		49.9	35.6		24.3	56.3	0.5
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		35.9	0.6	46.8	21.9		49.9	35.6		24.3	56.3	0.5
LOS		D	A	D	C		D	D		C	E	A
Approach Delay		20.3			28.0			42.7			28.4	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)		98	0	90	134		256	162		77	157	0

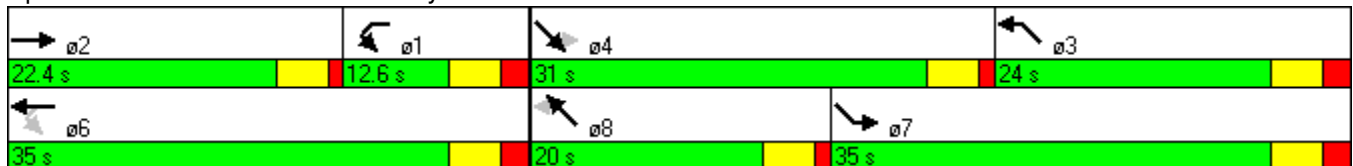


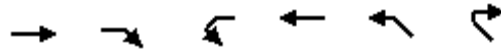
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Queue Length 95th (ft)		128	0	#143	171		#497	215		115	#264	0
Internal Link Dist (ft)		533			333			768			1160	
Turn Bay Length (ft)			300	300			300			250		200
Base Capacity (vph)		1259	1500	499	2101		666	1021		1015	602	1500
Starvation Cap Reductn		0	0	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.52	0.35	0.81	0.59		0.92	0.61		0.55	0.91	0.31

Intersection Summary

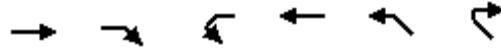
Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 86.5
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 29.7
 Intersection LOS: C
 Intersection Capacity Utilization 84.8%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 572: Broadway Blvd. & Stevens Ave





Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑	↑	↑
Volume (vph)	1926	584	0	1191	190	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	3185	1425	0	3185	1593	1425
Fl _t Permitted					0.950	
Satd. Flow (perm)	3185	1425	0	3185	1593	1425
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		481				24
Link Speed (mph)	30			30	25	
Link Distance (ft)	460			1057	685	
Travel Time (s)	10.5			24.0	18.7	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.80	0.80
Growth Factor	70%	70%	70%	70%	70%	70%
Adj. Flow (vph)	1586	481	0	981	166	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1586	481	0	981	166	24
Turn Type		Perm				Perm
Protected Phases	8			4	6	
Permitted Phases		8				6
Detector Phase	8	8		4	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0		20.0	20.0	20.0
Total Split (s)	60.0	60.0	0.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	0.0%	66.7%	33.3%	33.3%
Maximum Green (s)	56.0	56.0		56.0	26.0	26.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		C-Max	Min	Min
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	67.3	67.3		67.3	14.7	14.7
Actuated g/C Ratio	0.75	0.75		0.75	0.16	0.16
v/c Ratio	0.67	0.41		0.41	0.64	0.09
Control Delay	8.2	1.6		4.1	45.7	12.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	8.2	1.6		4.1	45.7	12.4

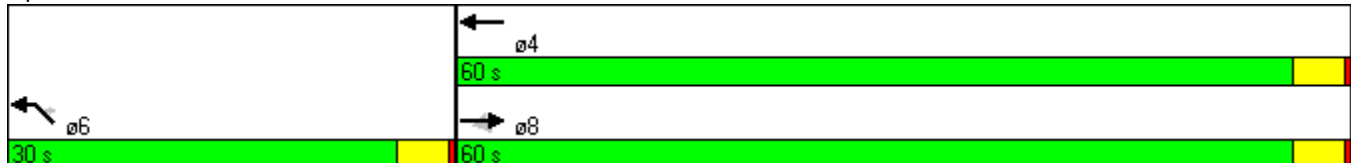


Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
LOS	A	A		A	D	B
Approach Delay	6.6			4.1	41.5	
Approach LOS	A			A	D	
Queue Length 50th (ft)	193	0		5	89	0
Queue Length 95th (ft)	300	21		m240	125	16
Internal Link Dist (ft)	380			977	605	
Turn Bay Length (ft)		300				
Base Capacity (vph)	2382	1187		2382	460	429
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.67	0.41		0.41	0.36	0.06

Intersection Summary

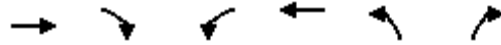
Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 4:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 7.9
 Intersection LOS: A
 Intersection Capacity Utilization 56.3%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: 6th St. #4 & Church Ave





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	
Volume (vph)	1173	857	58	774	886	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	300		0	150
Storage Lanes		0	1		2	0
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Fr _t	0.937				0.978	
Fl _t Protected			0.950		0.959	
Satd. Flow (prot)	2985	0	1593	3185	3050	0
Fl _t Permitted			0.090		0.959	
Satd. Flow (perm)	2985	0	151	3185	3050	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	361				22	
Link Speed (mph)	30			30	25	
Link Distance (ft)	434			512	539	
Travel Time (s)	9.9			11.6	14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	70%	70%	70%	70%	70%	70%
Adj. Flow (vph)	892	652	44	589	674	113
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1544	0	44	589	787	0
Turn Type			Perm			
Protected Phases	8			4	6	
Permitted Phases			4			
Detector Phase	8		4	4	6	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	21.5		21.5	21.5	21.5	
Total Split (s)	59.0	0.0	59.0	59.0	31.0	0.0
Total Split (%)	65.6%	0.0%	65.6%	65.6%	34.4%	0.0%
Maximum Green (s)	53.5		53.5	53.5	25.5	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	5.5	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	Max	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	53.5		53.5	53.5	25.5	
Actuated g/C Ratio	0.59		0.59	0.59	0.28	
v/c Ratio	0.80		0.49	0.31	0.89	
Control Delay	17.4		33.4	9.5	44.5	
Queue Delay	28.9		0.0	0.0	13.8	
Total Delay	46.4		33.4	9.5	58.3	

