Appendix A – Glossary and LOS Definitions

Signal Optimization Study
Onondaga County, New York

Glossary

Detection: Devices used by the signal controller to detect the calls for green phases. Detection is usually provided by wire loops placed in the pavement which create a disturbance in the electrical field when a vehicle passes over them. Microwave detectors operate like motion detectors and sense when a vehicle moves in front of them.

Presence: Generally 60 to 70 foot long loops placed in the pavement. These detect when a vehicle is present at any point above them.

Point: Point detection uses a similar loop as presence, but is usually only 6 feet long, and is place in advance of the intersection and/or placed immediately before the stop bar.

Gap: Gaps refer to the time between vehicles. Through vehicle detection, a signal will know that no vehicles are present, and begin by counting down the passage time. If no additional vehicles arrive, the phase will "gap out" or end due to the lack of traffic demand.

Headway: The distance between successive vehicles, usually measured in time.

Master Controller: The master controller controls all of the subsequent traffic signal controllers within a coordinated corridor.

Measures of effectiveness (MOEs): A MOE serves as performance measure for a traffic simulation evaluation.

Minimum Green: The minimum amount of green time provided for a phase.

Minimum Split: The minimum amount of green time plus the yellow and all-red clearance time provided for a phase.

Passage Time (Vehicle Extension): The maximum allowable time separation between vehicle calls before the signal phase gaps out to serve other approaches.

Phases: Different indications displayed on the traffic signal faces allowing specific movements to proceed through the intersection.

Permitted: Permitted phases allow drivers to turn after yielding to on-coming traffic. For example, a left turn movement must first yield to on-coming traffic before proceeding under a permitted left turn phase, displayed as a green ball.

Protected: Protected phases, indicated with green arrows, allow drivers to proceed by holding all other conflicting traffic movements with red lights.

Split: Split phases are traffic phases that could normally run together like northbound and southbound movements, but for some reason are separated or split, from each other. Under split phasing, each phase operates as a protected phase, one following the other.

Performance Index (PI): The PI is a Measure of Effectiveness (MOE) provided by the simulation model that represents a combination of the delays, stops, and queuing penalty. A lower PI indicates better overall operations.

Recall – A phase timing setting determining the length of each phase.

None or no recall: This phase can be skipped by the signal controller of no vehicles are detected on the approach.

Minimum: This phase must turn on and stay on for the preset minimum amount of time. If no additional traffic is detected, the phase will turn off and serve other approaches. Typically used for mainline approaches with presence or point loop detectors.

Maximum: This phase must turn on and stay on for the preset maximum amount of time. If no additional traffic is detected, the phase will continue to run until the maximum before serving other approaches. Typically used when no vehicle detection is provided.

LOS Definitions

The following is an excerpt from the 2000 Highway Capacity Manual (HCM).

Level of Service for Signalized Intersections

Level of service for a signalized intersection is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. Levels of service are defined to represent reasonable ranges in control delay.

LOS A describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay.

LOS B describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

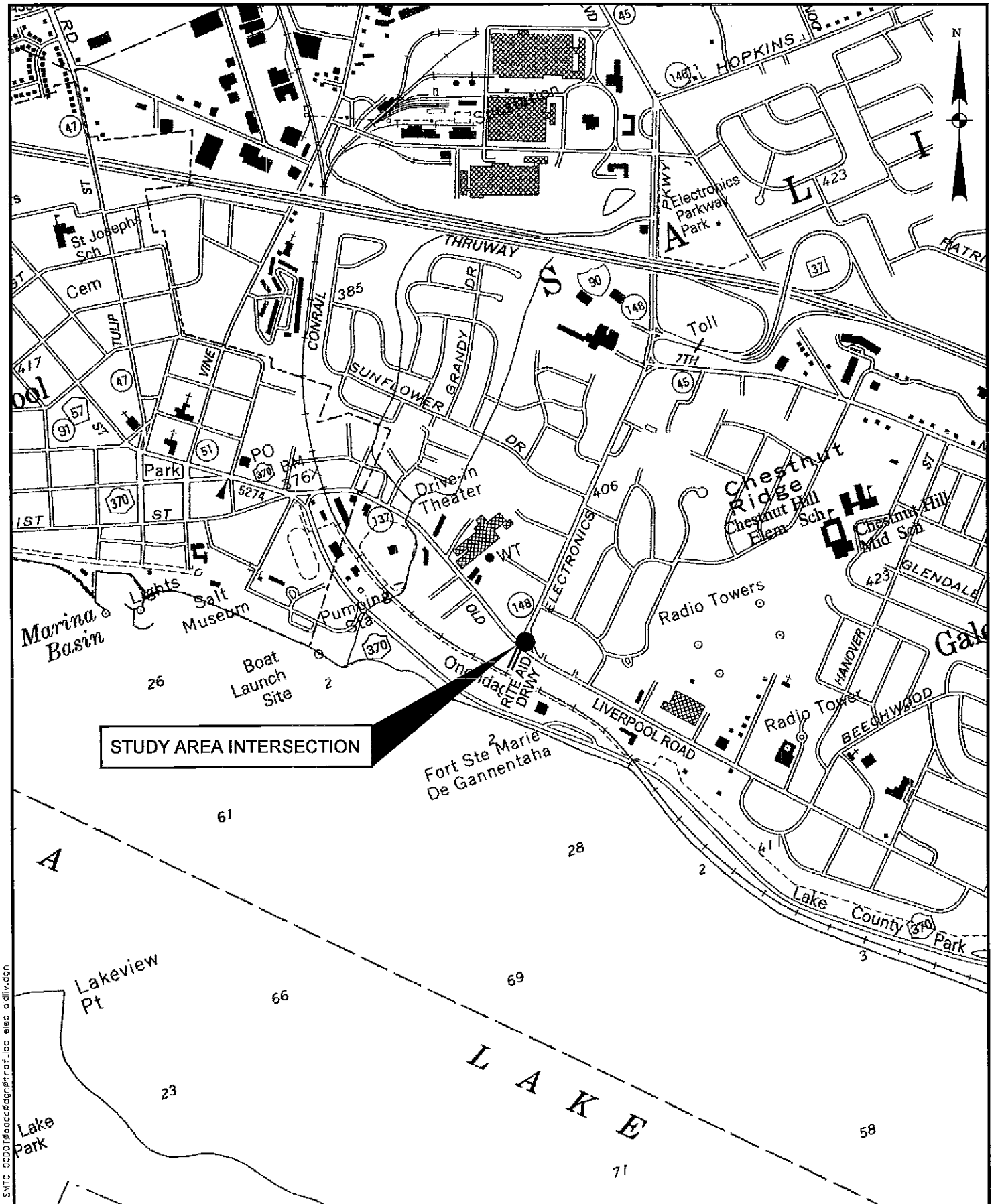
LOS D describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

LOS F describes operations with control delay in excess of 80 s/veh. This level, considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also be contribute significantly to high delay levels.

Appendix B – Intersection Details

Signal Optimization Study
Onondaga County, New York



LOCATION MAP
ELECTRONICS PKWY/OLD LIVERPOOL RD/RITE AID DRWY

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B.1

INTERSECTION DIAGRAM

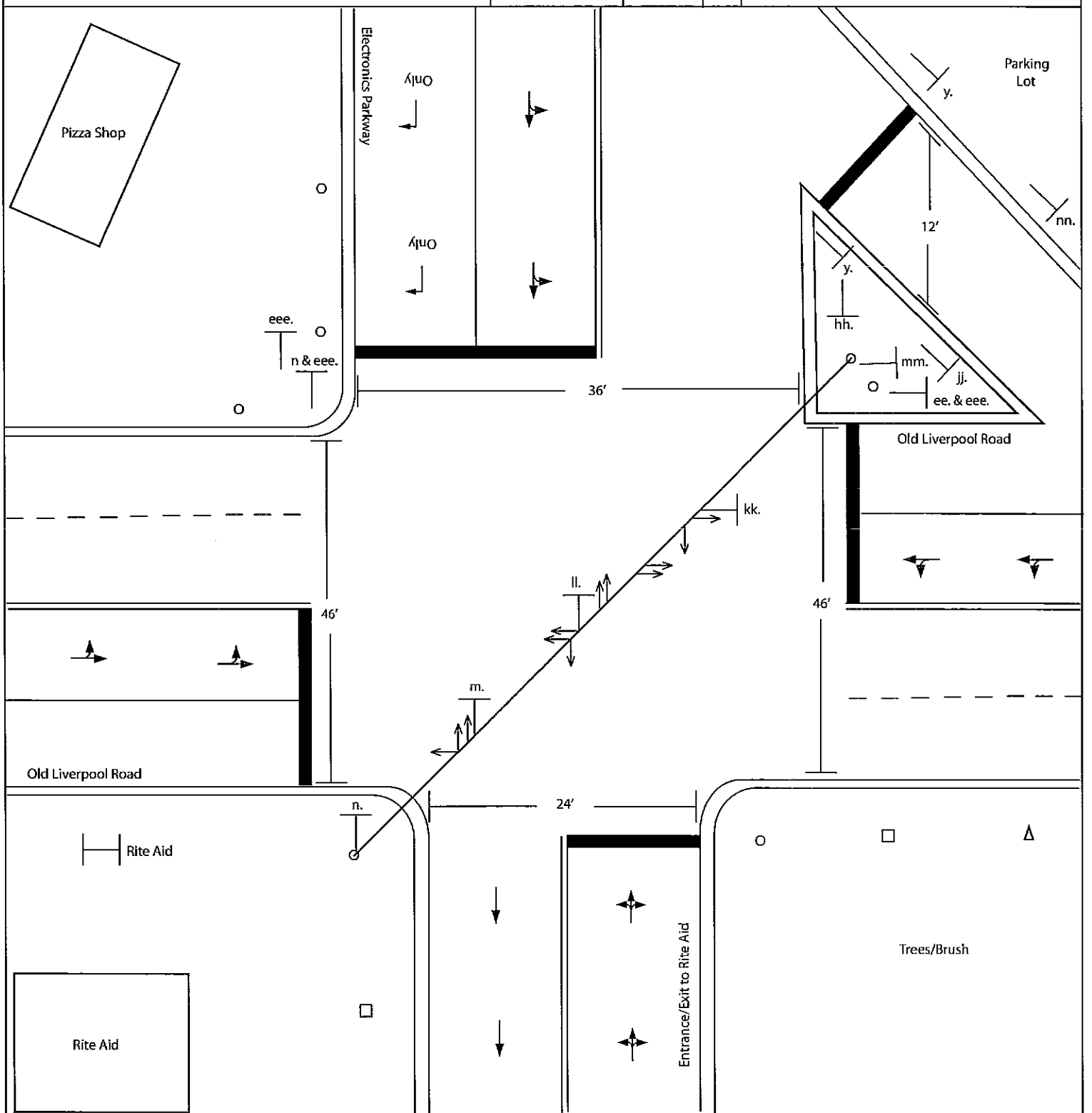
Location: Electronics Parkway at Old Liverpool Road

Legend: Sign; Signal Head; Signal with Span Wire; ## (Feet); Utility Pole; Fire Hydrant; Light Pole

Drawn By: KK | Date: May 2010 | Prepared By: SMTC | N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions Intersection Diagram Sign Index.



Task: OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.
Diagram is not to scale.


RITE AID
FedEx

Old Liverpool Rd. & Electronics Pkwy
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782037
Site Code : 78203701
Start Date : 3/23/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

