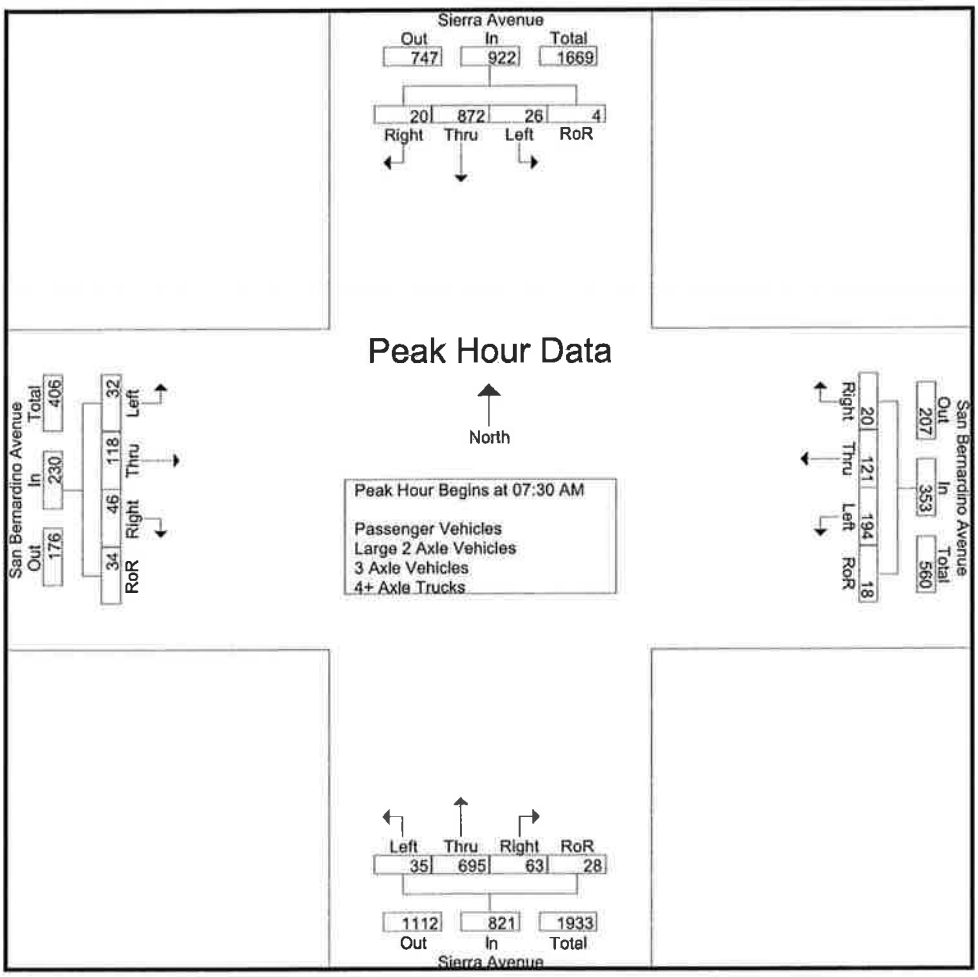
Counts Unlimited Inc.
25286 Jaclyn Avenue
Moreno Valley, CA 92557
951-485-7934

City of Fontana
N/S: Sierra Avenue
E/W: San Bernardino Avenue
Weather: Sunny

File Name : FONSISBAM
Site Code : 9111043
Start Date : 5/5/2009
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM					07:00 AM					07:45 AM					07:15 AM				
+0 mins.	7	223	**7**	**1**	238	**57**	**89**	5	1	**152**	**11**	**197**	17	4	**229**	7	42	**18**	6	73
+15 mins.	**8**	**263**	6	1	**278**	35	62	2	1	100	6	160	14	4	184	**12**	**45**	16	11	**84**
+30 mins.	5	214	5	1	225	51	32	5	1	89	8	187	**20**	**10**	225	3	30	18	4	55
+45 mins.	6	183	5	1	195	46	17	**7**	**9**	79	8	165	13	4	190	11	20	4	**16**	51
Total Volume	26	883	23	4	936	189	200	19	12	420	33	709	64	22	828	33	137	56	37	263
% App. Total	2.8	94.3	2.5	0.4		45	47.6	4.5	2.9		4	85.6	7.7	2.7		12.5	52.1	21.3	14.1	
PHF	.813	.839	.821	1.000	.842	.829	.562	.679	.333	.691	.750	.900	.800	.550	.904	.688	.761	.778	.578	.783