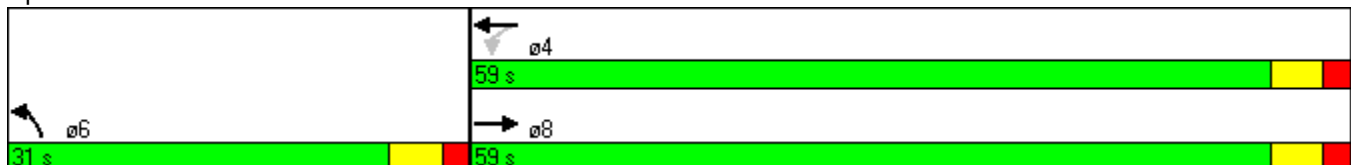


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	D		C	A	E	
Approach Delay	46.4			11.1	58.3	
Approach LOS	D			B	E	
Queue Length 50th (ft)	392		19	121	215	
Queue Length 95th (ft)	m382		#54	5	#323	
Internal Link Dist (ft)	354			432	459	
Turn Bay Length (ft)			300			
Base Capacity (vph)	1921		90	1893	880	
Starvation Cap Reductn	456		0	0	0	
Spillback Cap Reductn	0		0	0	96	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	1.05		0.49	0.31	1.00	

Intersection Summary

Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 28 (31%), Referenced to phase 4:WBTL and 8:EBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 42.0 Intersection LOS: D
 Intersection Capacity Utilization 79.0% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 39: 6th St. #4 & Stevens Ave #4





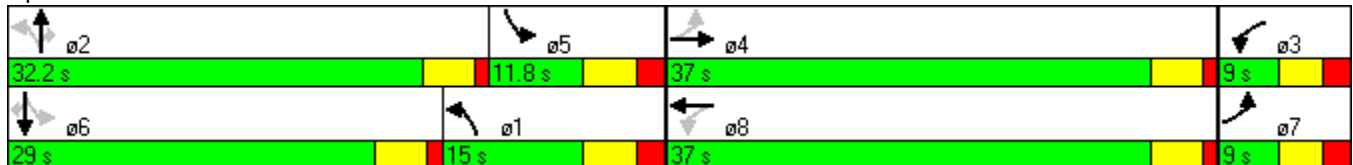
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	1455	13	226	1274	124	50	376	61	469	1227	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	0		0	300		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Fr _t		0.999			0.987				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	3182	0	1593	3144	0	1593	3185	1425	1593	3185	1425
Fl _t Permitted	0.130			0.130			0.138			0.482		
Satd. Flow (perm)	218	3182	0	218	3144	0	231	3185	1425	808	3185	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			13				53			48
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1057			434			468			1501	
Travel Time (s)		24.0			9.9			12.8			40.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80	0.94	0.94	0.94
Growth Factor	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Adj. Flow (vph)	73	1132	10	176	991	96	44	329	53	349	914	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	1142	0	176	1087	0	44	329	53	349	914	48
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		1	2		5	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	1.5	4.0		1.5	4.0		4.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	6.5	21.5		6.5	21.5		9.5	22.0	22.0	9.5	22.0	22.0
Total Split (s)	9.0	37.0	0.0	9.0	37.0	0.0	15.0	32.2	32.2	11.8	29.0	29.0
Total Split (%)	10.0%	41.1%	0.0%	10.0%	41.1%	0.0%	16.7%	35.8%	35.8%	13.1%	32.2%	32.2%
Maximum Green (s)	4.0	32.5		4.0	32.5		9.5	27.7	27.7	6.3	24.5	24.5
Yellow Time (s)	3.0	3.5		3.0	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	1.0		2.0	1.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	-0.5	0.5	0.0	-0.5	0.5	0.0	0.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.5	5.0	4.0	4.5	5.0	4.0	5.5	2.5	4.5	3.5	2.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	37.0	32.0		37.0	32.0		37.1	34.4	32.4	30.5	26.5	24.5
Actuated g/C Ratio	0.41	0.36		0.41	0.36		0.41	0.38	0.36	0.34	0.29	0.27
v/c Ratio	0.46	1.01		1.11	0.97		0.18	0.27	0.10	1.10	0.97	0.11
Control Delay	35.2	52.4		127.8	43.1		23.4	21.2	7.2	108.9	56.5	8.4
Queue Delay	0.0	44.4		0.0	0.0		0.0	0.0	0.0	56.5	0.0	0.0
Total Delay	35.2	96.8		127.8	43.1		23.4	21.2	7.2	165.4	56.5	8.4

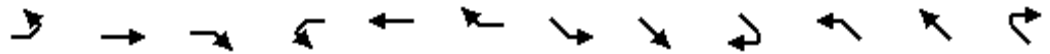
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	F		F	D		C	C	A	F	E	A
Approach Delay		93.1			54.9			19.7			83.8	
Approach LOS		F			D			B			F	
Queue Length 50th (ft)	29	~374		~63	220		14	72	0	135	269	0
Queue Length 95th (ft)	m38	#507		m#137	m#415		30	94	20	#251	#400	26
Internal Link Dist (ft)		977			354			388			1421	
Turn Bay Length (ft)	300			300						300		200
Base Capacity (vph)	158	1132		158	1126		239	1218	547	317	938	423
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	118		0	0		0	0	69	35	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.46	1.13		1.11	0.97		0.18	0.27	0.11	1.24	0.97	0.11

Intersection Summary

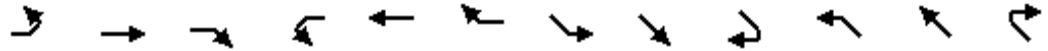
Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay: 71.3 Intersection LOS: E
 Intersection Capacity Utilization 86.9% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 500: 6th St. #4 & Stone Ave.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑		↑	↑↑		↑↑	↑↑	↑
Volume (vph)	0	630	357	219	512	498	555	416	69	793	748	641
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		300	300		400	300		600	250		200
Storage Lanes	0		0	2		0	1		1	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.86	1.00	0.97	0.86	0.86	1.00	0.95	0.95	0.97	0.95	1.00
Frt			0.850		0.926			0.979				0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	6408	1583	3433	5934	0	1770	3465	0	3433	3539	1583
Flt Permitted				0.440			0.315			0.450		
Satd. Flow (perm)	0	6408	1583	1590	5934	0	587	3465	0	1626	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			272		270			20				400
Link Speed (mph)		25			25			25				25
Link Distance (ft)		613			413			848				1240
Travel Time (s)		16.7			11.3			23.1				33.8
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
Growth Factor	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Adj. Flow (vph)	0	479	272	167	390	379	422	317	52	603	569	488
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	479	272	167	769	0	422	369	0	603	569	488
Turn Type			Free	pm+pt			pm+pt			pm+pt		Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases			Free	6			4			8		Free
Detector Phase		2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)		20.0		9.5	20.0		9.5	20.0		20.0	20.0	
Total Split (s)	0.0	21.1	0.0	9.6	30.7	0.0	33.3	29.3	0.0	30.0	26.0	0.0
Total Split (%)	0.0%	23.4%	0.0%	10.7%	34.1%	0.0%	37.0%	32.6%	0.0%	33.3%	28.9%	0.0%
Maximum Green (s)		16.6		4.1	25.2		27.8	24.8		24.5	21.5	
Yellow Time (s)		3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)		1.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.0	5.5	5.5	4.0	5.5	4.5	4.0	5.5	4.5	4.0
Lead/Lag		Lead		Lag			Lag	Lead		Lag	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode		None		None	Min		None	None		Min	Min	
Act Effct Green (s)		11.0	71.4	19.9	19.9		30.7	12.7		38.4	16.6	71.4
Actuated g/C Ratio		0.15	1.00	0.28	0.28		0.43	0.18		0.54	0.23	1.00
v/c Ratio		0.48	0.17	0.30	0.42		0.75	0.58		0.41	0.69	0.31
Control Delay		30.7	0.2	25.3	15.1		27.8	30.6		11.8	30.9	0.5
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		30.7	0.2	25.3	15.1		27.8	30.6		11.8	30.9	0.5
LOS		C	A	C	B		C	C		B	C	A
Approach Delay		19.6			16.9			29.1			15.0	
Approach LOS		B			B			C			B	