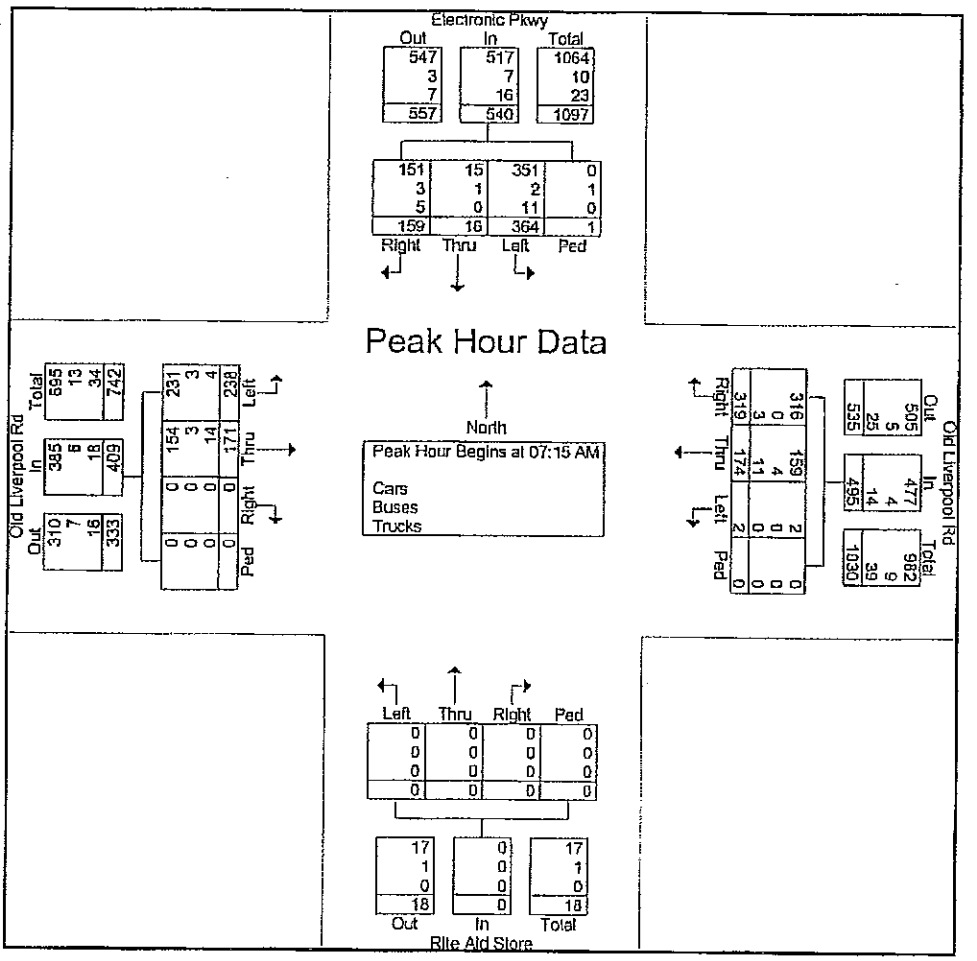
	Electronic Pkwy From North					Old Liverpool Rd From East					Rite Aid Store From South					Old Liverpool Rd From West					
Start Time	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Int. Total
07:00 AM	20	2	62	0	84	52	14	1	0	67	0	0	0	0	0	0	18	31	0	49	200
07:15 AM	39	7	62	0	108	64	27	0	0	91	0	0	0	0	0	0	44	51	0	95	294
07:30 AM	35	0	89	0	124	87	52	0	0	139	0	0	0	0	0	0	53	62	0	115	378
07:45 AM	50	4	111	1	166	105	55	0	0	160	0	0	0	0	0	0	34	58	0	92	418
Total	144	13	324	1	482	308	148	1	0	457	0	0	0	0	0	0	149	202	0	351	1290
08:00 AM	35	5	102	0	142	63	40	2	0	105	0	0	0	0	0	0	40	67	0	107	354
08:15 AM	30	0	65	0	95	58	35	1	0	94	0	0	1	0	1	0	48	53	0	101	291
08:30 AM	43	0	66	1	110	49	55	0	0	104	2	0	0	0	2	0	44	40	0	84	300
08:45 AM	36	4	68	1	109	41	37	0	0	78	1	0	0	0	1	1	54	36	0	91	279
Total	144	9	301	2	456	211	167	3	0	381	3	0	1	0	4	1	186	196	0	383	1224
Break																					
04:00 PM	59	1	60	1	121	78	67	1	1	147	6	2	0	0	8	0	67	55	0	122	398
04:15 PM	59	1	73	1	134	70	80	5	0	155	0	1	5	0	6	0	40	44	0	84	379
04:30 PM	76	0	99	2	177	97	70	0	0	167	4	1	3	0	8	0	53	40	0	93	445
04:45 PM	91	1	105	0	197	98	75	4	0	177	2	4	2	0	8	0	64	67	0	131	513
Total	285	3	337	4	629	343	292	10	1	646	12	8	10	0	30	0	224	206	0	430	1735
05:00 PM	95	4	105	2	206	87	95	1	1	184	1	8	1	0	10	0	56	56	0	112	512
05:15 PM	76	1	97	0	174	118	81	5	0	204	6	5	5	1	17	0	50	74	0	124	519
05:30 PM	77	0	87	1	165	78	69	2	0	149	3	5	2	1	11	0	41	42	0	83	408
05:45 PM	72	1	67	2	142	74	81	1	0	156	0	2	6	1	9	0	52	53	0	105	392
Total	320	6	356	5	687	357	306	9	1	673	10	20	14	3	47	0	199	225	0	424	1831
Grand Total	893	31	1318	12	2254	1219	913	23	2	2157	25	28	25	3	81	1	758	829	0	1588	6080
Apprch %	39.6	1.4	58.5	0.5		56.5	42.3	1.1	0.1		30.9	34.6	30.9	3.7		0.1	47.7	52.2	0		
Total %	14.7	0.5	21.7	0.2	37.1	20	15	0.4	0	35.5	0.4	0.5	0.4	0	1.3	0	12.5	13.6	0	26.1	
Cars	866	30	1280	7	2193	1204	866	23	2	2095	25	28	25	1	79	1	698	806	0	1505	5872
% Cars	97	96.8	97.9	58.3	97.3	98.8	94.9	100	100	97.1	100	100	100	33.3	97.5	100	92.1	97.2	0	94.8	96.6
Buses	12	1	3	5	21	3	17	0	0	20	0	0	0	2	2	0	16	9	0	25	68
% Buses	1.3	3.2	0.2	41.7	0.9	0.2	1.9	0	0	0.9	0	0	0	66.7	2.5	0	2.1	1.1	0	1.6	1.1
Trucks	15	0	25	0	40	12	30	0	0	42	0	0	0	0	0	0	44	14	0	58	140
% Trucks	1.7	0	1.9	0	1.8	1	3.3	0	0	1.9	0	0	0	0	0	0	5.8	1.7	0	3.7	2.3

Old Liverpool Rd. & Electronics Pkwy
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782037
Site Code : 78203701
Start Date : 3/23/2010
Page No : 3

	Electronic Pkwy From North					Old Liverpool Rd From East					Rite Aid Store From South					Old Liverpool Rd From West					
Start Time	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	39	7	62	0	108	64	27	0	0	91	0	0	0	0	0	0	44	51	0	95	294
07:30 AM	35	0	89	0	124	87	52	0	0	139	0	0	0	0	0	0	53	62	0	115	378
07:45 AM	50	4	111	1	166	105	55	0	0	160	0	0	0	0	0	0	34	58	0	92	418
08:00 AM	35	5	102	0	142	63	40	2	0	105	0	0	0	0	0	0	40	67	0	107	354
Total Volume	159	16	364	1	540	319	174	2	0	495	0	0	0	0	0	0	171	238	0	409	1444
% App. Total	29.4	3	67.4	0.2		64.4	35.2	0.4	0		0	0	0	0		0	41.8	58.2	0		
PHF	.795	.571	.820	.250	.813	.760	.791	.250	.000	.773	.000	.000	.000	.000	.000	.000	.807	.868	.000	.889	.864
Cars	151	15	351	0	517	316	159	2	0	477	0	0	0	0	0	0	154	231	0	385	1379
% Cars	95.0	93.8	96.4	0	95.7	99.1	91.4	100	0	96.4	0	0	0	0	0	0	90.1	97.1	0	94.1	95.5
Buses	3	1	2	1	7	0	4	0	0	4	0	0	0	0	0	0	3	3	0	6	17
% Buses	1.9	6.3	0.5	100	1.3	0	2.3	0	0	0.8	0	0	0	0	0	0	1.8	1.3	0	1.5	1.2
Trucks	5	0	11	0	16	3	11	0	0	14	0	0	0	0	0	0	14	4	0	18	48
% Trucks	3.1	0	3.0	0	3.0	0.9	6.3	0	0	2.8	0	0	0	0	0	0	8.2	1.7	0	4.4	3.3

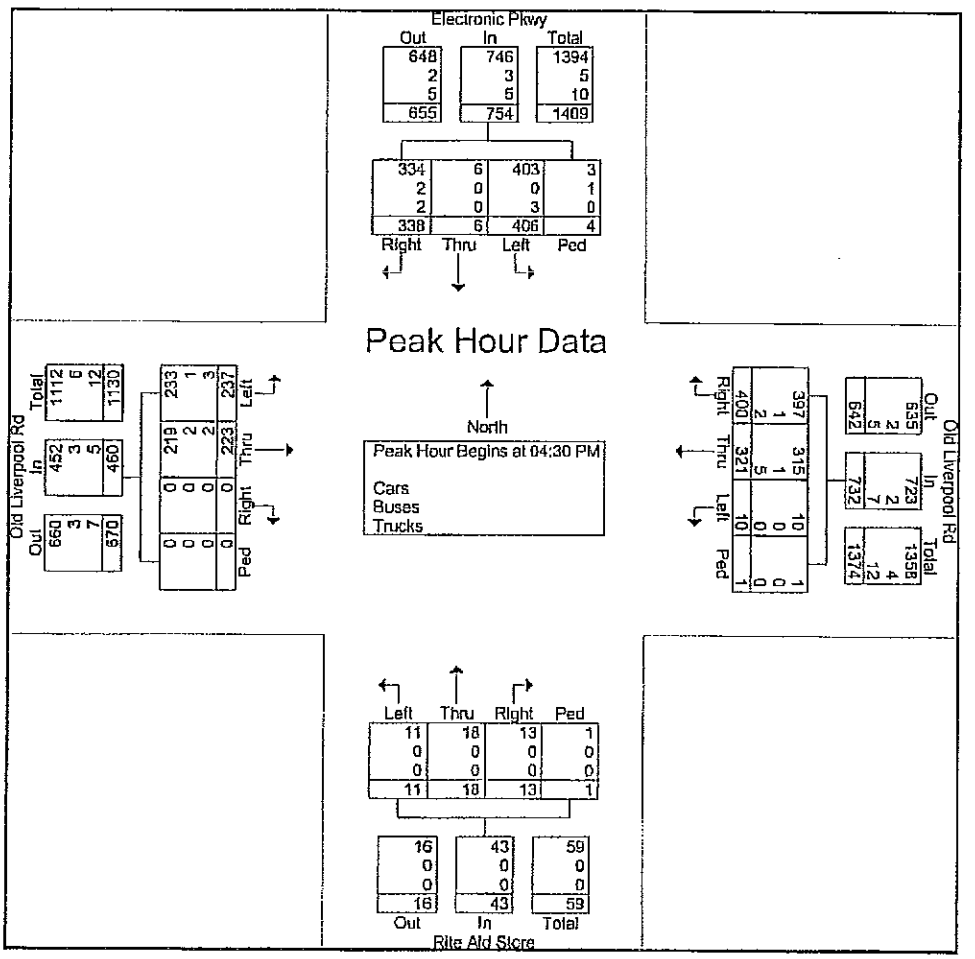


Old Liverpool Rd. & Electronics Pkwy
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782037
Site Code : 78203701
Start Date : 3/23/2010
Page No : 4

	Electronic Pkwy From North					Old Liverpool Rd From East					Rite Aid Store From South					Old Liverpool Rd From West					
Start Time	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	76	0	98	2	177	97	70	0	0	167	4	1	3	0	8	0	53	40	0	93	445
04:45 PM	91	1	105	0	197	98	75	4	0	177	2	4	2	0	8	0	64	67	0	131	513
05:00 PM	95	4	105	2	206	87	95	1	1	184	1	8	1	0	10	0	56	56	0	112	512
05:15 PM	76	1	97	0	174	118	81	5	0	204	6	5	5	1	17	0	50	74	0	124	519
Total Volume	338	6	406	4	754	400	321	10	1	732	13	18	11	1	43	0	223	237	0	460	1989
% App. Total	44.8	0.8	53.8	0.5		54.6	43.9	1.4	0.1		30.2	41.9	25.6	2.3		0	48.5	51.5	0		
PHF	.889	.375	.967	.500	.915	.847	.845	.500	.250	.897	.542	.563	.550	.250	.632	.000	.871	.801	.000	.878	.958
Cars	334	6	403	3	746	397	315	10	1	723	13	18	11	1	43	0	219	233	0	452	1964
% Cars	98.8	100	99.3	75.0	98.9	99.3	98.1	100	100	98.8	100	100	100	100	100	0	98.2	98.3	0	98.3	98.7
Buses	2	0	0	1	3	1	1	0	0	2	0	0	0	0	0	0	2	1	0	3	8
% Buses	0.6	0	0	25.0	0.4	0.3	0.3	0	0	0.3	0	0	0	0	0	0	0.9	0.4	0	0.7	0.4
Trucks	2	0	3	0	5	2	5	0	0	7	0	0	0	0	0	0	2	3	0	5	17
% Trucks	0.6	0	0.7	0	0.7	0.5	1.6	0	0	1.0	0	0	0	0	0	0	0.9	1.3	0	1.1	0.9



Bank 1 & Ped Key in the direction of
ravel are counting vehicles turning
Right On Red only

INTERSECTION NAME: Old Liverpool Rd. @ GE Parkway
INTERSECTION NUMBER: 2

INSTALLATION DATE:
PROGRAM DATE:
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	7	7	7	5				
PASSAGE	3.5	3.5	3.5	3.5				
YELLOW	4	4	4	4				
RED	2	2	2	2				
MAX I	35	35	34	12				
MAX II	30	30	30	30				
WALK	1	1	1	1				1
PED CLEAR	1	1	1	1				1
S/A								
TBR	12	12	12					12
TTR	2	2	2					2
MIN GAP	2	2	2					2
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X	X				

Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA		X						

INTERSECTION NAME: Old Liverpool Rd. @ GE Parkway
INTERSECTION NUMBER: 2

INSTALLATION DATE: COORDINATION
PROGRAM DATE: OPTIMIZATION
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL			X					
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	10	10	10				7	
PASSAGE	1.5	1.5	1.5				1.5	
YELLOW	4	4	4				4	
RED	1.5	1.5	1.5				1.5	
MAX I (AM)	13.5	11.5	38.5				38.5	
MAX II (PM)	13.5	15.5	34.5				34.5	
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X				X	

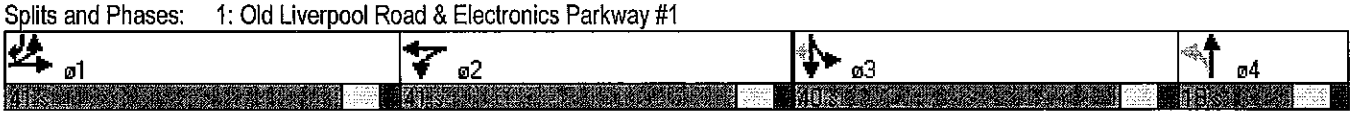
Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA		X						

Lane Group	EBT	WBT	NBT	SBT	SBR
Lane Configurations					
Volume (vph)	171	174	1	16	159
Turn Type					pm+ov
Protected Phases	1	2	4	3	1
Permitted Phases					3
Detector Phase	1	2	4	3	1
Switch Phase					
Minimum Initial (s)	7.0	7.0	7.0	5.0	7.0
Minimum Split (s)	13.0	13.0	13.0	11.0	13.0
Total Split (s)	41.0	41.0	18.0	40.0	41.0
Total Split (%)	29.3%	29.3%	12.9%	28.6%	29.3%
Maximum Green (s)	35.0	35.0	12.0	34.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5
Minimum Gap (s)	3.5	3.5	3.5	3.5	3.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 91.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Old Liverpool Road & Electronics Parkway #1

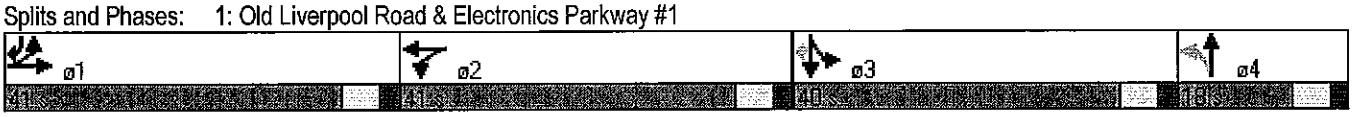


Lane Group	EBT	WBT	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	223	321	11	18	6	338
Turn Type			Perm			pm+ov
Protected Phases	1	2		4	3	1
Permitted Phases			4			3
Detector Phase	1	2	4	4	3	1
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	11.0	13.0
Total Split (s)	41.0	41.0	18.0	18.0	40.0	41.0
Total Split (%)	29.3%	29.3%	12.9%	12.9%	28.6%	29.3%
Maximum Green (s)	35.0	35.0	12.0	12.0	34.0	35.0
Yellow Time (s)	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
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5
Minimum Gap (s)	3.5	3.5	3.5	3.5	3.5	3.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 120.4
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Old Liverpool Road & Electronics Parkway #1