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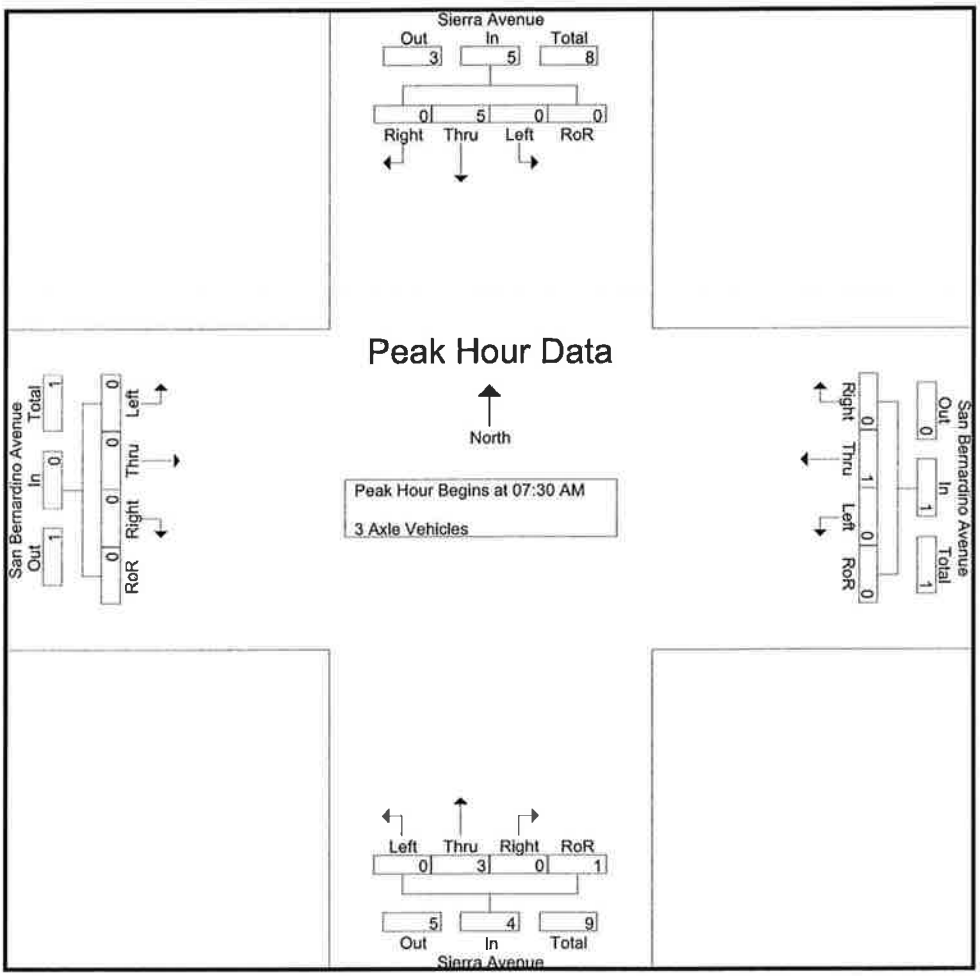

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM					07:30 AM					07:30 AM					07:30 AM				
+0 mins.	0	1	0	0	1	0	**1**	0	0	**1**	0	**2**	0	**1**	**3**	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**3**	0	0	**3**	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
+45 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	0	0	5	0	1	0	0	1	0	3	0	1	4	0	0	0	0	0
% App. Total	0	100	0	0		0	100	0	0		0	75	0	25		0	0	0	0	
PHF	.000	.417	.000	.000	.417	.000	.250	.000	.000	.250	.000	.375	.000	.250	.333	.000	.000	.000	.000	.000