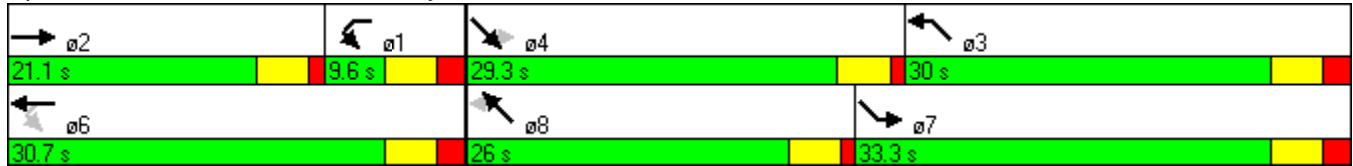


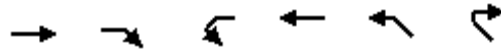
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Queue Length 50th (ft)		57	0	28	50		93	74		63	119	0
Queue Length 95th (ft)		96	0	62	93		170	135		103	207	0
Internal Link Dist (ft)		533			333			768			1160	
Turn Bay Length (ft)			300	300			300			250		200
Base Capacity (vph)		1533	1583	551	2328		806	1252		1655	1097	1583
Starvation Cap Reductn		0	0	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.31	0.17	0.30	0.33		0.52	0.29		0.36	0.52	0.31

Intersection Summary

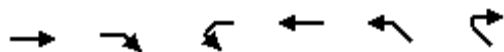
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	71.4
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	19.0
Intersection LOS:	B
Intersection Capacity Utilization:	63.4%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 572: Broadway Blvd. & Stevens Ave





Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑	↑	↑
Volume (vph)	1796	175	0	1515	285	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	3185	1425	0	3185	1593	1425
Fl _t Permitted					0.950	
Satd. Flow (perm)	3185	1425	0	3185	1593	1425
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		124				67
Link Speed (mph)	30			30	25	
Link Distance (ft)	460			1057	685	
Travel Time (s)	10.5			24.0	18.7	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.80	0.80
Growth Factor	60%	60%	60%	60%	60%	60%
Adj. Flow (vph)	1268	124	0	1069	214	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1268	124	0	1069	214	70
Turn Type		Perm				Perm
Protected Phases	8			4	6	
Permitted Phases		8				6
Detector Phase	8	8		4	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.5	21.5		21.5	21.5	21.5
Total Split (s)	60.0	60.0	0.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	0.0%	66.7%	33.3%	33.3%
Maximum Green (s)	54.5	54.5		54.5	24.5	24.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		C-Max	Min	Min
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	61.7	61.7		61.7	17.3	17.3
Actuated g/C Ratio	0.69	0.69		0.69	0.19	0.19
v/c Ratio	0.58	0.12		0.49	0.70	0.21
Control Delay	9.5	1.6		7.2	45.8	9.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	9.5	1.6		7.2	45.8	9.4

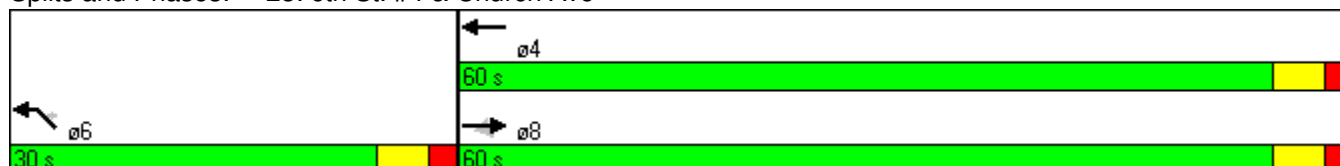


Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
LOS	A	A		A	D	A
Approach Delay	8.8			7.2	36.8	
Approach LOS	A			A	D	
Queue Length 50th (ft)	171	0		142	115	1
Queue Length 95th (ft)	260	17		m302	150	26
Internal Link Dist (ft)	380			977	605	
Turn Bay Length (ft)		300				
Base Capacity (vph)	2185	1016		2185	434	437
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.58	0.12		0.49	0.49	0.16

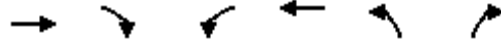
Intersection Summary

Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 4:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 11.1
 Intersection LOS: B
 Intersection Capacity Utilization 52.8%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: 6th St. #4 & Church Ave