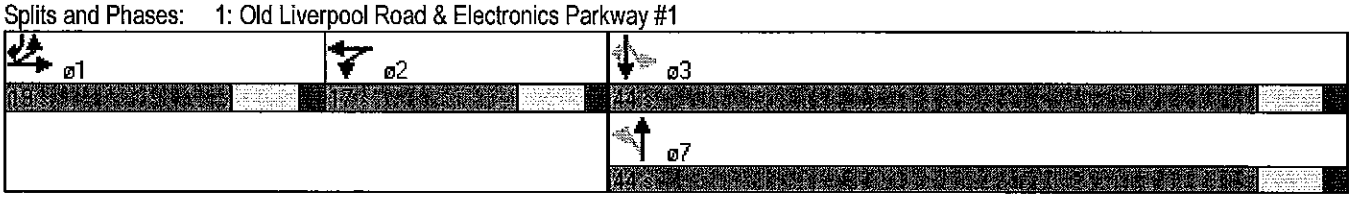


Lane Group	EBT	WBT	NBT	SBL	SBT	SBR
Lane Configurations						
Volume (vph)	171	174	1	364	16	159
Turn Type				Perm		pm+ov
Protected Phases	1	2	7		3	1
Permitted Phases				3		3
Detector Phase	1	2	7	3	3	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	7.0	10.0	10.0	10.0
Minimum Split (s)	15.5	15.5	12.5	15.5	15.5	15.5
Total Split (s)	19.0	17.0	44.0	44.0	44.0	19.0
Total Split (%)	23.8%	21.3%	55.0%	55.0%	55.0%	23.8%
Maximum Green (s)	13.5	11.5	38.5	38.5	38.5	13.5
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
Lead/Lag	Lead	Lag				Lead
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5
Minimum Gap (s)	1.5	1.5	1.5	1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 64 (80%), Referenced to phase 3:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Old Liverpool Road & Electronics Parkway #1

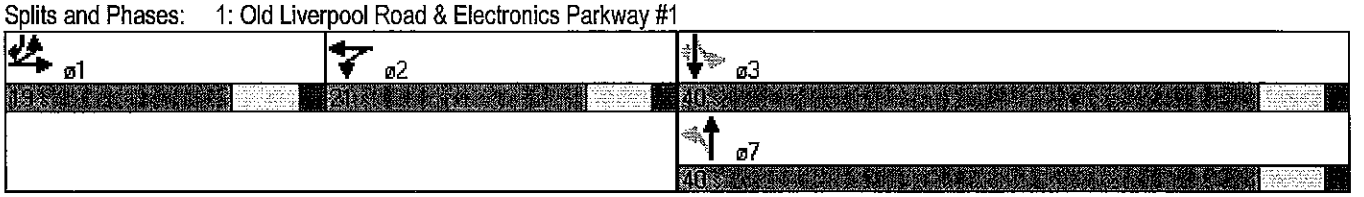


Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations							
Volume (vph)	223	321	11	18	406	6	338
Turn Type			Perm		Perm		pm+ov
Protected Phases	1	2		7		3	1
Permitted Phases			7		3		3
Detector Phase	1	2	7	7	3	3	1
Switch Phase							
Minimum Initial (s)	10.0	10.0	7.0	7.0	10.0	10.0	10.0
Minimum Split (s)	15.5	15.5	12.5	12.5	15.5	15.5	15.5
Total Split (s)	19.0	21.0	40.0	40.0	40.0	40.0	19.0
Total Split (%)	23.8%	26.3%	50.0%	50.0%	50.0%	50.0%	23.8%
Maximum Green (s)	13.5	15.5	34.5	34.5	34.5	34.5	13.5
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lead/Lag	Lead	Lag					Lead
Lead-Lag Optimize?							
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Minimum Gap (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	C-Min	C-Min	None
Walk Time (s)							
Flash Dont Walk (s)							
Pedestrian Calls (#/hr)							

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 23 (29%), Referenced to phase 3:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Old Liverpool Road & Electronics Parkway #1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	238	171	0	2	174	246	0	1	0	364	16	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	16	16	16	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.91			1.00			1.00	0.85
Flt Protected		0.97			1.00			1.00			0.95	1.00
Satd. Flow (prot)		3312			3158			2153			1742	1538
Flt Permitted		0.97			1.00			1.00			0.95	1.00
Satd. Flow (perm)		3312			3158			2153			1742	1538
Peak-hour factor, PHF	0.89	0.89	0.89	0.77	0.77	0.77	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	267	192	0	3	226	319	0	1	0	449	20	196
RTOR Reduction (vph)	0	0	0	0	201	0	0	0	0	0	0	76
Lane Group Flow (vph)	0	459	0	0	347	0	0	1	0	0	469	120
Confl. Peds. (#/hr)	1											
Heavy Vehicles (%)	3%	10%	0%	0%	9%	1%	0%	0%	0%	4%	6%	5%
Turn Type	Split			Split			Perm			custom		pm+ov
Protected Phases	1	1		2	2			4		3	3	1
Permitted Phases							4			3		3
Actuated Green, G (s)		19.7			16.1			1.1			34.9	54.6
Effective Green, g (s)		21.7			18.1			3.1			36.9	58.6
Actuated g/C Ratio		0.23			0.19			0.03			0.39	0.61
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.5			3.5			3.5			3.5	3.5
Lane Grp Cap (vph)		750			597			70			671	941
v/s Ratio Prot		c0.14			c0.11			c0.00			c0.27	0.03
v/s Ratio Perm												0.05
v/c Ratio		0.61			0.58			0.01			0.70	0.13
Uniform Delay, d1		33.3			35.4			44.9			24.8	7.8
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		1.6			1.5			0.1			3.3	0.1
Delay (s)		34.8			36.9			45.0			28.1	7.9
Level of Service		C			D			D			C	A
Approach Delay (s)		34.8			36.9			45.0			22.1	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	95.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
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)	237	223	0	10	321	400	11	18	13	406	6	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	16	16	16	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		0.95			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			0.99			1.00			1.00	1.00
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.92			0.96			1.00	0.85
Flt Protected		0.97			1.00			0.99			0.95	1.00
Satd. Flow (prot)		3450			3242			2036			1793	1599
Flt Permitted		0.97			1.00			0.78			0.95	1.00
Satd. Flow (perm)		3450			3242			1598			1793	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.90	0.90	0.90	0.63	0.63	0.63	0.92	0.92	0.92
Adj. Flow (vph)	269	253	0	11	357	444	17	29	21	441	7	367
RTOR Reduction (vph)	0	0	0	0	158	0	0	12	0	0	0	171
Lane Group Flow (vph)	0	522	0	0	654	0	0	55	0	0	448	196
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	0%	0%	0%	1%	0%	1%
Turn Type	Split			Split			Perm			custom		pm+ov
Protected Phases	1	1		2	2			4		3	3	1
Permitted Phases							4			3		3
Actuated Green, G (s)		26.4			29.5			7.8			33.5	59.9
Effective Green, g (s)		28.4			31.5			9.8			35.5	63.9
Actuated g/C Ratio		0.23			0.26			0.08			0.29	0.53
Clearance Time (s)		6.0			6.0			6.0			6.0	6.0
Vehicle Extension (s)		3.5			3.5			3.5			3.5	3.5
Lane Grp Cap (vph)		808			843			129			525	843
v/s Ratio Prot		c0.15			c0.20						c0.25	0.05
v/s Ratio Perm								c0.03				0.07
v/c Ratio		0.65			0.78			0.43			0.85	0.23
Uniform Delay, d1		41.9			41.6			53.0			40.4	15.4
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		1.9			4.7			2.7			13.0	0.2
Delay (s)		43.7			46.2			55.7			53.4	15.6
Level of Service		D			D			E			D	B
Approach Delay (s)		43.7			46.2			55.7			36.4	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	42.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	121.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.7%	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)	238	171	0	2	174	246	0	1	0	364	16	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	16	16	16	12	12	12
Total Lost time (s)		3.5			3.5			3.5			3.5	3.5
Lane Util. Factor		0.95			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.91			1.00			1.00	0.85
Flt Protected		0.97			1.00			1.00			0.95	1.00
Satd. Flow (prot)		3312			3158			2153			1742	1538
Flt Permitted		0.97			1.00			1.00			0.74	1.00
Satd. Flow (perm)		3312			3158			2153			1342	1538
Peak-hour factor, PHF	0.89	0.89	0.89	0.77	0.77	0.77	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	267	192	0	3	226	319	0	1	0	449	20	196
RTOR Reduction (vph)	0	0	0	0	268	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	459	0	0	280	0	0	1	0	0	469	141
Confl. Peds. (#/hr)	1											
Heavy Vehicles (%)	3%	10%	0%	0%	9%	1%	0%	0%	0%	4%	6%	5%
Turn Type	Split			Split			Perm			Perm		pm+ov
Protected Phases	1	1		2	2			7			3	1
Permitted Phases							7			3		3
Actuated Green, G (s)		13.4			10.7			39.4			39.4	52.8
Effective Green, g (s)		15.4			12.7			41.4			41.4	56.8
Actuated g/C Ratio		0.19			0.16			0.52			0.52	0.71
Clearance Time (s)		5.5			5.5			5.5			5.5	5.5
Vehicle Extension (s)		1.5			1.5			1.5			1.5	1.5
Lane Grp Cap (vph)		638			501			1114			694	1159
v/s Ratio Prot		c0.14			c0.09			0.00				0.02
v/s Ratio Perm											c0.35	0.07
v/c Ratio		0.72			0.56			0.00			0.68	0.12
Uniform Delay, d1		30.3			31.1			9.3			14.3	3.7
Progression Factor		1.00			1.00			1.00			0.88	2.33
Incremental Delay, d2		3.2			0.8			0.0			4.9	0.0
Delay (s)		33.5			31.8			9.3			17.5	8.6
Level of Service		C			C			A			B	A
Approach Delay (s)		33.5			31.8			9.3			14.9	
Approach LOS		C			C			A			B	

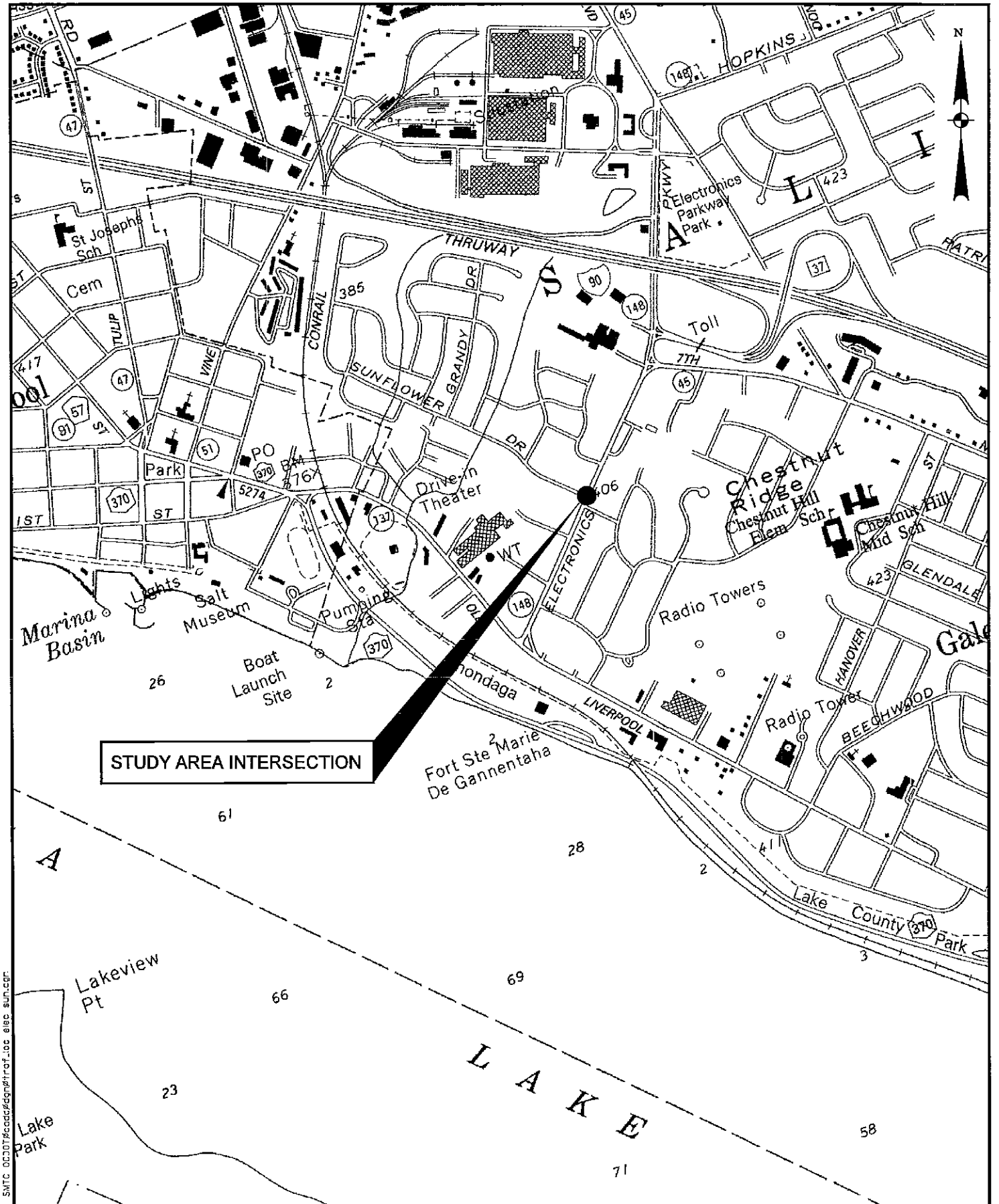
Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	237	223	0	10	321	400	11	18	13	406	6	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	16	16	16	12	12	12
Total Lost time (s)		3.5			3.5			3.5			3.5	3.5
Lane Util. Factor		0.95			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			0.99			1.00			1.00	1.00
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.92			0.96			1.00	0.85
Flt Protected		0.97			1.00			0.99			0.95	1.00
Satd. Flow (prot)		3450			3241			2036			1793	1599
Flt Permitted		0.97			1.00			0.88			0.68	1.00
Satd. Flow (perm)		3450			3241			1825			1280	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.90	0.90	0.90	0.63	0.63	0.63	0.92	0.92	0.92
Adj. Flow (vph)	269	253	0	11	357	444	17	29	21	441	7	367
RTOR Reduction (vph)	0	0	0	0	279	0	0	11	0	0	0	42
Lane Group Flow (vph)	0	522	0	0	533	0	0	56	0	0	448	325
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	0%	0%	0%	1%	0%	1%
Turn Type	Split			Split			Perm			Perm		pm+ov
Protected Phases	1	1		2	2			7			3	1
Permitted Phases							7			3		3
Actuated Green, G (s)		13.7			14.2			35.6			35.6	49.3
Effective Green, g (s)		15.7			16.2			37.6			37.6	53.3
Actuated g/C Ratio		0.20			0.20			0.47			0.47	0.67
Clearance Time (s)		5.5			5.5			5.5			5.5	5.5
Vehicle Extension (s)		1.5			1.5			1.5			1.5	1.5
Lane Grp Cap (vph)		677			656			858			602	1135
v/s Ratio Prot		c0.15			c0.16							0.06
v/s Ratio Perm								0.03			c0.35	0.15
v/c Ratio		0.77			0.81			0.07			0.74	0.29
Uniform Delay, d1		30.4			30.4			11.6			17.3	5.5
Progression Factor		1.00			1.00			1.00			0.95	0.81
Incremental Delay, d2		5.0			7.2			0.0			7.8	0.0
Delay (s)		35.4			37.6			11.6			24.2	4.5
Level of Service		D			D			B			C	A
Approach Delay (s)		35.4			37.6			11.6			15.3	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