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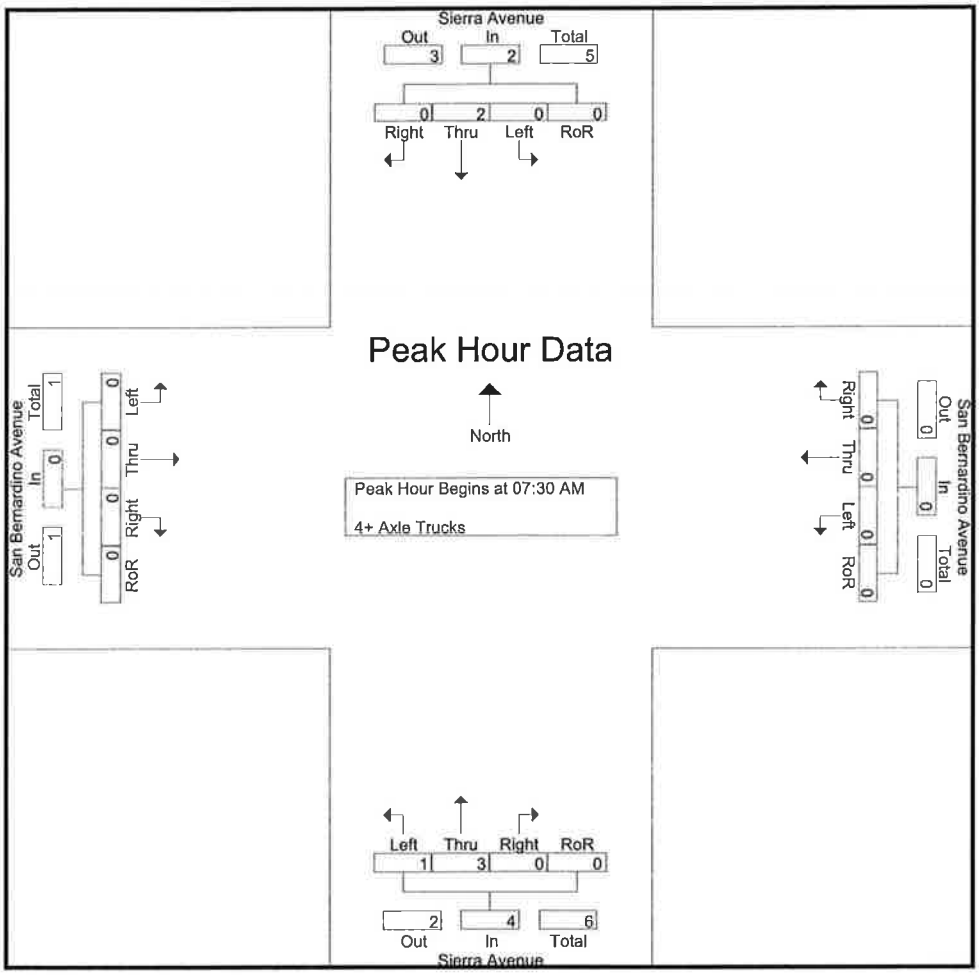

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM					07:30 AM					07:30 AM					07:30 AM				
+0 mins.	0	**1**	0	0	**1**	0	0	0	0	0	**1**	0	0	0	1	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	**0**	**3**	0	0	**3**	0	0	0	0	0
+30 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0
% App. Total	0	100	0	0		0	0	0	0		25	75	0	0		0	0	0	0	
PHF	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.250	.250	.000	.000	.333	.000	.000	.000	.000	.000