	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↖↗	
Volume (vph)	897	764	94	1061	755	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	300		0	150
Storage Lanes		0	1		2	0
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Fr _t	0.931				0.976	
Fl _t Protected			0.950		0.960	
Satd. Flow (prot)	2966	0	1593	3185	3047	0
Fl _t Permitted			0.217		0.960	
Satd. Flow (perm)	2966	0	364	3185	3047	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	457				25	
Link Speed (mph)	30			30	25	
Link Distance (ft)	434			512	539	
Travel Time (s)	9.9			11.6	14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	60%	60%	60%	60%	60%	60%
Adj. Flow (vph)	585	498	61	692	492	96
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1083	0	61	692	588	0
Turn Type			Perm			
Protected Phases	8			4	6	
Permitted Phases			4			
Detector Phase	8		4	4	6	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	21.5		21.5	21.5	21.5	
Total Split (s)	62.0	0.0	62.0	62.0	28.0	0.0
Total Split (%)	68.9%	0.0%	68.9%	68.9%	31.1%	0.0%
Maximum Green (s)	56.5		56.5	56.5	22.5	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.5	5.5	5.5	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	Max	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	56.5		56.5	56.5	22.5	
Actuated g/C Ratio	0.63		0.63	0.63	0.25	
v/c Ratio	0.53		0.27	0.35	0.75	
Control Delay	1.0		6.8	4.8	36.9	
Queue Delay	0.6		0.0	0.1	0.3	
Total Delay	1.6		6.8	4.9	37.2	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	A		A	A	D	
Approach Delay	1.6			5.1	37.2	
Approach LOS	A			A	D	
Queue Length 50th (ft)	2		6	38	153	
Queue Length 95th (ft)	m11		13	45	213	
Internal Link Dist (ft)	354			432	459	
Turn Bay Length (ft)			300			
Base Capacity (vph)	2032		229	1999	781	
Starvation Cap Reductn	504		0	0	0	
Spillback Cap Reductn	0		0	453	23	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.71		0.27	0.45	0.78	

Intersection Summary

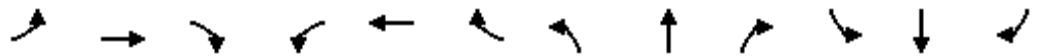
Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:WBTL and 8:EBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 11.3
 Intersection LOS: B
 Intersection Capacity Utilization 67.5%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 39: 6th St. #4 & Stevens Ave #4



Downtown Links_Design Traffic Analysis
500: 6th St. #4 & Stone Ave.

9/27/2012



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗	↖	↖	↖↗	↖
Volume (vph)	118	1431	31	159	1563	246	100	759	143	464	1002	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	0		0	300		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.997			0.980				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	3176	0	1593	3122	0	1593	3185	1425	1593	3185	1425
Flt Permitted	0.122			0.132			0.182			0.240		
Satd. Flow (perm)	205	3176	0	221	3122	0	305	3185	1425	402	3185	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			22				88			153
Link Speed (mph)		30			30			25				25
Link Distance (ft)		1057			434			468				1501
Travel Time (s)		24.0			9.9			12.8				40.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80	0.94	0.94	0.94
Growth Factor	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Adj. Flow (vph)	79	954	21	106	1042	164	75	569	107	296	640	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	975	0	106	1206	0	75	569	107	296	640	153
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		1	2		5	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	1.5	4.0		1.5	4.0		4.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	6.5	21.5		6.5	21.5		9.5	22.0	22.0	9.5	22.0	22.0
Total Split (s)	7.0	38.0	0.0	7.0	38.0	0.0	23.0	33.5	33.5	11.5	22.0	22.0
Total Split (%)	7.8%	42.2%	0.0%	7.8%	42.2%	0.0%	25.6%	37.2%	37.2%	12.8%	24.4%	24.4%
Maximum Green (s)	2.0	33.5		2.0	33.5		17.5	29.0	29.0	6.0	17.5	17.5
Yellow Time (s)	3.0	3.5		3.0	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	1.0		2.0	1.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	-0.5	0.5	0.0	-0.5	0.5	0.0	0.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.5	5.0	4.0	4.5	5.0	4.0	5.5	2.5	4.5	3.5	2.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	None		None	Max	Max	None	Max	Max
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	36.0	33.0		36.0	33.0		39.5	33.3	31.3	24.9	19.5	17.5
Actuated g/C Ratio	0.40	0.37		0.40	0.37		0.44	0.37	0.35	0.28	0.22	0.19
v/c Ratio	0.65	0.84		0.83	1.04		0.20	0.48	0.19	1.51	0.93	0.38
Control Delay	51.1	30.2		69.7	63.1		22.3	24.3	8.0	281.8	56.3	8.5
Queue Delay	0.0	0.0		0.0	2.3		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	30.2		69.7	65.4		22.3	24.3	8.0	281.8	56.3	8.5

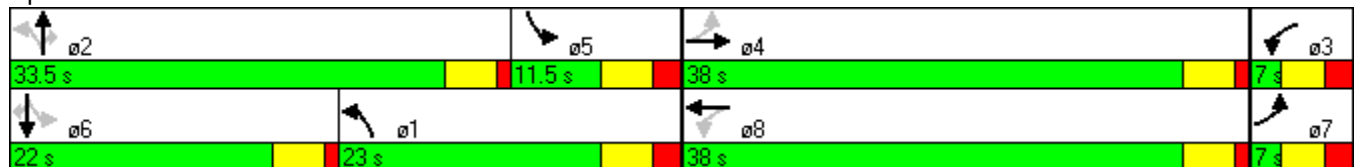


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		E	E		C	C	A	F	E	A
Approach Delay		31.8			65.7			21.7			110.9	
Approach LOS		C			E			C			F	
Queue Length 50th (ft)	32	288		35	~396		24	134	7	~156	188	0
Queue Length 95th (ft)	m#66	#385		m#79	#512		45	159	34	#331	#294	50
Internal Link Dist (ft)		977			354			388			1421	
Turn Bay Length (ft)	300			300						300		200
Base Capacity (vph)	121	1166		127	1159		384	1178	553	196	690	400
Starvation Cap Reductn	0	0		0	7		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.84		0.83	1.05		0.20	0.48	0.19	1.51	0.93	0.38

Intersection Summary

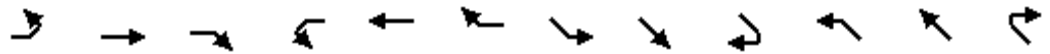
Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.51
 Intersection Signal Delay: 61.1 Intersection LOS: E
 Intersection Capacity Utilization 84.1% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 500: 6th St. #4 & Stone Ave.