LOCATION MAP
ELECTRONICS PKWY/SUNFLOWER DR

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B.2

INTERSECTION DIAGRAM

Location

Electronics Parkway at Sunflower Drive

Legend

Sign | Signal Head | Signal with Span Wire | ## (Feet) | Utility Pole

Drawn By: KK

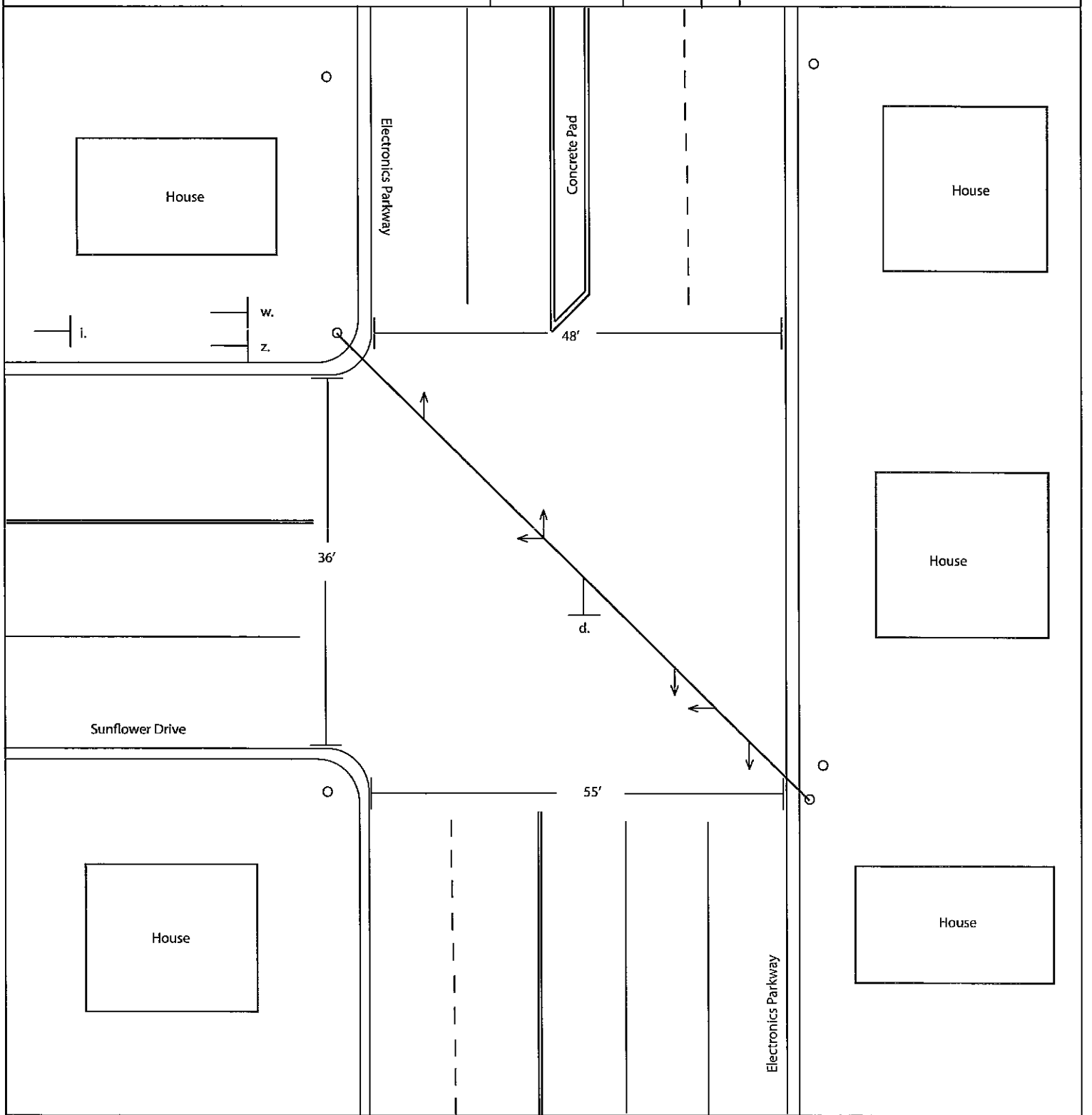
Date: May 2010

Prepared By: SMTC

N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.

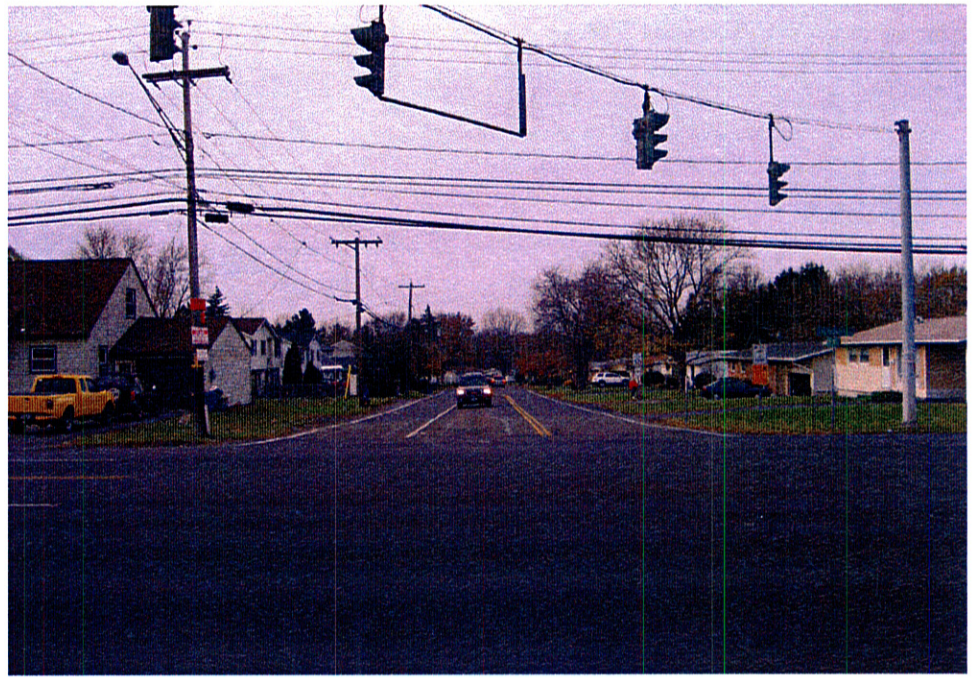


Task

OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.
Diagram is not to scale.



Sunflower St. & Electronics Pkwy
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782038
Site Code : 78203801
Start Date : 3/23/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

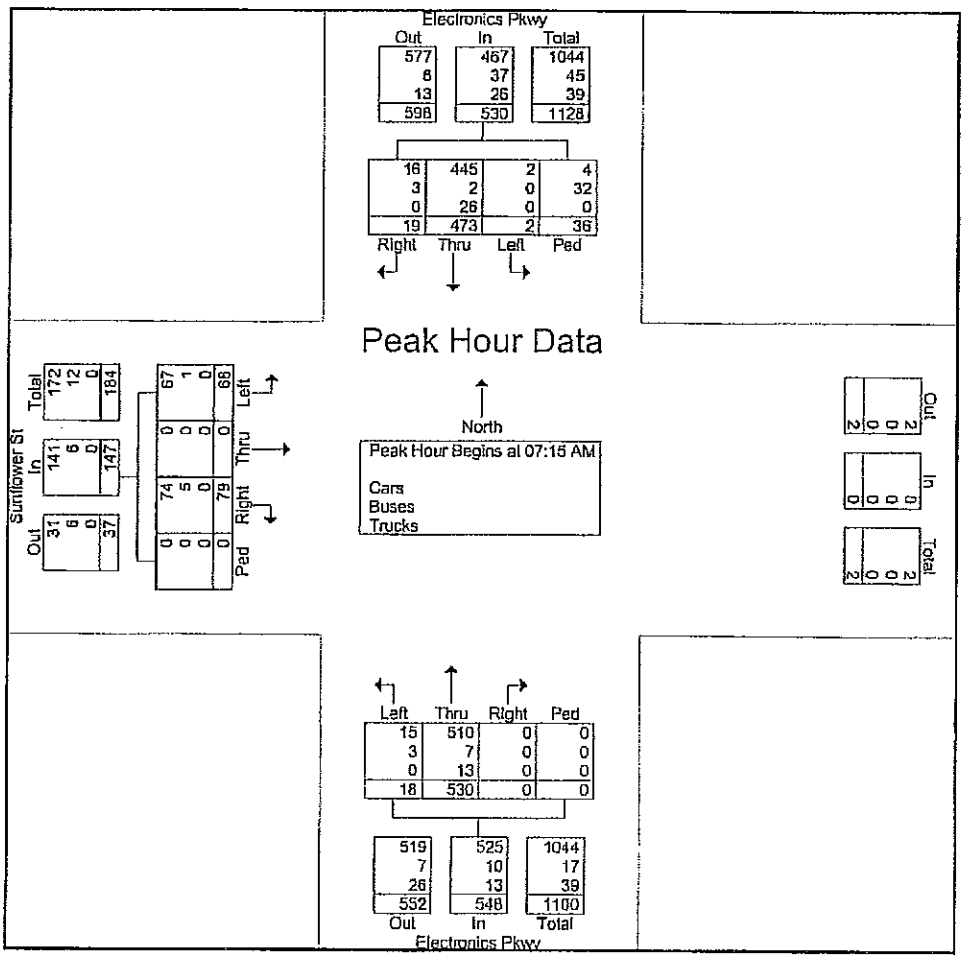
	Electronics Pkwy From North					Electronics Pkwy From South					Sunflower St From West					
Start Time	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Int. Total
07:00 AM	4	65	0	6	75	0	97	3	0	100	17	0	16	0	33	208
07:15 AM	4	110	0	10	124	0	98	7	0	105	16	0	16	0	32	261
07:30 AM	8	114	0	14	136	0	137	5	0	142	23	0	14	0	37	315
07:45 AM	4	142	1	5	152	0	167	2	0	169	19	0	21	0	40	361
Total	20	431	1	35	487	0	499	17	0	516	75	0	67	0	142	1145
08:00 AM	3	107	1	7	118	0	128	4	0	132	21	0	17	0	38	288
08:15 AM	7	93	1	6	107	0	98	6	0	104	7	0	17	0	24	235
08:30 AM	2	90	0	10	102	0	81	5	0	86	15	0	13	0	28	216
08:45 AM	4	100	0	8	112	0	80	4	0	84	17	1	9	0	27	223
Total	16	390	2	31	439	0	387	19	0	406	60	1	56	0	117	962
Break																
04:00 PM	10	123	0	2	135	0	112	19	0	131	5	0	12	6	23	289
04:15 PM	16	128	0	4	148	0	110	22	0	132	3	0	10	6	19	299
04:30 PM	15	171	0	1	187	0	114	15	0	129	4	0	11	4	19	335
04:45 PM	17	167	0	1	185	0	141	25	0	166	9	0	10	6	25	376
Total	58	589	0	8	655	0	477	81	0	558	21	0	43	22	86	1299
05:00 PM	17	197	0	3	217	0	143	16	0	159	8	0	13	6	27	403
05:15 PM	15	159	0	2	176	0	146	20	0	166	2	0	11	7	20	362
05:30 PM	18	139	0	7	164	0	125	10	3	138	15	0	16	2	33	335
05:45 PM	16	111	0	2	129	1	104	13	0	118	7	1	8	15	31	278
Total	66	606	0	14	686	1	518	59	3	581	32	1	48	30	111	1378
Grand Total	160	2016	3	88	2267	1	1881	176	3	2061	188	2	214	52	456	4784
Apprch %	7.1	88.9	0.1	3.9		0	91.3	8.5	0.1		41.2	0.4	46.9	11.4		
Total %	3.3	42.1	0.1	1.8	47.4	0	39.3	3.7	0.1	43.1	3.9	0	4.5	1.1	9.5	
Cars	148	1947	2	4	2101	1	1823	169	3	1996	173	2	204	5	384	4481
% Cars	92.5	96.6	66.7	4.5	92.7	100	96.9	96	100	96.8	92	100	95.3	9.6	84.2	93.7
Buses	10	11	1	84	106	0	15	4	0	19	15	0	7	47	69	194
% Buses	6.2	0.5	33.3	95.5	4.7	0	0.8	2.3	0	0.9	8	0	3.3	90.4	15.1	4.1
Trucks	2	58	0	0	60	0	43	3	0	46	0	0	3	0	3	109
% Trucks	1.2	2.9	0	0	2.6	0	2.3	1.7	0	2.2	0	0	1.4	0	0.7	2.3

Sunflower St. & Electronics Pkwy
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782038
Site Code : 78203801
Start Date : 3/23/2010