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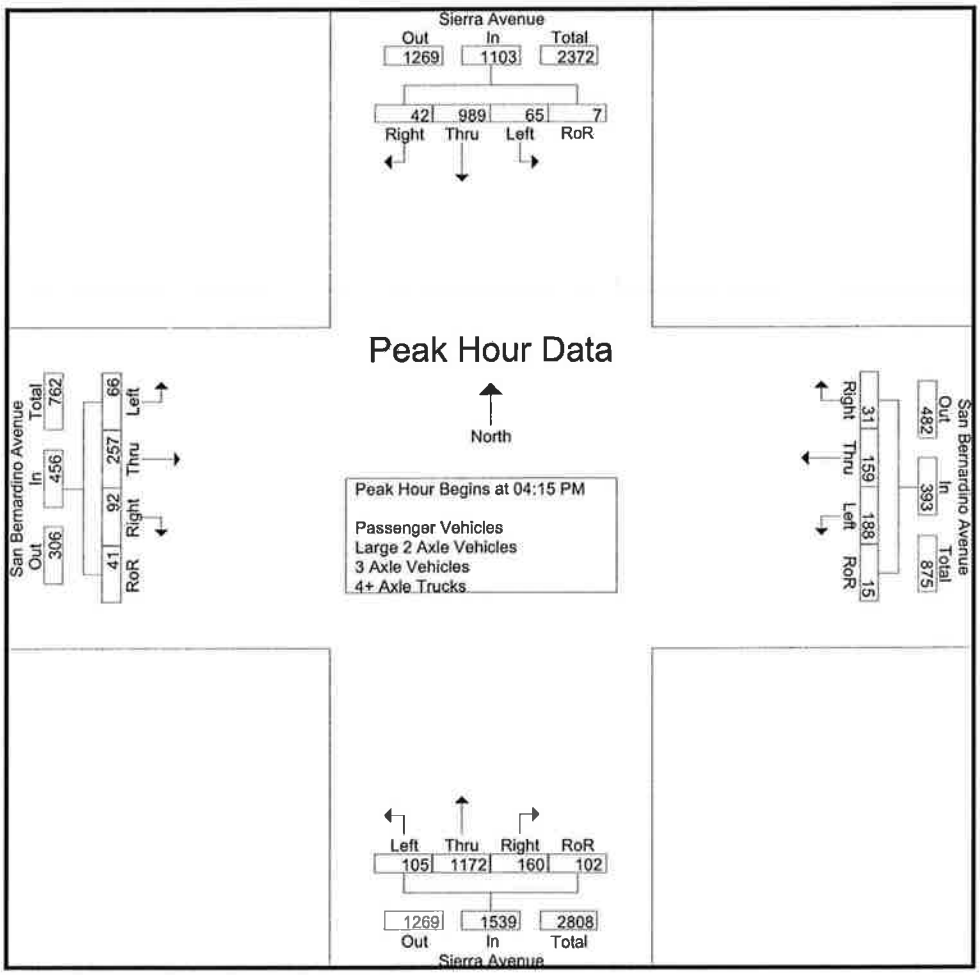

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM					05:00 PM					04:00 PM					04:15 PM				
+0 mins.	18	262	12	3	295	44	26	9	**5**	84	30	**314**	37	12	393	**18**	**75**	**30**	3	**126**
+15 mins.	16	**270**	8	2	**296**	52	**47**	8	3	110	20	284	33	**27**	364	14	62	19	**15**	110
+30 mins.	**21**	238	**14**	**4**	277	43	38	**10**	3	94	**33**	311	**42**	26	**412**	17	62	21	9	109
+45 mins.	14	224	13	1	252	**58**	43	8	4	**113**	29	295	40	21	385	17	58	22	14	111
Total Volume	69	994	47	10	1120	197	154	35	15	401	112	1204	152	86	1554	66	257	92	41	456
% App. Total	6.2	88.8	4.2	0.9		49.1	38.4	8.7	3.7		7.2	77.5	9.8	5.5		14.5	56.4	20.2	9	
PHF	.821	.920	.839	.625	.946	.849	.819	.875	.750	.887	.848	.959	.905	.796	.943	.917	.857	.767	.683	.905