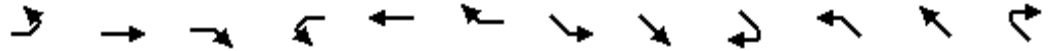


Downtown Links_Design Traffic Analysis
572: Broadway Blvd. & Stevens Ave

9/27/2012



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑		↑	↑↑		↑↑	↑↑	↑
Volume (vph)	0	604	479	372	609	531	566	503	71	514	501	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		300	300		400	300		600	250		200
Storage Lanes	0		0	2		0	1		1	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.86	1.00	0.97	0.86	0.86	1.00	0.95	0.95	0.97	0.95	1.00
Frt			0.850		0.930			0.982				0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	6408	1583	3433	5959	0	1770	3476	0	3433	3539	1583
Flt Permitted				0.499			0.530			0.471		
Satd. Flow (perm)	0	6408	1583	1803	5959	0	987	3476	0	1702	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			312		261			17				279
Link Speed (mph)		25			25			25				25
Link Distance (ft)		613			413			848			1240	
Travel Time (s)		16.7			11.3			23.1			33.8	
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
Growth Factor	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Adj. Flow (vph)	0	394	312	243	397	346	369	328	46	335	327	279
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	394	312	243	743	0	369	374	0	335	327	279
Turn Type			Free	pm+pt			pm+pt			pm+pt		Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases			Free	6			4			8		Free
Detector Phase		2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)		20.0		9.5	20.0		9.5	20.0		20.0	20.0	
Total Split (s)	0.0	22.4	0.0	12.6	35.0	0.0	35.0	31.0	0.0	24.0	20.0	0.0
Total Split (%)	0.0%	24.9%	0.0%	14.0%	38.9%	0.0%	38.9%	34.4%	0.0%	26.7%	22.2%	0.0%
Maximum Green (s)		17.9		7.1	29.5		29.5	26.5		18.5	15.5	
Yellow Time (s)		3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)		1.0		2.0	2.0		2.0	1.0		2.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.0	5.5	5.5	4.0	5.5	4.5	4.0	5.5	4.5	4.0
Lead/Lag		Lead		Lag			Lag	Lead		Lag	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode		None		None	Min		None	None		Min	Min	
Act Effct Green (s)		9.4	59.0	19.5	19.5		23.4	11.9		22.0	11.2	59.0
Actuated g/C Ratio		0.16	1.00	0.33	0.33		0.40	0.20		0.37	0.19	1.00
v/c Ratio		0.39	0.20	0.32	0.35		0.66	0.52		0.34	0.49	0.18
Control Delay		24.5	0.3	18.4	10.6		20.4	23.5		11.4	24.8	0.2
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.5	0.3	18.4	10.6		20.4	23.5		11.4	24.8	0.2
LOS		C	A	B	B		C	C		B	C	A
Approach Delay		13.8			12.5			22.0			12.7	
Approach LOS		B			B			C			B	

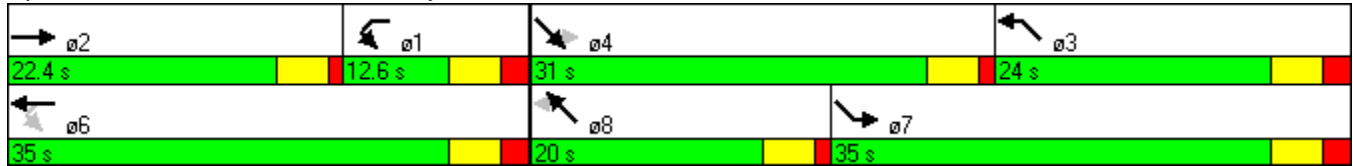


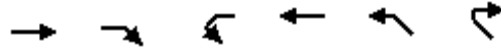
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Queue Length 50th (ft)		36	0	30	34		79	58		32	54	0
Queue Length 95th (ft)		66	0	67	68		143	110		55	102	0
Internal Link Dist (ft)		533			333			768			1160	
Turn Bay Length (ft)			300	300			300			250		200
Base Capacity (vph)		1978	1583	846	3160		1083	1598		1390	946	1583
Starvation Cap Reductn		0	0	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.20	0.20	0.29	0.24		0.34	0.23		0.24	0.35	0.18

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	59
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	14.9
Intersection LOS:	B
Intersection Capacity Utilization:	55.1%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 572: Broadway Blvd. & Stevens Ave

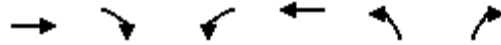




Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑	↑	↑
Volume (vph)	1926	584	0	1191	190	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Fr _t	1.00	0.85		1.00	1.00	0.85
Fl _t Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3185	1425		3185	1593	1425
Fl _t Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3185	1425		3185	1593	1425
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.80	0.80
Adj. Flow (vph)	2266	687	0	1401	238	34
RTOR Reduction (vph)	0	203	0	0	0	6
Lane Group Flow (vph)	2266	484	0	1401	238	28
Turn Type	Perm				Perm	
Protected Phases	8			4	6	
Permitted Phases		8				6
Actuated Green, G (s)	63.4	63.4		63.4	18.6	18.6
Effective Green, g (s)	63.4	63.4		63.4	18.6	18.6
Actuated g/C Ratio	0.70	0.70		0.70	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2244	1004		2244	329	295
v/s Ratio Prot	c0.71			0.44	c0.15	
v/s Ratio Perm		0.34				0.02
v/c Ratio	1.01	0.48		0.62	0.72	0.10
Uniform Delay, d ₁	13.3	6.0		7.0	33.3	28.9
Progression Factor	1.00	1.00		1.24	1.00	1.00
Incremental Delay, d ₂	21.4	0.4		0.1	7.7	0.1
Delay (s)	34.7	6.3		8.8	41.0	29.0
Level of Service	C	A		A	D	C
Approach Delay (s)	28.1			8.8	39.5	
Approach LOS	C			A	D	

Intersection Summary

HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵↵	↵
Volume (vph)	1173	857	58	774	886	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3185	1425	1593	3185	3090	1425
Flt Permitted	1.00	1.00	0.12	1.00	0.95	1.00
Satd. Flow (perm)	3185	1425	204	3185	3090	1425
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1275	932	63	841	963	161
RTOR Reduction (vph)	0	389	0	0	0	25
Lane Group Flow (vph)	1275	543	63	841	963	136
Turn Type		Perm	Perm			Perm
Protected Phases	8			4	6	
Permitted Phases		8	4			6
Actuated Green, G (s)	46.4	46.4	46.4	46.4	32.6	32.6
Effective Green, g (s)	46.4	46.4	46.4	46.4	32.6	32.6
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.36	0.36
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1642	735	105	1642	1119	516
v/s Ratio Prot	c0.40			0.26	c0.31	
v/s Ratio Perm		0.38	0.31			0.10
v/c Ratio	0.78	0.74	0.60	0.51	0.86	0.26
Uniform Delay, d1	17.6	17.1	15.3	14.4	26.6	20.2
Progression Factor	1.13	3.31	0.60	0.51	1.00	1.00
Incremental Delay, d2	0.3	0.6	18.7	0.9	8.7	1.2
Delay (s)	20.3	57.0	27.8	8.2	35.3	21.5
Level of Service	C	E	C	A	D	C
Approach Delay (s)	35.8			9.6	33.3	
Approach LOS	D			A	C	