	Electronics Pkwy From North					Electronics Pkwy From South					Sunflower St From West					
Start Time	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:15 AM																
07:15 AM	4	110	0	10	124	0	98	7	0	105	16	0	16	0	32	261
07:30 AM	8	114	0	14	136	0	137	5	0	142	23	0	14	0	37	315
07:45 AM	4	142	1	5	152	0	167	2	0	169	19	0	21	0	40	361
08:00 AM	3	107	1	7	118	0	128	4	0	132	21	0	17	0	38	288
Total Volume	19	473	2	36	530	0	530	18	0	548	79	0	68	0	147	1225
% App. Total	3.6	89.2	0.4	6.8		0	96.7	3.3	0		53.7	0	46.3	0		
PHF	.594	.833	.500	.643	.872	.000	.793	.643	.000	.811	.859	.000	.810	.000	.919	.848
Cars	16	445	2	4	467	0	510	15	0	525	74	0	67	0	141	1133
% Cars	84.2	94.1	100	11.1	88.1	0	96.2	83.3	0	95.8	93.7	0	98.5	0	95.9	92.5
Buses	3	2	0	32	37	0	7	3	0	10	5	0	1	0	6	53
% Buses	15.8	0.4	0	88.9	7.0	0	1.3	16.7	0	1.8	6.3	0	1.5	0	4.1	4.3
Trucks	0	26	0	0	26	0	13	0	0	13	0	0	0	0	0	39
% Trucks	0	5.5	0	0	4.9	0	2.5	0	0	2.4	0	0	0	0	0	3.2

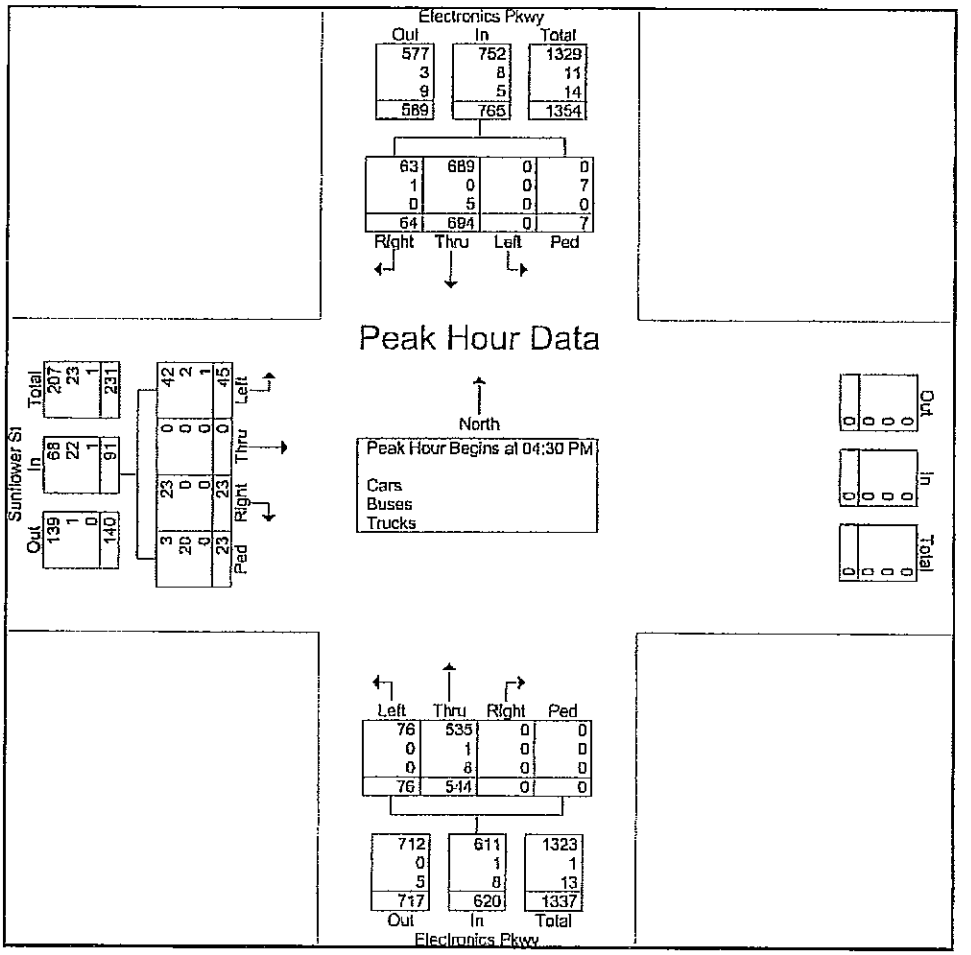


Sunflower St. & Electronics Pkwy
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782038
Site Code : 78203801
Start Date : 3/23/2010
Page No : 4

	Electronics Pkwy From North					Electronics Pkwy From South					Sunflower St From West					
Start Time	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Right	Thru	Left	Ped	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	15	171	0	1	187	0	114	15	0	129	4	0	11	4	19	335
04:45 PM	17	167	0	1	185	0	141	25	0	166	9	0	10	6	25	376
05:00 PM	17	197	0	3	217	0	143	18	0	159	8	0	13	6	27	403
05:15 PM	15	159	0	2	176	0	146	20	0	166	2	0	11	7	20	362
Total Volume	64	694	0	7	765	0	544	76	0	620	23	0	45	23	91	1476
% App. Total	8.4	90.7	0	0.9		0	87.7	12.3	0		25.3	0	49.5	25.3		
PHF	.941	.881	.000	.583	.881	.000	.932	.760	.000	.934	.639	.000	.865	.821	.843	.916
Cars	63	689	0	0	752	0	535	76	0	611	23	0	42	3	68	1431
% Cars	98.4	99.3	0	0	98.3	0	98.3	100	0	98.5	100	0	93.3	13.0	74.7	97.0
Buses	1	0	0	7	8	0	1	0	0	1	0	0	2	20	22	31
% Buses	1.6	0	0	100	1.0	0	0.2	0	0	0.2	0	0	4.4	87.0	24.2	2.1
Trucks	0	5	0	0	5	0	8	0	0	8	0	0	1	0	1	14
% Trucks	0	0.7	0	0	0.7	0	1.5	0	0	1.3	0	0	2.2	0	1.1	0.9



Bank 1 & Ped Key In the direction of
travel is counting vehicles turning
ht on Red

INTERSECTION NAME: Sunflower @ GE Parkway
INTERSECTION NUMBER: 8

INSTALLATION DATE:
PROGRAM DATE:

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL	X							
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	10	8						
PASSAGE	3	3						
YELLOW	3	3						
RED	3	3						
MAX I	30	17						
MAX II								
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF								

INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NAME: Sunflower @ GE Parkway
INTERSECTION NUMBER: 8

INSTALLATION DATE: COORDINATION
PROGRAM DATE: OPTIMIZATION

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY	X							
EXT RECALL	X							
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	10	7						
PASSAGE	2.6	1.6						
YELLOW	4	4						
RED	2	2						
MAX I (AM)	19	9						
MAX II (PM)	21	7						
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X						

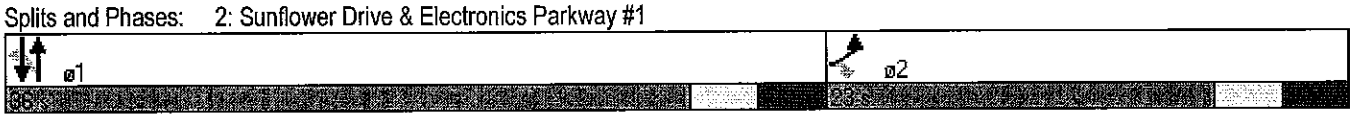
INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	68	79	18	530	473
Turn Type		Perm	Perm		
Protected Phases	2			1	1
Permitted Phases		2	1		
Detector Phase	2	2			
Switch Phase					
Minimum Initial (s)	8.0	8.0	10.0	10.0	10.0
Minimum Split (s)	14.0	14.0	16.0	16.0	16.0
Total Split (s)	23.0	23.0	36.0	36.0	36.0
Total Split (%)	39.0%	39.0%	61.0%	61.0%	61.0%
Maximum Green (s)	17.0	17.0	30.0	30.0	30.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Max	Max	Max
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary

Cycle Length: 59
Actuated Cycle Length: 51.4
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Sunflower Drive & Electronics Parkway #1

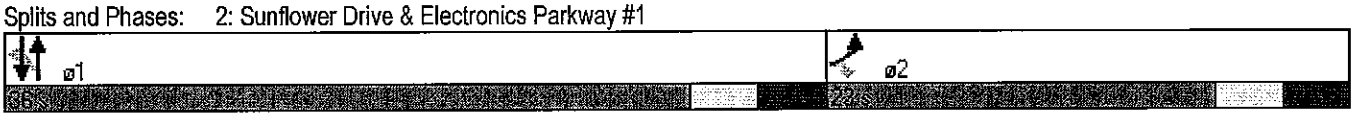


Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	45	23	76	544	694
Turn Type		Perm	Perm		
Protected Phases	2			1	1
Permitted Phases		2	1		
Detector Phase	2	2			
Switch Phase					
Minimum Initial (s)	8.0	8.0	10.0	10.0	10.0
Minimum Split (s)	14.0	14.0	16.0	16.0	16.0
Total Split (s)	23.0	23.0	36.0	36.0	36.0
Total Split (%)	39.0%	39.0%	61.0%	61.0%	61.0%
Maximum Green (s)	17.0	17.0	30.0	30.0	30.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Max	Max	Max
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary

Cycle Length: 59
Actuated Cycle Length: 50.6
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Sunflower Drive & Electronics Parkway #1

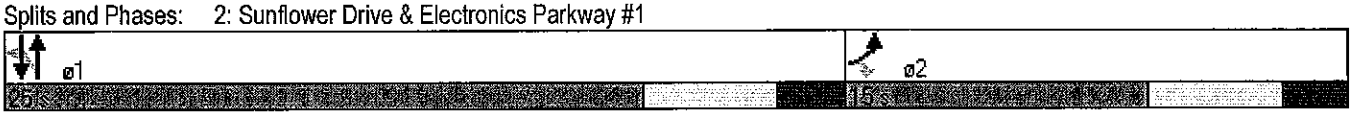


Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	68	79	18	530	473
Turn Type		Perm	Perm		
Protected Phases	2			1	1
Permitted Phases		2	1		
Detector Phase	2	2	1	1	1
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0
Minimum Split (s)	13.0	13.0	16.0	16.0	16.0
Total Split (s)	15.0	15.0	25.0	25.0	25.0
Total Split (%)	37.5%	37.5%	62.5%	62.5%	62.5%
Maximum Green (s)	9.0	9.0	19.0	19.0	19.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					
Vehicle Extension (s)	1.6	1.6	3.8	3.8	3.8
Minimum Gap (s)	1.6	1.6	3.8	3.8	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary

Cycle Length: 40
Actuated Cycle Length: 40
Offset: 8 (20%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

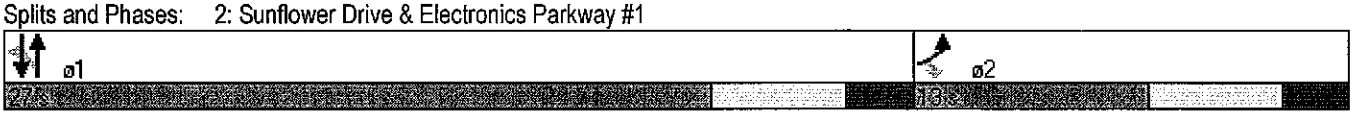
Splits and Phases: 2: Sunflower Drive & Electronics Parkway #1



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	45	23	76	544	694
Turn Type		Perm	Perm		
Protected Phases	2			1	1
Permitted Phases		2	1		
Detector Phase	2	2	1	1	1
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0
Minimum Split (s)	13.0	13.0	16.0	16.0	16.0
Total Split (s)	13.0	13.0	27.0	27.0	27.0
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%
Maximum Green (s)	7.0	7.0	21.0	21.0	21.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					
Vehicle Extension (s)	1.6	1.6	3.8	3.8	3.8
Minimum Gap (s)	1.6	1.6	3.8	3.8	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary
Cycle Length: 40
Actuated Cycle Length: 40
Offset: 16 (40%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 2: Sunflower Drive & Electronics Parkway #1



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	68	79	18	530	473	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1745	1561	1745	3455	3433	
Flt Permitted	0.95	1.00	0.31	1.00	1.00	
Satd. Flow (perm)	1745	1561	565	3455	3433	
Peak-hour factor, PHF	0.62	0.62	0.64	0.64	0.57	0.57
Adj. Flow (vph)	110	127	28	828	830	40
RTOR Reduction (vph)	0	104	0	0	4	0
Lane Group Flow (vph)	110	23	28	828	866	0
Confl. Peds. (#/hr)	32					
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type		Perm	Perm			
Protected Phases	2			1	1	
Permitted Phases		2	1			
Actuated Green, G (s)	7.5	7.5	33.0	33.0	33.0	
Effective Green, g (s)	9.5	9.5	35.0	35.0	35.0	
Actuated g/C Ratio	0.18	0.18	0.67	0.67	0.67	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	316	282	377	2303	2289	
v/s Ratio Prot	c0.06			0.24	c0.25	
v/s Ratio Perm		0.01	0.05			
v/c Ratio	0.35	0.08	0.07	0.36	0.38	
Uniform Delay, d1	18.8	17.9	3.1	3.8	3.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.1	0.4	0.4	0.5	
Delay (s)	19.5	18.0	3.5	4.3	4.4	
Level of Service	B	B	A	A	A	
Approach Delay (s)	18.7			4.2	4.4	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	52.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	45	23	76	544	694	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1646	1561	1738	3421	3399	
Flt Permitted	0.95	1.00	0.32	1.00	1.00	
Satd. Flow (perm)	1646	1561	584	3421	3399	
Peak-hour factor, PHF	0.84	0.84	0.93	0.93	0.88	0.88
Adj. Flow (vph)	54	27	82	585	789	73
RTOR Reduction (vph)	0	23	0	0	7	0
Lane Group Flow (vph)	54	4	82	585	855	0
Confl. Peds. (#/hr)	7		20			20
Heavy Vehicles (%)	6%	0%	0%	2%	1%	2%
Turn Type		Perm	Perm			
Protected Phases	2			1	1	
Permitted Phases		2	1			
Actuated Green, G (s)	5.1	5.1	36.0	36.0	36.0	
Effective Green, g (s)	7.1	7.1	38.0	38.0	38.0	
Actuated g/C Ratio	0.13	0.13	0.72	0.72	0.72	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	220	209	418	2448	2432	
v/s Ratio Prot	c0.03			0.17	c0.25	
v/s Ratio Perm		0.00	0.14			
v/c Ratio	0.25	0.02	0.20	0.24	0.35	
Uniform Delay, d1	20.6	20.0	2.5	2.6	2.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.0	1.0	0.2	0.4	
Delay (s)	21.2	20.0	3.5	2.8	3.3	
Level of Service	C	C	A	A	A	
Approach Delay (s)	20.8			2.9	3.3	
Approach LOS	C			A	A	