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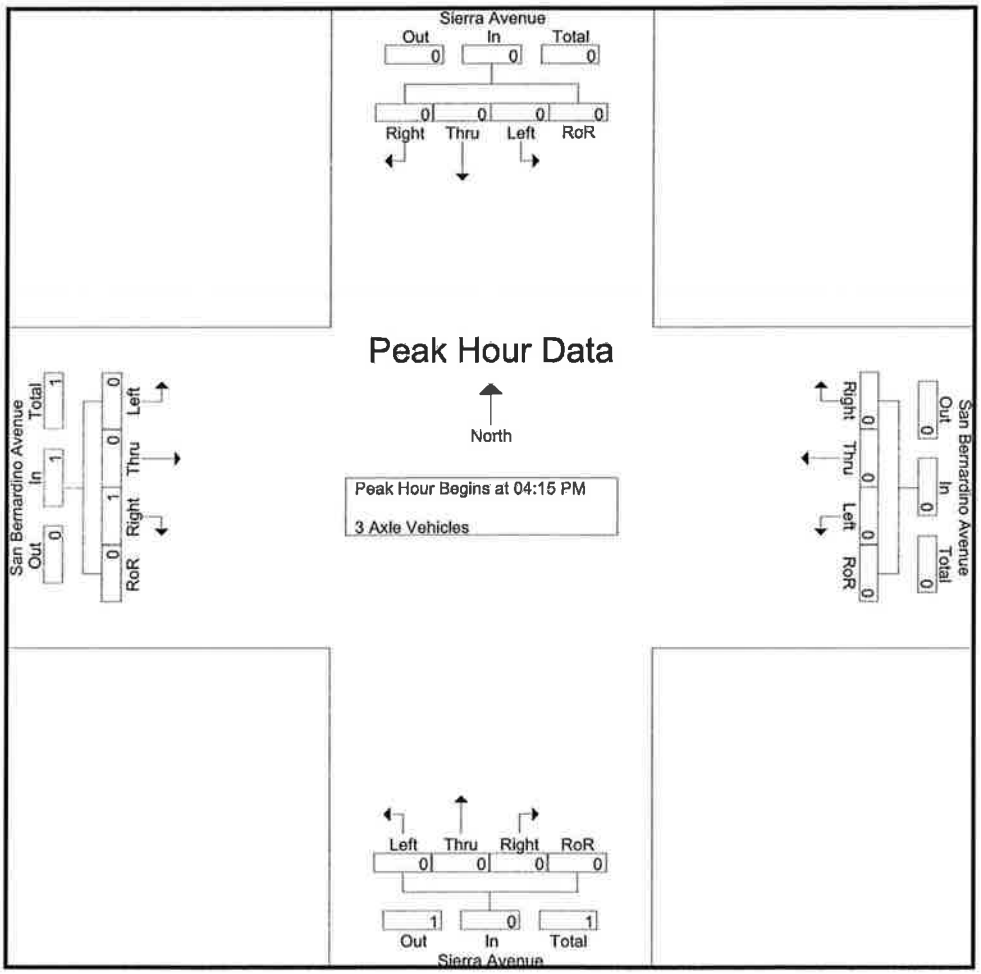

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM					04:15 PM					04:15 PM					04:15 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