Intersection Summary

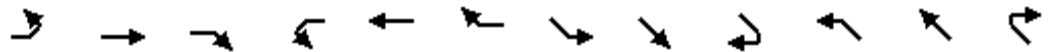
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	1455	13	226	1274	124	50	376	61	469	1227	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	4.5	4.5	5.0	4.5	5.5	2.5	4.5	3.5	2.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frnt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1593	3185	1425	1593	3185	1425	1593	3185	1425	3090	3185	1425
Flt Permitted	0.11	1.00	1.00	0.11	1.00	1.00	0.16	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)	189	3185	1425	189	3185	1425	275	3185	1425	1134	3185	1425
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80	0.94	0.94	0.94
Adj. Flow (vph)	104	1617	14	251	1416	138	62	470	76	499	1305	69
RTOR Reduction (vph)	0	0	7	0	0	83	0	0	55	0	0	36
Lane Group Flow (vph)	104	1617	7	251	1416	55	62	470	21	499	1305	33
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		1	2		5	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	39.9	34.9	34.9	39.9	34.9	34.9	29.5	24.4	24.4	31.7	25.5	25.5
Effective Green, g (s)	40.9	34.4	34.9	40.9	34.4	34.9	29.5	26.4	24.4	35.7	27.5	25.5
Actuated g/C Ratio	0.45	0.38	0.39	0.45	0.38	0.39	0.33	0.29	0.27	0.40	0.31	0.28
Clearance Time (s)	5.0	4.5	4.5	5.0	4.5	4.5	5.5	4.5	4.5	5.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	172	1217	553	172	1217	553	165	934	386	628	973	404
v/s Ratio Prot	0.04	0.51		c0.09	0.44		0.02	0.15		c0.07	c0.41	
v/s Ratio Perm	0.24		0.00	c0.57		0.04	0.10		0.01	0.24		0.02
v/c Ratio	0.60	1.33	0.01	1.46	1.16	0.10	0.38	0.50	0.05	0.79	1.34	0.08
Uniform Delay, d1	38.0	27.8	16.9	39.2	27.8	17.5	37.8	26.4	24.3	28.7	31.2	23.7
Progression Factor	1.08	0.80	0.57	0.90	1.05	1.57	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	149.3	0.0	227.9	80.4	0.1	1.4	1.9	0.3	6.9	160.5	0.4
Delay (s)	42.4	171.5	9.7	263.3	109.4	27.6	39.2	28.3	24.5	35.5	191.8	24.1
Level of Service	D	F	A	F	F	C	D	C	C	D	F	C
Approach Delay (s)		162.4			124.6			28.9			144.0	
Approach LOS		F			F			C			F	

Intersection Summary

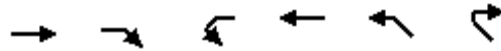
HCM Average Control Delay	131.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	115.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



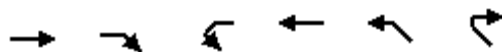
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑		↑↑	↑↑	↑	↑↑	↑↑	↑
Volume (vph)	0	630	357	219	512	498	555	416	69	793	748	641
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.0	5.5	5.5		5.5	4.5	4.5	5.5	4.5	4.0
Lane Util. Factor		0.86	1.00	0.97	0.86		0.97	0.95	1.00	0.97	0.95	1.00
Frt		1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		6071	1500	3252	5622		3252	3353	1500	3252	3353	1500
Flt Permitted		1.00	1.00	0.30	1.00		0.25	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)		6071	1500	1020	5622		861	3353	1500	1274	3353	1500
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	685	388	238	557	541	603	452	75	862	813	697
RTOR Reduction (vph)	0	0	0	0	192	0	0	0	47	0	0	0
Lane Group Flow (vph)	0	685	388	238	906	0	603	452	28	862	813	697
Turn Type			Free	pm+pt		pm+pt		Perm	pm+pt		Free	
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases			Free	6		4		4	8		Free	
Actuated Green, G (s)		14.2	77.9	22.8	22.8		33.8	15.9	15.9	44.1	21.7	77.9
Effective Green, g (s)		14.2	77.9	22.8	22.8		33.8	15.9	15.9	44.1	21.7	77.9
Actuated g/C Ratio		0.18	1.00	0.29	0.29		0.43	0.20	0.20	0.57	0.28	1.00
Clearance Time (s)		4.5		5.5	5.5		5.5	4.5	4.5	5.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1107	1500	416	1645		923	684	306	1323	934	1500
v/s Ratio Prot		0.11		0.03	0.16		0.15	0.13		c0.20	c0.24	
v/s Ratio Perm			0.26	c0.14			0.13		0.02	0.17		c0.46
v/c Ratio		0.62	0.26	0.57	0.86dr		0.65	0.66	0.09	0.65	0.87	0.46
Uniform Delay, d1		29.4	0.0	27.2	23.2		23.6	28.5	25.1	14.9	26.8	0.0
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		1.0	0.4	1.9	0.4		1.7	2.4	0.1	1.2	8.9	1.0
Delay (s)		30.4	0.4	29.1	23.6		25.3	30.9	25.3	16.1	35.7	1.0
Level of Service		C	A	C	C		C	C	C	B	D	A
Approach Delay (s)		19.6			24.6			27.5			18.4	
Approach LOS		B			C			C			B	

Intersection Summary

HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			
c Critical Lane Group			



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑	↑	↑
Volume (vph)	1796	175	0	1515	285	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300	0		0	0
Storage Lanes		1	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected					0.950	
Satd. Flow (prot)	3185	1425	0	3185	1593	1425
Fl _t Permitted					0.950	
Satd. Flow (perm)	3185	1425	0	3185	1593	1425
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		206				9
Link Speed (mph)	30			30	25	
Link Distance (ft)	460			1057	685	
Travel Time (s)	10.5			24.0	18.7	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.80	0.80
Adj. Flow (vph)	2113	206	0	1782	356	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2113	206	0	1782	356	116
Turn Type		Perm				Perm
Protected Phases	8			4	6	
Permitted Phases		8				6
Detector Phase	8	8		4	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.5	21.5		21.5	21.5	21.5
Total Split (s)	60.0	60.0	0.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	0.0%	66.7%	33.3%	33.3%
Maximum Green (s)	54.5	54.5		54.5	24.5	24.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		C-Max	Min	Min
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	56.2	56.2		56.2	22.8	22.8
Actuated g/C Ratio	0.62	0.62		0.62	0.25	0.25
v/c Ratio	1.06	0.21		0.90	0.88	0.32
Control Delay	58.5	1.7		21.2	56.3	27.0
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	58.5	1.7		21.2	56.3	27.0
LOS	E	A		C	E	C