Intersection Summary				
HCM Average Control Delay	4.0	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.33			
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	46.4%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	68	79	18	530	473	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1745	1561	1745	3455	3433	
Flt Permitted	0.95	1.00	0.31	1.00	1.00	
Satd. Flow (perm)	1745	1561	561	3455	3433	
Peak-hour factor, PHF	0.62	0.62	0.64	0.64	0.57	0.57
Adj. Flow (vph)	110	127	28	828	830	40
RTOR Reduction (vph)	0	101	0	0	7	0
Lane Group Flow (vph)	110	26	28	828	863	0
Confl. Peds. (#/hr)	32					
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type		Perm	Perm			
Protected Phases	2			1	1	
Permitted Phases		2	1			
Actuated Green, G (s)	6.1	6.1	21.9	21.9	21.9	
Effective Green, g (s)	8.1	8.1	23.9	23.9	23.9	
Actuated g/C Ratio	0.20	0.20	0.60	0.60	0.60	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	1.6	1.6	3.8	3.8	3.8	
Lane Grp Cap (vph)	353	316	335	2064	2051	
v/s Ratio Prot	c0.06			0.24	c0.25	
v/s Ratio Perm		0.02	0.05			
v/c Ratio	0.31	0.08	0.08	0.40	0.42	
Uniform Delay, d1	13.6	12.9	3.4	4.3	4.3	
Progression Factor	1.00	1.00	0.99	0.96	1.02	
Incremental Delay, d2	0.2	0.0	0.4	0.5	0.6	
Delay (s)	13.8	13.0	3.8	4.6	5.0	
Level of Service	B	B	A	A	A	
Approach Delay (s)	13.3			4.6	5.0	
Approach LOS	B			A	A	

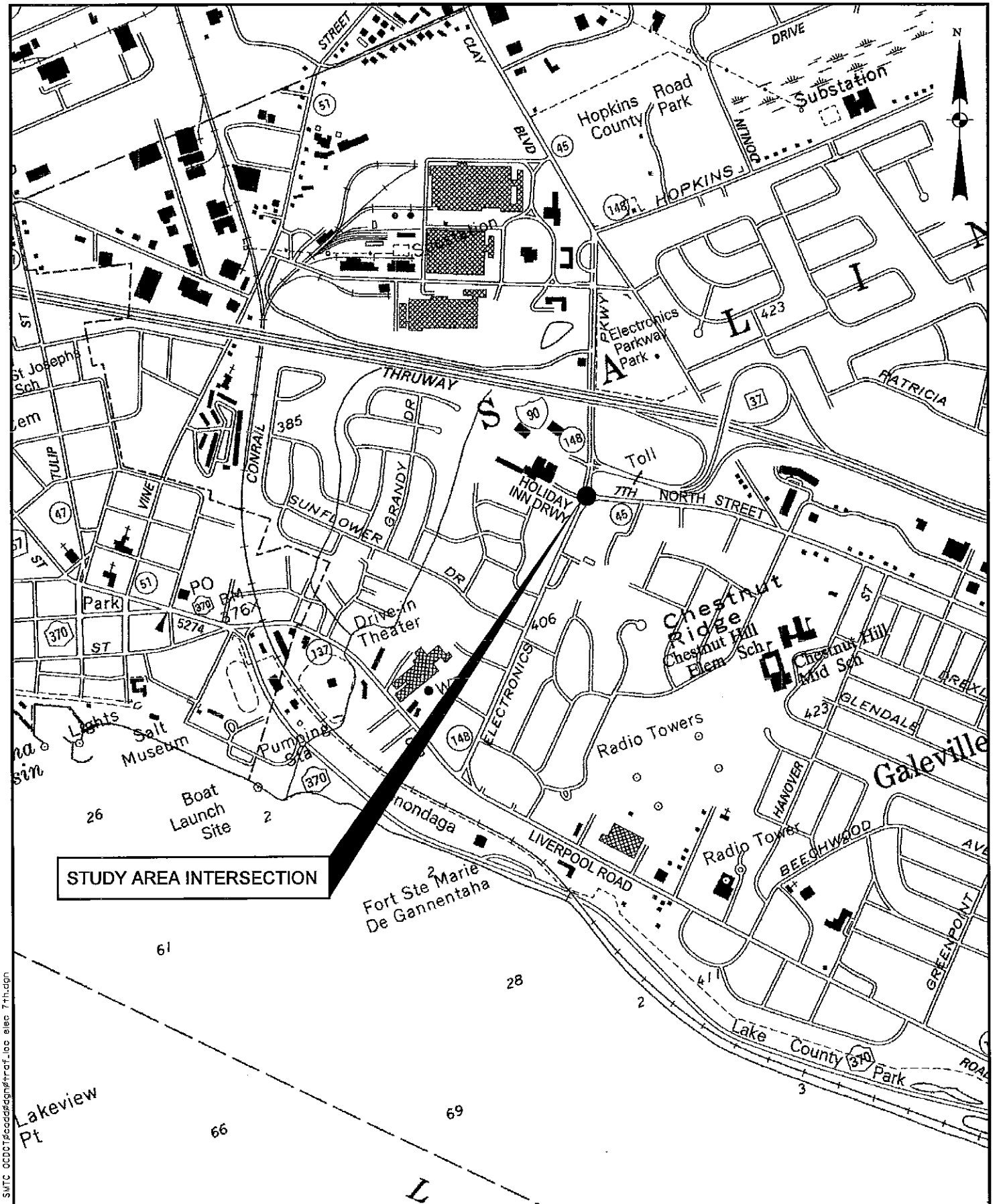
Intersection Summary			
HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	45	23	76	544	694	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1646	1561	1737	3421	3398	
Flt Permitted	0.95	1.00	0.32	1.00	1.00	
Satd. Flow (perm)	1646	1561	582	3421	3398	
Peak-hour factor, PHF	0.84	0.84	0.93	0.93	0.88	0.88
Adj. Flow (vph)	54	27	82	585	789	73
RTOR Reduction (vph)	0	23	0	0	15	0
Lane Group Flow (vph)	54	4	82	585	847	0
Confl. Peds. (#/hr)	7		20			20
Heavy Vehicles (%)	6%	0%	0%	2%	1%	2%
Turn Type		Perm	Perm			
Protected Phases	2			1	1	
Permitted Phases		2	1			
Actuated Green, G (s)	4.2	4.2	23.8	23.8	23.8	
Effective Green, g (s)	6.2	6.2	25.8	25.8	25.8	
Actuated g/C Ratio	0.16	0.16	0.65	0.65	0.65	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	1.6	1.6	3.8	3.8	3.8	
Lane Grp Cap (vph)	255	242	375	2207	2192	
v/s Ratio Prot	c0.03			0.17	c0.25	
v/s Ratio Perm		0.00	0.14			
v/c Ratio	0.21	0.02	0.22	0.27	0.39	
Uniform Delay, d1	14.8	14.3	2.9	3.0	3.4	
Progression Factor	1.00	1.00	1.01	1.01	0.93	
Incremental Delay, d2	0.2	0.0	0.8	0.2	0.5	
Delay (s)	14.9	14.3	3.8	3.3	3.6	
Level of Service	B	B	A	A	A	
Approach Delay (s)	14.7			3.3	3.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



LOCATION MAP
ELECTRONICS PKWY/7TH NORTH ST/HOLIDAY INN DRWY

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B.3

dgaron
F:\pProjects\2009\09-094 SMTC OCDOT\cadd\dgn\#traf_loc elec 7th.dgn

INTERSECTION DIAGRAM

Location: Electronics Parkway at 7th North Street

Legend: Sign; Signal Head; Signal with Span Wire; ## (Feet); Utility Pole; Mastarm Pole

Drawn By: KK

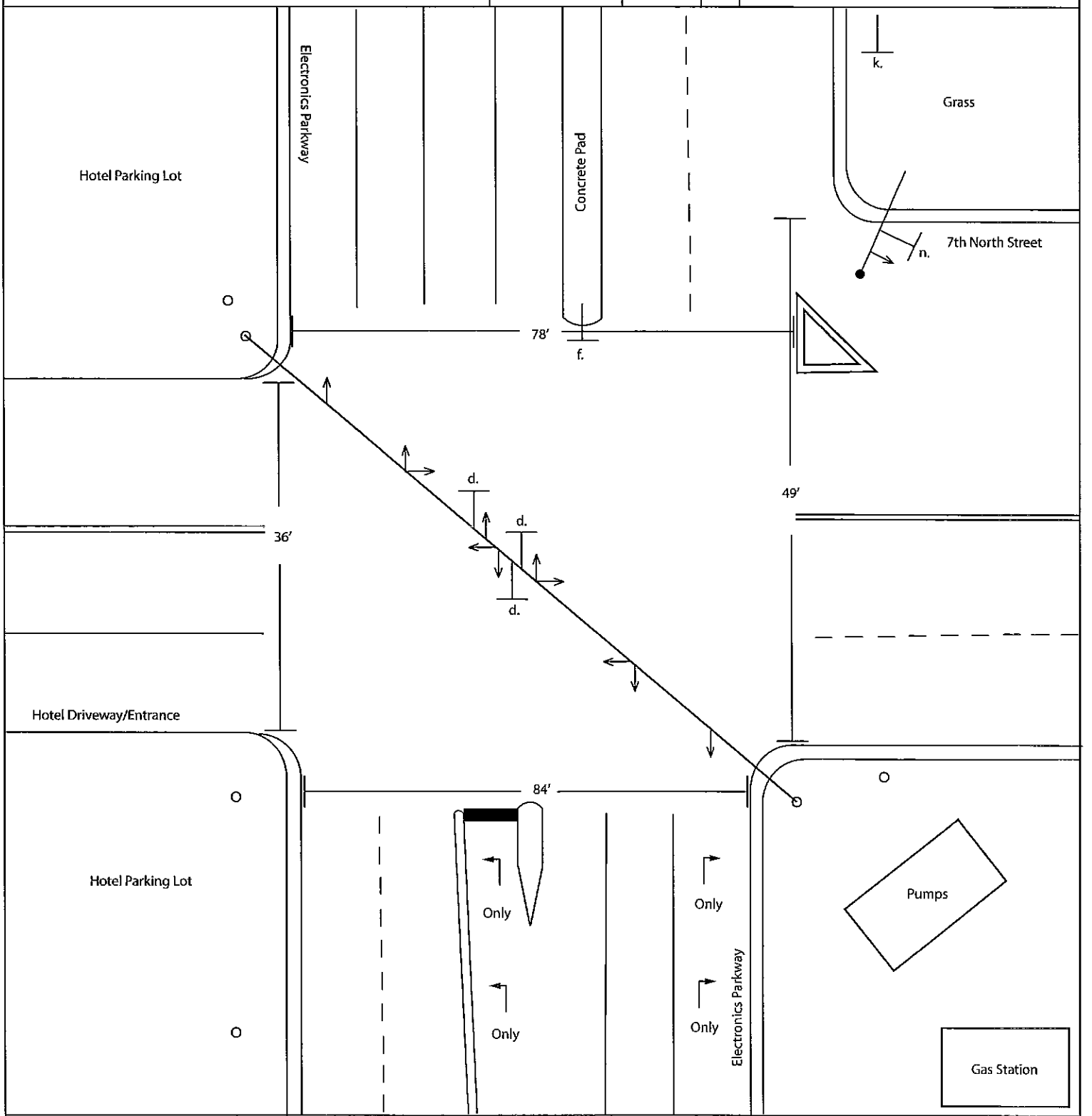
Date: May 2010

Prepared By: SMTC

N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.



Task: OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.

Diagram is not to scale.


ONLY


HESS

Fisher Associates
135 Calkins Road
Rochester NY 14623
585-334-1310

Electronics Pkwy & 7th North St
Town of Salina
Morning Count Period

File Name : 3 Electronics & 7th AM
Site Code : 78203900
Start Date : 3/23/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