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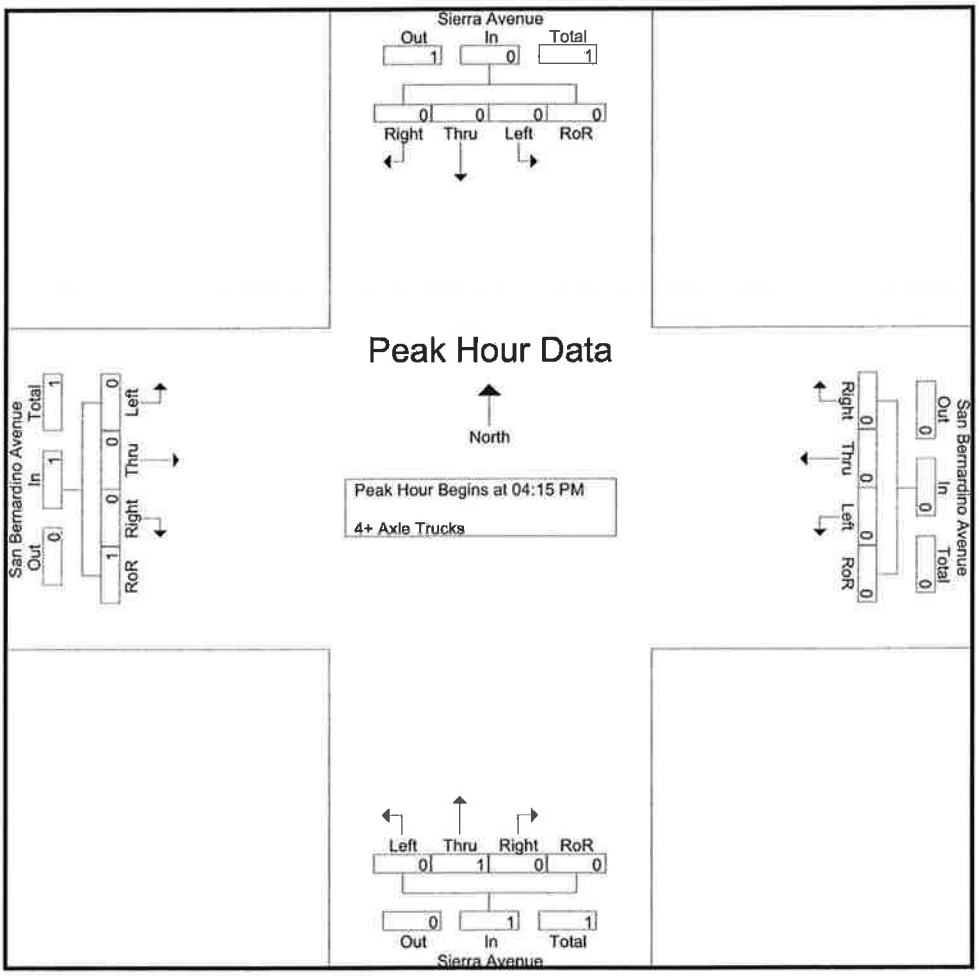


Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

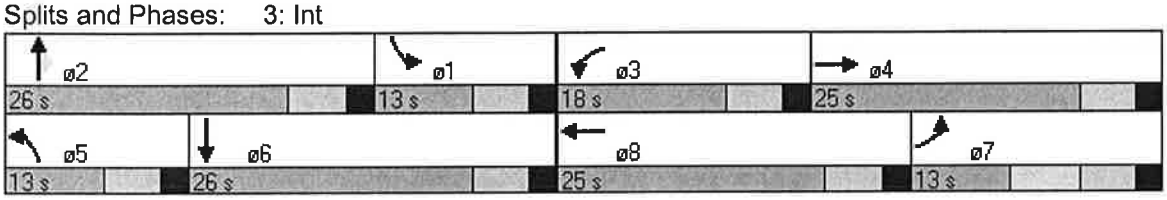
	04:15 PM					04:15 PM					04:15 PM					04:15 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1
% App. Total	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.250	.250

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91
Frt		0.929			0.964				0.850		0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3115	0	1583	3232	0	1583	3353	1500	1583	4798	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1583	3115	0	1583	3232	0	1583	3353	1500	1583	4798	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		114			48				106		5	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1424			1664			1280			1216	
Travel Time (s)		32.4			37.8			29.1			27.6	
Volume (vph)	32	118	80	194	122	38	37	704	91	26	881	24
Peak Hour Factor	0.60	0.93	0.70	0.87	0.80	0.80	0.54	0.91	0.86	0.53	0.97	0.86
Adj. Flow (vph)	53	127	114	223	152	48	69	774	106	49	908	28
Lane Group Flow (vph)	53	241	0	223	200	0	69	774	106	49	936	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phases	7	4		3	8		5	2	2	1	6	
Minimum Initial (s)	7.0	7.0		12.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	25.0		18.0	25.0		13.0	26.0	26.0	13.0	26.0	
Total Split (s)	13.0	25.0	0.0	18.0	25.0	0.0	13.0	26.0	26.0	13.0	26.0	0.0
Total Split (%)	15.9%	30.5%	0.0%	22.0%	30.5%	0.0%	15.9%	31.7%	31.7%	15.9%	31.7%	0.0%
Maximum Green (s)	7.0	19.0		12.0	19.0		7.0	20.0	20.0	7.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)		4.0			4.0			4.0	4.0		4.0	
Flash Dont Walk (s)		15.0			15.0			16.0	16.0		16.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	11.9	11.0		14.0	18.3		10.7	37.2	37.2	9.0	32.9	
Actuated g/C Ratio	0.15	0.13		0.17	0.22		0.13	0.45	0.45	0.11	0.40	
v/c Ratio	0.23	0.47		0.83	0.26		0.33	0.51	0.14	0.28	0.49	
Control Delay	31.9	17.6		59.0	22.7		36.2	19.2	4.5	38.2	20.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	31.9	17.6		59.0	22.7		36.2	19.2	4.5	38.2	20.9	
LOS	C	B		E	C		D	B	A	D	C	
Approach Delay		20.2			41.8			18.8			21.7	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 82
Actuated Cycle Length: 82
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 57.9% ICU Level of Service B
Analysis Period (min) 15