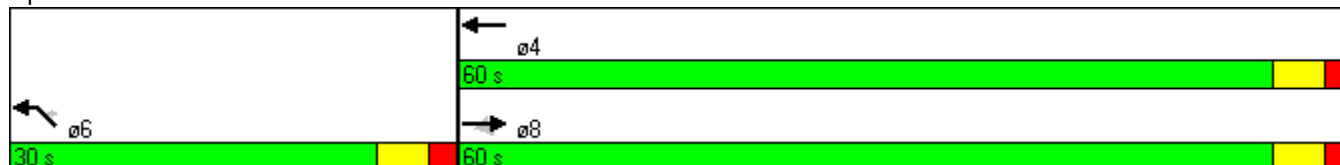
Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Approach Delay	53.4			21.2	49.1	
Approach LOS	D			C	D	
Queue Length 50th (ft)	~722	0		560	190	48
Queue Length 95th (ft)	#778	21		m379	#260	82
Internal Link Dist (ft)	380			977	605	
Turn Bay Length (ft)		300				
Base Capacity (vph)	1989	967		1989	434	394
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	1.06	0.21		0.90	0.82	0.29

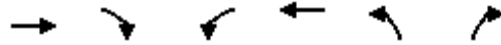
Intersection Summary

Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 4:WBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 40.4
 Intersection LOS: D
 Intersection Capacity Utilization 81.9%
 ICU Level of Service D
 Analysis Period (min) 15

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

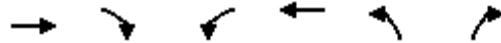
Splits and Phases: 23: 6th St. #4 & Church Ave





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓↓	↓
Volume (vph)	897	764	94	1061	755	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	300		0	150
Storage Lanes		1	1		2	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Fr _t		0.850				0.850
Fl _t Protected			0.950		0.950	
Satd. Flow (prot)	3185	1425	1593	3185	3090	1425
Fl _t Permitted			0.231		0.950	
Satd. Flow (perm)	3185	1425	387	3185	3090	1425
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		830				104
Link Speed (mph)	30			30	25	
Link Distance (ft)	434			512	539	
Travel Time (s)	9.9			11.6	14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	975	830	102	1153	821	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	975	830	102	1153	821	160
Turn Type		Perm	Perm			Perm
Protected Phases	8			4	6	
Permitted Phases		8	4			6
Detector Phase	8	8	4	4	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.5	21.5	21.5	21.5	21.5	21.5
Total Split (s)	55.0	55.0	55.0	55.0	35.0	35.0
Total Split (%)	61.1%	61.1%	61.1%	61.1%	38.9%	38.9%
Maximum Green (s)	49.5	49.5	49.5	49.5	29.5	29.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	49.5	49.5	49.5	49.5	29.5	29.5
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.33	0.33
v/c Ratio	0.56	0.72	0.48	0.66	0.81	0.30
Control Delay	4.8	3.5	15.1	9.7	35.3	10.5
Queue Delay	0.9	21.2	0.0	4.4	120.0	0.0
Total Delay	5.7	24.8	15.1	14.1	155.4	10.5
LOS	A	C	B	B	F	B

39: 6th St. #4 & Stevens Ave #4

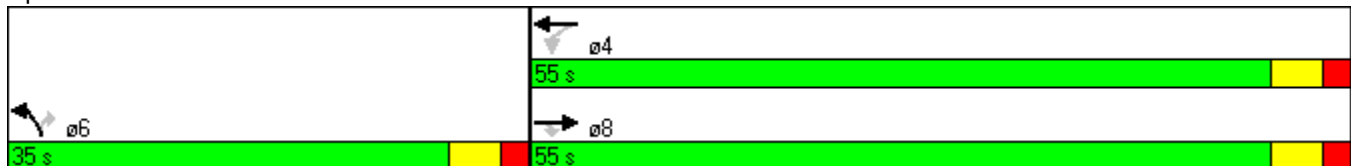


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach Delay	14.5			14.2	131.7	
Approach LOS	B			B	F	
Queue Length 50th (ft)	48	52	15	92	218	22
Queue Length 95th (ft)	m37	m0	m35	148	291	69
Internal Link Dist (ft)	354			432	459	
Turn Bay Length (ft)		150	300			150
Base Capacity (vph)	1752	1157	213	1752	1013	537
Starvation Cap Reductn	470	343	0	24	0	0
Spillback Cap Reductn	0	0	0	512	363	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.02	0.48	0.93	1.26	0.30

Intersection Summary

























Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:WBTL and 8:EBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 42.9
 Intersection LOS: D
 Intersection Capacity Utilization 71.0%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

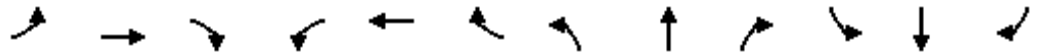
Splits and Phases: 39: 6th St. #4 & Stevens Ave #4



Downtown Links_Design Traffic Analysis
500: 6th St. #4 & Stone Ave.

9/27/2012

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	1431	31	159	1563	246	100	759	143	464	1002	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	0		0	300		200
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	3185	1425	1593	3185	1425	1593	3185	1425	3090	3185	1425
Flt Permitted	0.121			0.121			0.167			0.186		
Satd. Flow (perm)	203	3185	1425	203	3185	1425	280	3185	1425	605	3185	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			28			175			58			188
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1057			434			468			1501	
Travel Time (s)		24.0			9.9			12.8			40.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80	0.94	0.94	0.94
Adj. Flow (vph)	131	1590	34	177	1737	273	125	949	179	494	1066	255
Shared Lane Traffic (%)												
Lane Group Flow (vph)	131	1590	34	177	1737	273	125	949	179	494	1066	255
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		1	2		5	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	1.5	4.0	4.0	1.5	4.0	4.0	4.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	6.5	21.5	21.5	6.5	21.5	21.5	9.5	22.0	22.0	9.5	22.0	22.0
Total Split (s)	7.0	37.0	37.0	7.0	37.0	37.0	22.0	36.2	36.2	9.8	24.0	24.0
Total Split (%)	7.8%	41.1%	41.1%	7.8%	41.1%	41.1%	24.4%	40.2%	40.2%	10.9%	26.7%	26.7%
Maximum Green (s)	2.0	32.5	32.5	2.0	32.5	32.5	16.5	31.7	31.7	4.3	19.5	19.5
Yellow Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	-0.5	0.5	0.0	-0.5	0.5	0.0	0.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	4.5	5.0	4.5	4.5	5.0	4.5	5.5	2.5	4.5	3.5	2.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	35.0	32.0	32.5	35.0	32.0	32.5	40.5	33.7	31.7	26.8	21.5	19.5
Actuated g/C Ratio	0.39	0.36	0.36	0.39	0.36	0.36	0.45	0.37	0.35	0.30	0.24	0.22
v/c Ratio	1.11	1.40	0.06	1.50	1.53	0.44	0.34	0.80	0.33	1.40	1.40	0.56
Control Delay	90.1	205.0	4.2	283.2	270.6	13.3	26.7	31.1	16.2	222.4	218.0	14.6
Queue Delay	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.1	205.0	4.2	283.2	271.8	13.3	26.7	31.1	16.2	222.4	218.0	14.6
LOS	F	F	A	F	F	B	C	C	B	F	F	B