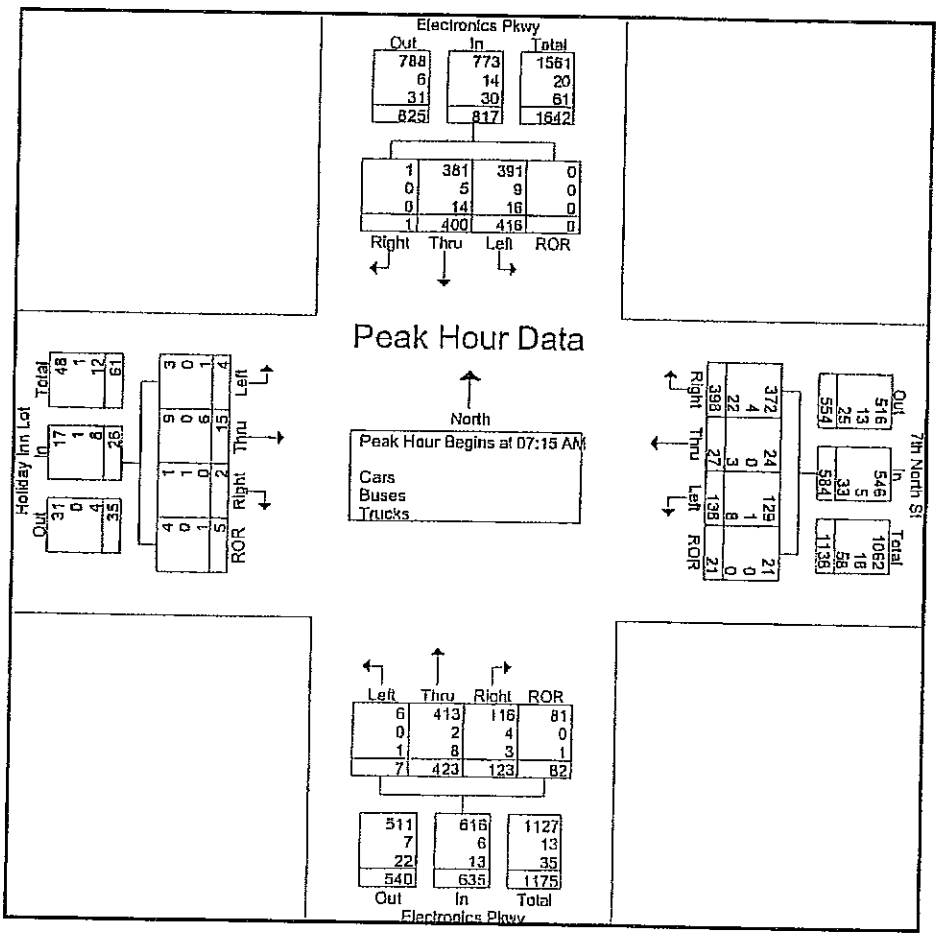
	Electronics Pkwy Southbound					7th North St Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
07:00 AM	0	72	81	1	154	76	13	19	2	110	13	75	2	8	98	0	0	4	0	4	366
07:15 AM	0	92	91	0	183	87	5	36	3	131	22	84	2	27	135	0	0	0	2	2	451
07:30 AM	0	103	95	0	198	100	8	36	6	150	28	104	1	27	160	0	6	2	1	9	517
07:45 AM	1	111	127	0	239	127	10	37	6	180	27	147	2	16	192	2	1	1	1	5	616
Total	1	378	394	1	774	390	36	128	17	571	90	410	7	78	585	2	7	7	4	20	1950
08:00 AM	0	94	103	0	197	84	4	29	6	123	46	88	2	12	148	0	8	1	1	10	478
08:15 AM	1	72	105	0	178	83	3	34	6	126	26	75	1	16	118	1	6	1	1	9	431
08:30 AM	0	78	101	0	179	87	11	38	2	138	22	71	0	19	112	0	4	0	1	5	434
08:45 AM	1	86	70	0	157	76	4	24	1	105	19	57	5	11	92	0	7	2	2	11	365
Total	2	330	379	0	711	330	22	125	15	492	113	291	8	58	470	1	25	4	5	35	1708
Grand Total	3	708	773	1	1485	720	58	253	32	1063	203	701	15	136	1055	3	32	11	9	55	3658
Apprch %	0.2	47.7	52.1	0.1		67.7	5.5	23.8	3		19.2	66.4	1.4	12.9		5.5	58.2	20	16.4		
Total %	0.1	19.4	21.1	0	40.6	19.7	1.6	6.9	0.9	29.1	5.5	19.2	0.4	3.7	28.8	0.1	0.9	0.3	0.2	1.5	
Cars	3	679	715	0	1397	661	51	234	29	975	189	677	12	134	1012	2	23	10	8	43	3427
% Cars	100	95.9	92.5	0	94.1	91.8	87.9	92.5	90.6	91.7	93.1	96.6	80	98.5	95.9	66.7	71.9	90.9	88.9	78.2	93.7
Buses	0	7	17	1	25	15	0	6	1	22	9	8	0	0	17	1	0	0	0	1	65
% Buses	0	1	2.2	100	1.7	2.1	0	2.4	3.1	2.1	4.4	1.1	0	0	1.6	33.3	0	0	0	1.8	1.8
Trucks	0	22	41	0	63	44	7	13	2	66	5	16	3	2	26	0	9	1	1	11	166
% Trucks	0	3.1	5.3	0	4.2	6.1	12.1	5.1	6.2	6.2	2.5	2.3	20	1.5	2.5	0	28.1	9.1	11.1	20	4.5

Fisher Associates
135 Calkins Road
Rochester NY 14623
585-334-1310

Electronics Pkwy & 7th North St
Town of Salina
Morning Count Period

File Name : 3 Electronics & 7th AM
Site Code : 78203900
Start Date : 3/23/2010

	Electronics Pkwy Southbound					7th North St Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	92	91	0	183	87	5	36	3	131	22	84	2	27	135	0	0	0	2	2	451
07:30 AM	0	103	95	0	198	100	8	36	6	150	28	104	1	27	160	0	6	2	1	9	517
07:45 AM	1	111	127	0	239	127	10	37	6	180	27	147	2	16	192	2	1	1	1	5	616
08:00 AM	0	94	103	0	197	84	4	29	6	123	46	88	2	12	148	0	8	1	1	10	478
Total Volume	1	400	416	0	817	398	27	138	21	584	123	423	7	82	635	2	15	4	5	26	2062
% App. Total	0.1	49	50.9	0		68.2	4.6	23.6	3.6		19.4	66.6	1.1	12.9		7.7	57.7	15.4	19.2		
PHF	.250	.901	.819	.000	.855	.783	.675	.932	.875	.811	.668	.719	.875	.759	.827	.250	.469	.500	.625	.650	.837
Cars	1	381	391	0	773	372	24	129	21	546	116	413	6	81	616	1	9	3	4	17	1952
% Cars	100	95.3	94.0	0	94.6	93.5	88.9	93.5	100	93.5	94.3	97.6	85.7	98.8	97.0	50.0	60.0	75.0	80.0	65.4	94.7
Buses	0	5	9	0	14	4	0	1	0	5	4	2	0	0	6	1	0	0	0	1	26
% Buses	0	1.3	2.2	0	1.7	1.0	0	0.7	0	0.9	3.3	0.5	0	0	0.9	50.0	0	0	0	3.8	1.3
Trucks	0	14	16	0	30	22	3	8	0	33	3	8	1	1	13	0	6	1	1	8	84
% Trucks	0	3.5	3.8	0	3.7	5.5	11.1	5.8	0	5.7	2.4	1.9	14.3	1.2	2.0	0	40.0	25.0	20.0	30.8	4.1



Fisher Associates
135 Calkins Road
Rochester NY 14623
585-334-1310

ectronics Pkwy & 7th North
Town of Salina
Evening Count Period

File Name : 3 Electronics & 7th PM Corrected
Site Code : 78203901
Start Date : 3/23/2010

Groups Printed- Cars - Buses - Trucks

	Electronics Pkwy Southbound					7th North St Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
04:00 PM	0	105	102	0	207	90	5	52	4	151	26	79	0	18	123	4	12	41	3	60	541
04:15 PM	1	91	83	0	175	110	4	62	1	177	20	81	1	25	127	2	2	9	1	14	493
04:30 PM	2	152	135	1	290	105	4	59	5	173	25	98	0	25	148	3	7	2	2	14	625
04:45 PM	1	155	121	0	277	112	0	66	3	181	21	117	3	14	155	1	7	3	0	11	624
Total	4	503	441	1	949	417	13	239	13	682	92	375	4	82	553	10	28	55	6	99	2283
05:00 PM	3	188	133	0	324	101	0	74	12	187	38	123	1	21	183	1	2	1	2	6	700
05:15 PM	2	129	91	0	222	110	2	68	1	181	30	100	5	20	155	1	8	3	4	16	574
05:30 PM	2	115	82	0	199	89	7	67	0	163	22	116	3	21	162	0	10	3	2	15	539
05:45 PM	1	96	80	0	177	55	15	44	4	118	22	85	0	11	118	0	1	2	1	4	417
Total	8	528	386	0	922	355	24	253	17	649	112	424	9	73	618	2	21	9	9	41	2230
Grand Total	12	1031	827	1	1871	772	37	492	30	1331	204	799	13	155	1171	12	49	64	15	140	4513
Apprch %	0.6	55.1	44.2	0.1		58	2.8	37	2.3		17.4	68.2	1.1	13.2		8.6	35	45.7	10.7		
Total %	0.3	22.8	18.3	0	41.5	17.1	0.8	10.9	0.7	29.5	4.5	17.7	0.3	3.4	25.9	0.3	1.1	1.4	0.3	3.1	
Cars	12	1017	809	1	1839	747	35	487	30	1299	201	782	12	152	1147	12	48	55	14	129	4414
% Cars	100	98.6	97.8	100	98.3	96.8	94.6	99	100	97.6	98.5	97.9	92.3	98.1	98	100	98	85.9	93.3	92.1	97.8
Buses	0	4	5	0	9	4	0	1	0	5	1	4	0	1	6	0	0	9	1	10	30
% Buses	0	0.4	0.6	0	0.5	0.5	0	0.2	0	0.4	0.5	0.5	0	0.6	0.5	0	0	14.1	6.7	7.1	0.7
Trucks	0	10	13	0	23	21	2	4	0	27	2	13	1	2	18	0	1	0	0	1	69
% Trucks	0	1	1.6	0	1.2	2.7	5.4	0.8	0	2	1	1.6	7.7	1.3	1.5	0	2	0	0	0.7	1.5

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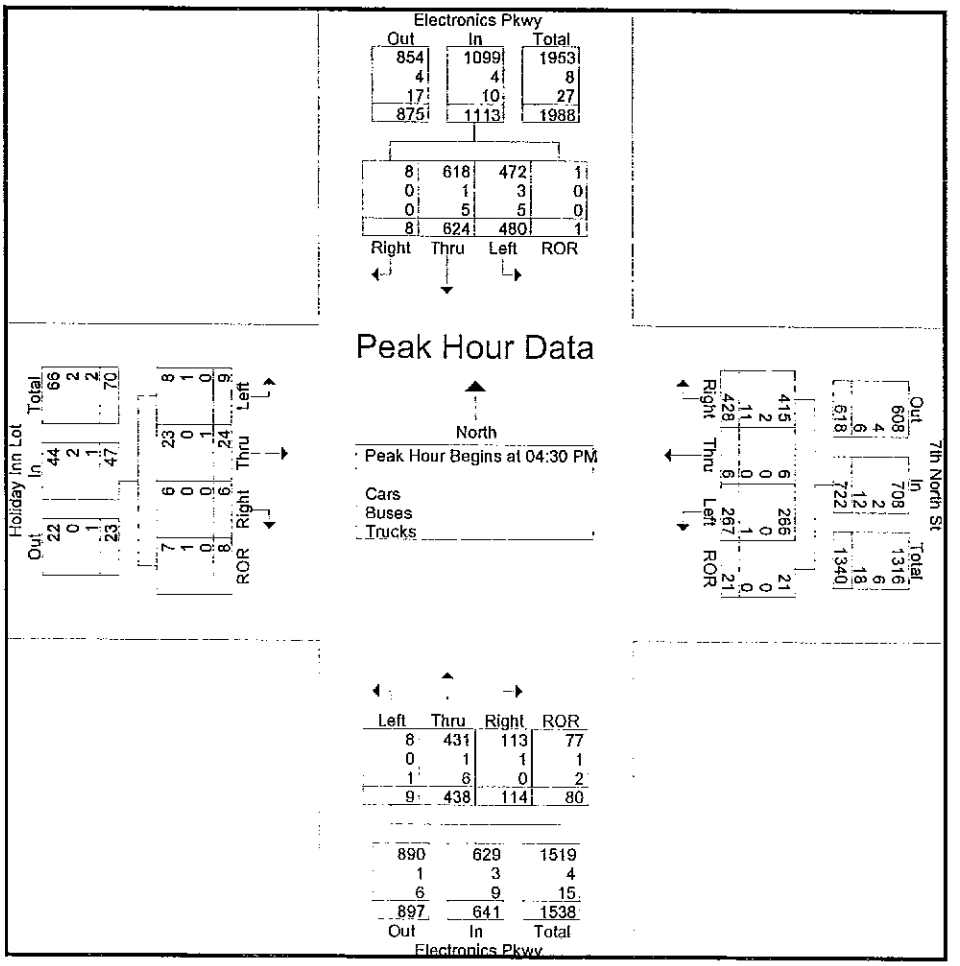
ectronics Pkwy & 7th North
Town of Salina
Evening Count Period

File Name : 3 Electronics & 7th PM Corrected
Site Code : 78203901
Start Date : 3/23/2010

	Electronics Pkwy Southbound					7th North St Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	2	152	135	1	290	105	4	59	5	173	25	98	0	25	148	3	7	2	2	14	625
04:45 PM	1	155	121	0	277	112	0	66	3	181	21	117	3	14	155	1	7	3	0	11	624
05:00 PM	3	188	133	0	324	101	0	74	12	187	38	123	1	21	183	1	2	1	2	6	700
05:15 PM	2	129	91	0	222	110	2	68	1	181	30	100	5	20	155	1	8	3	4	16	574
Total Volume	8	624	480	1	1113	428	6	267	21	722	114	438	9	80	641	6	24	9	8	47	2523
% App. Total	0.7	56.1	43.1	0.1		59.3	0.8	37	2.9		17.8	68.3	1.4	12.5		12.8	51.1	19.1	17		
PHF	.667	.830	.889	.250	.859	.955	.375	.902	.438	.965	.750	.890	.450	.800	.876	.500	.750	.750	.500	.734	.901
Cars	8	618	472	1	1099	415	6	266	21	708	113	431	8	77	629	6	23	8	7	44	2480
% Cars	100	99.0	98.3	100	98.7	97.0	100	99.6	100	98.1	99.1	98.4	88.9	96.3	98.1	100	95.8	88.9	87.5	93.6	98.3
Buses	0	1	3	0	4	2	0	0	0	2	1	1	0	1	3	0	0	1	1	2	11
% Buses	0	0.2	0.6	0	0.4	0.5	0	0	0	0.3	0.9	0.2	0	1.3	0.5	0	0	11.1	12.5	4.3	0.4
Trucks	0	5	5	0	10	11	0	1	0	12	0	6	1	2	9	0	1	0	0	1	32
% Trucks	0	0.8	1.0	0	0.9	2.6	0	0.4	0	1.7	0	1.4	11.1	2.5	1.4	0	4.2	0	0	2.1	1.3



INTERSECTION NUMBER: Electronics Pkwy @ 7th North 20

INSTALLATION DATE:
PROGRAM DATE:
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL		X				X		
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	8	4.5	4.5	10	4.5	8
PASSAGE	3	3	3	3	3	3	3	3
YELLOW	3	3	3	3	3	3	3	3
RED	3	3	3	3	3	3	3	3
MAX I	25	25	35	25	25	25	25	25
MAX II	40	40	35	40	40	40	40	40
WALK								
PED CLEAR								
S/A								
TBR	10	15	10	8	10	15	10	8
TTR	5	40	5	10	5	40	5	10
MIN GAP	3	1.5	2	1.5	2.5	1.5	2	1.5
MAX VI	30	30	30	30	30	30	30	30
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X		X	X		

INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NUMBER: Electronics Pkwy @ 7th North 20

INSTALLATION DATE: STANDARD COORDINATION
PROGRAM DATE: OPTIMIZATION
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY		X				X		
EXT RECALL		X				X		
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	10		5	10		
PASSAGE	1.5	2.6	1.8		1.5	2.6		
YELLOW	4	4	4		4	4		
RED	2	2	2		2	2		
MAX I (AM)	18	20	24		5	33		
MAX II (PM)	18	18	26		5	31		
WALK								
PED CLEAR								
S/A								
TBR	10	15	10		10	15		
TTR	5	40	5		10	15		
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X		X	X		

INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NUMBER: Electronics Pkwy @ 7th North 20