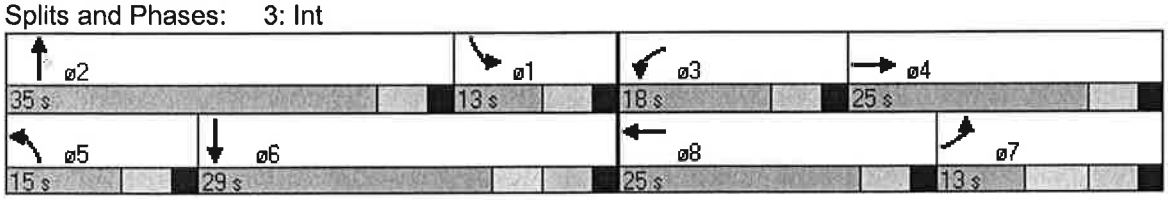
Splits and Phases: 3: Int



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91
Frt		0.940			0.967				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3152	0	1583	3242	0	1583	3353	1500	1583	4784	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1583	3152	0	1583	3242	0	1583	3353	1500	1583	4784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		162			36				283		8	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1424			1664			1280			1216	
Travel Time (s)		32.4			37.8			29.1			27.6	
Volume (vph)	66	257	136	188	159	46	105	1174	262	65	989	49
Peak Hour Factor	0.60	0.93	0.70	0.87	0.80	0.80	0.54	0.91	0.86	0.73	0.94	0.89
Growth Factor	73%	94%	89%	97%	90%	87%	89%	95%	93%	86%	96%	85%
Adj. Flow (vph)	80	260	173	210	179	50	173	1226	283	77	1010	47
Lane Group Flow (vph)	80	433	0	210	229	0	173	1226	283	77	1057	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phases	7	4		3	8		5	2	2	1	6	
Minimum Initial (s)	7.0	7.0		12.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	25.0		18.0	25.0		13.0	26.0	26.0	13.0	26.0	
Total Split (s)	13.0	25.0	0.0	18.0	25.0	0.0	15.0	35.0	35.0	13.0	29.0	0.0
Total Split (%)	14.3%	27.5%	0.0%	19.8%	27.5%	0.0%	16.5%	38.5%	38.5%	14.3%	31.9%	0.0%
Maximum Green (s)	7.0	19.0		12.0	19.0		9.0	29.0	29.0	7.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Walk Time (s)		4.0			4.0			4.0	4.0		4.0	
Flash Dont Walk (s)		15.0			15.0			16.0	16.0		16.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	15.4	15.2		14.0	16.4		14.7	39.4	39.4	9.0	31.1	
Actuated g/C Ratio	0.17	0.17		0.15	0.18		0.16	0.43	0.43	0.10	0.34	
v/c Ratio	0.30	0.66		0.86	0.37		0.68	0.84	0.35	0.49	0.64	
Control Delay	34.6	23.4		70.2	29.8		51.6	32.2	4.0	50.2	27.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	34.6	23.4		70.2	29.8		51.6	32.2	4.0	50.2	27.8	
LOS	C	C		E	C		D	C	A	D	C	
Approach Delay		25.2			49.1			29.5			29.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 91
Actuated Cycle Length: 91
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 31.1 Intersection LOS: C
Intersection Capacity Utilization 74.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Int