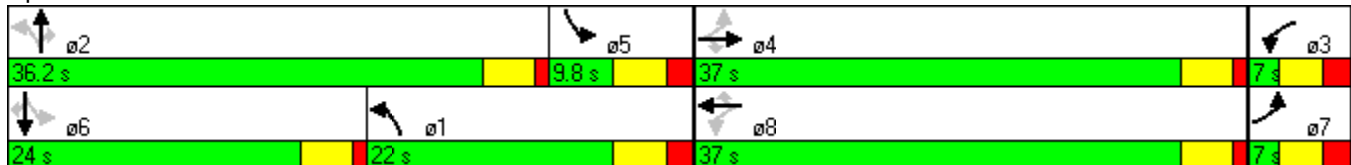


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		192.5			240.5			28.6			190.6	
Approach LOS		F			F			C			F	
Queue Length 50th (ft)	~49	~673	4	~99	~764	67	41	248	48	~134	~431	32
Queue Length 95th (ft)	m#44	m#622	m4	m#185	#906	m112	66	274	84	#253	#556	106
Internal Link Dist (ft)		977			354			388			1421	
Turn Bay Length (ft)	300			300						300		200
Base Capacity (vph)	118	1132	532	118	1132	626	367	1193	539	354	761	456
Starvation Cap Reductn	0	0	0	0	2	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	1.40	0.06	1.50	1.54	0.44	0.34	0.80	0.33	1.40	1.40	0.56

Intersection Summary

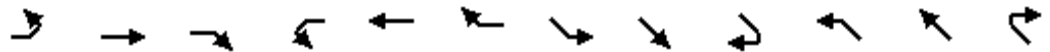
Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.53
 Intersection Signal Delay: 177.7 Intersection LOS: F
 Intersection Capacity Utilization 108.0% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 500: 6th St. #4 & Stone Ave.

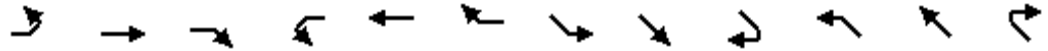


Downtown Links_Design Traffic Analysis
572: Broadway Blvd. & Stevens Ave

9/27/2012



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑		↑↑	↑↑	↑	↑↑	↑↑	↑
Volume (vph)	0	604	479	372	609	531	566	503	71	514	501	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	200		300	300		400	300		600	250		200
Storage Lanes	0		0	2		0	2		1	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.86	1.00	0.97	0.86	0.86	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850		0.930				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	6071	1500	3252	5646	0	3252	3353	1500	3252	3353	1500
Flt Permitted				0.322			0.290			0.286		
Satd. Flow (perm)	0	6071	1500	1102	5646	0	993	3353	1500	979	3353	1500
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			431		281				77			367
Link Speed (mph)		25			25			25				25
Link Distance (ft)		613			413			848				1240
Travel Time (s)		16.7			11.3			23.1				33.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	657	521	404	662	577	615	547	77	559	545	465
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	657	521	404	1239	0	615	547	77	559	545	465
Turn Type			Free	pm+pt			pm+pt		Perm	pm+pt		Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases			Free	6			4		4	8		Free
Detector Phase		2		1	6		7	4	4	3	8	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)		20.0		9.5	20.0		9.5	20.0	20.0	20.0	20.0	
Total Split (s)	0.0	21.7	0.0	17.7	39.4	0.0	24.6	28.6	28.6	22.0	26.0	0.0
Total Split (%)	0.0%	24.1%	0.0%	19.7%	43.8%	0.0%	27.3%	31.8%	31.8%	24.4%	28.9%	0.0%
Maximum Green (s)		17.2		12.2	33.9		19.1	24.1	24.1	16.5	21.5	
Yellow Time (s)		3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)		1.0		2.0	2.0		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.0	5.5	5.5	4.0	5.5	4.5	4.5	5.5	4.5	4.0
Lead/Lag		Lead		Lag			Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode		None		None	Min		None	None	None	Min	Min	
Act Effct Green (s)		14.2	75.1	27.3	27.3		31.6	18.1	18.1	30.2	17.4	75.1
Actuated g/C Ratio		0.19	1.00	0.36	0.36		0.42	0.24	0.24	0.40	0.23	1.00
v/c Ratio		0.57	0.35	0.63	0.56		0.72	0.68	0.18	0.69	0.70	0.31
Control Delay		31.1	0.6	29.6	15.9		27.2	31.5	7.7	26.8	33.1	0.5
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		31.1	0.6	29.6	15.9		27.2	31.5	7.7	26.8	33.1	0.5
LOS		C	A	C	B		C	C	A	C	C	A
Approach Delay		17.6			19.3			27.9				21.2
Approach LOS		B			B			C				C
Queue Length 50th (ft)		82	0	70	100		88	122	0	78	124	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Queue Length 95th (ft)		130	0	119	153		144	197	32	129	205	0
Internal Link Dist (ft)		533			333			768			1160	
Turn Bay Length (ft)			300	300			300		600	250		200
Base Capacity (vph)		1430	1500	819	2772		1076	1107	547	955	988	1500
Starvation Cap Reductn		0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.46	0.35	0.49	0.45		0.57	0.49	0.14	0.59	0.55	0.31

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 75.1
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 21.4 Intersection LOS: C
 Intersection Capacity Utilization 68.8% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 572: Broadway Blvd. & Stevens Ave