INSTALLATION DATE: CLUSTER COORDINATION
PROGRAM DATE: OPTIMIZATION
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY		X				X		
EXT RECALL		X				X		
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	10		5	10		
PASSAGE	1.5	2.6	0.8		1.5	2.6		
YELLOW	4	4	4		4	4		
RED	2.5	2.5	2.5		2.5	2.5		
MAX I (AM)	17.5	24.5	18.5		5.5	36.5		
MAX II (PM)	20.5	18.5	21.5		5.5	33.5		
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X		X	X		

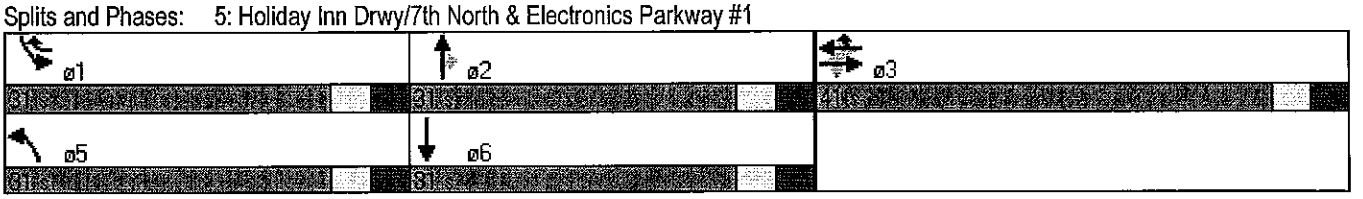
INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	4	15	138	37	419	7	423	205	416	400
Turn Type	Perm		Perm		pt+ov	Prot		Perm	Prot	
Protected Phases		3		3	31	5	2		1	6
Permitted Phases	3		3					2		
Detector Phase	3	3	3	3	31	5			1	
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0		4.5	10.0	10.0	5.0	10.0
Minimum Split (s)	14.0	14.0	14.0	14.0		10.5	16.0	16.0	11.0	16.0
Total Split (s)	41.0	41.0	41.0	41.0	72.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	39.8%	39.8%	39.8%	39.8%	69.9%	30.1%	30.1%	30.1%	30.1%	30.1%
Maximum Green (s)	35.0	35.0	35.0	35.0		25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0		2.5	1.5	1.5	3.0	1.5
Time Before Reduce (s)	10.0	10.0	10.0	10.0		10.0	15.0	15.0	10.0	15.0
Time To Reduce (s)	5.0	5.0	5.0	5.0		10.0	40.0	40.0	5.0	15.0
Recall Mode	None	None	None	None		None	Max	Max	None	Max
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary

Cycle Length: 103
Actuated Cycle Length: 83.5
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Holiday Inn Drwy/7th North & Electronics Parkway #1

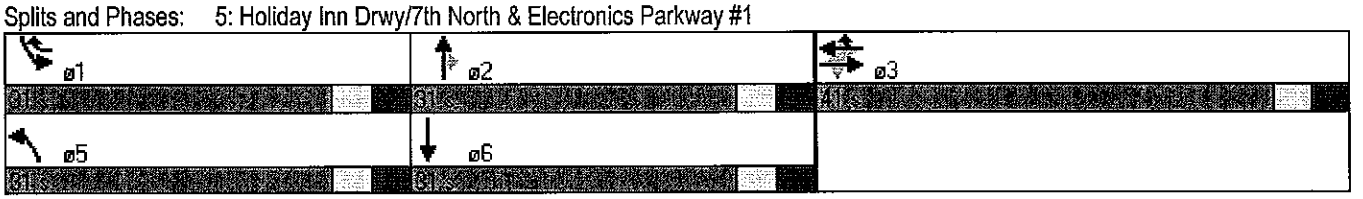


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	9	24	267	6	449	9	438	193	480	624
Turn Type	Perm		Perm		pt+ov	Prot		Perm	Prot	
Protected Phases		3		3	31	5	2		1	6
Permitted Phases	3		3					2		
Detector Phase	3	3	3	3	31	5			1	
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0		4.5	10.0	10.0	5.0	10.0
Minimum Split (s)	14.0	14.0	14.0	14.0		10.5	16.0	16.0	11.0	16.0
Total Split (s)	41.0	41.0	41.0	41.0	72.0	31.0	31.0	31.0	31.0	31.0
Total Split (%)	39.8%	39.8%	39.8%	39.8%	69.9%	30.1%	30.1%	30.1%	30.1%	30.1%
Maximum Green (s)	35.0	35.0	35.0	35.0		25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0		2.5	1.5	1.5	3.0	1.5
Time Before Reduce (s)	10.0	10.0	10.0	10.0		10.0	15.0	15.0	10.0	15.0
Time To Reduce (s)	5.0	5.0	5.0	5.0		10.0	40.0	40.0	5.0	15.0
Recall Mode	None	None	None	None		None	Max	Max	None	Max
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary

Cycle Length: 103
Actuated Cycle Length: 89.1
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Holiday Inn Drwy/7th North & Electronics Parkway #1

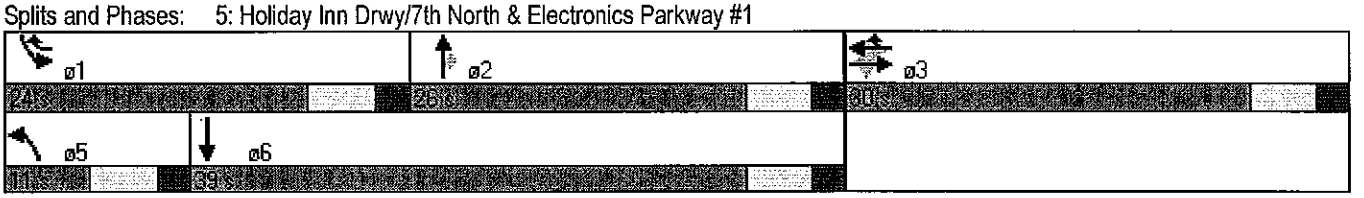


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	4	15	138	37	419	7	423	205	416	400
Turn Type	Perm		Perm		pt+ov	Prot		Perm	Prot	
Protected Phases		3		3	31	5	2		1	6
Permitted Phases	3		3					2		
Detector Phase	3	3	3	3	31	5	2		1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0		11.0	16.0	16.0	11.0	16.0
Total Split (s)	30.0	30.0	30.0	30.0	54.0	11.0	26.0	26.0	24.0	39.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	67.5%	13.8%	32.5%	32.5%	30.0%	48.8%
Maximum Green (s)	24.0	24.0	24.0	24.0		5.0	20.0	20.0	18.0	33.0
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
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	1.8	1.8	1.8	1.8		1.5	3.8	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	1.8	1.8		1.5	3.8	3.8	1.5	3.8
Time Before Reduce (s)	10.0	10.0	10.0	10.0		10.0	15.0	15.0	10.0	15.0
Time To Reduce (s)	5.0	5.0	5.0	5.0		10.0	40.0	40.0	5.0	15.0
Recall Mode	None	None	None	None		None	C-Min	C-Min	None	C-Min
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 10 (13%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

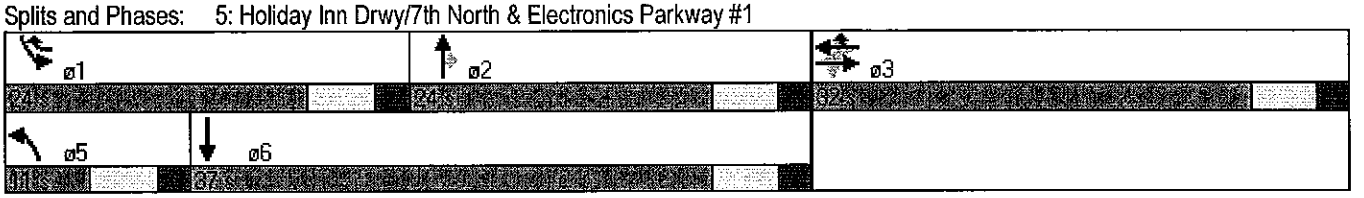
Splits and Phases: 5: Holiday Inn Drwy/7th North & Electronics Parkway #1



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	9	24	267	6	449	9	438	193	480	624
Turn Type	Perm		Perm		pt+ov	Prot		Perm	Prot	
Protected Phases		3		3	3 1	5	2		1	6
Permitted Phases	3		3					2		
Detector Phase	3	3	3	3	3 1	5	2		1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0		11.0	16.0	16.0	11.0	16.0
Total Split (s)	32.0	32.0	32.0	32.0	56.0	11.0	24.0	24.0	24.0	37.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	70.0%	13.8%	30.0%	30.0%	30.0%	46.3%
Maximum Green (s)	26.0	26.0	26.0	26.0		5.0	18.0	18.0	18.0	31.0
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
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	1.8	1.8	1.8	1.8		1.5	3.8	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	1.8	1.8		1.5	3.8	3.8	1.5	3.8
Time Before Reduce (s)	10.0	10.0	10.0	10.0		10.0	15.0	15.0	10.0	15.0
Time To Reduce (s)	5.0	5.0	5.0	5.0		10.0	40.0	40.0	5.0	15.0
Recall Mode	None	None	None	None		None	C-Min	C-Min	None	C-Min
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 6 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 5: Holiday Inn Drwy/7th North & Electronics Parkway #1

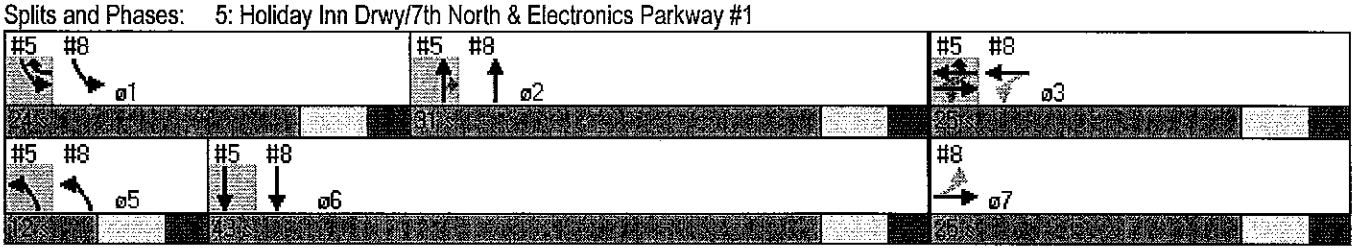


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	ø7
Lane Configurations											
Volume (vph)	4	15	138	37	419	7	423	205	416	400	
Turn Type	Perm		Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3		3	3 1	5	2		1	6	7
Permitted Phases	3		3					2			
Detector Phase	3	3	3	3	3 1	5	2		1	6	
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0	7.0
Minimum Split (s)	16.5	16.5	16.5	16.5		11.5	16.5	16.5	11.5	16.5	13.5
Total Split (s)	25.0	25.0	25.0	25.0	49.0	12.0	31.0	31.0	24.0	43.0	25.0
Total Split (%)	31.3%	31.3%	31.3%	31.3%	61.3%	15.0%	38.8%	38.8%	30.0%	53.8%	31%
Maximum Green (s)	18.5	18.5	18.5	18.5		5.5	24.5	24.5	17.5	36.5	18.5
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag						Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?											
Vehicle Extension (s)	0.8	0.8	0.8	0.8		1.5	3.8	3.8	1.5	3.8	1.8
Minimum Gap (s)	0.8	0.8	0.8	0.8		1.5	3.8	3.8	1.5	3.8	1.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	C-Min	C-Min	None	C-Min	None
Walk Time (s)											
Flash Dont Walk (s)											
Pedestrian Calls (#/hr)											

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 5: Holiday Inn Drwy/7th North & Electronics Parkway #1

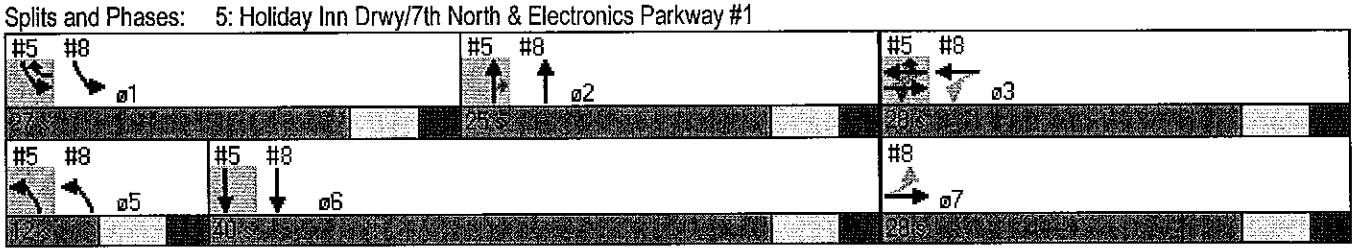


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	ø7
Lane Configurations											
Volume (vph)	9	24	267	6	449	9	438	193	480	624	
Turn Type	Perm		Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3		3	3 1	5	2		1	6	7
Permitted Phases	3		3					2			
Detector Phase	3	3	3	3	3 1	5	2		1	6	
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0	7.0
Minimum Split (s)	16.5	16.5	16.5	16.5		11.5	16.5	16.5	11.5	16.5	13.5
Total Split (s)	28.0	28.0	28.0	28.0	55.0	12.0	25.0	25.0	27.0	40.0	28.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	68.8%	15.0%	31.3%	31.3%	33.8%	50.0%	35%
Maximum Green (s)	21.5	21.5	21.5	21.5		5.5	18.5	18.5	20.5	33.5	21.5
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag						Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?											
Vehicle Extension (s)	0.8	0.8	0.8	0.8		1.5	3.8	3.8	1.5	3.8	1.8
Minimum Gap (s)	0.8	0.8	0.8	0.8		1.5	3.8	3.8	1.5	3.8	1.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	C-Min	C-Min	None	C-Min	None
Walk Time (s)											
Flash Dont Walk (s)											
Pedestrian Calls (#/hr)											

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 5: Holiday Inn Drwy/7th North & Electronics Parkway #1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	15	7	138	37	419	7	423	205	416	400	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	13	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2364			1695	1560	1583	3539	1524	3303	3437	
Flt Permitted		0.92			0.74	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2179			1310	1560	1583	3539	1524	3303	3437	
Peak-hour factor, PHF	0.65	0.65	0.65	0.81	0.81	0.81	0.83	0.83	0.83	0.86	0.86	0.86
Adj. Flow (vph)	6	23	11	170	46	517	8	510	247	484	465	1
RTOR Reduction (vph)	0	8	0	0	0	38	0	0	156	0	0	0
Lane Group Flow (vph)	0	32	0	0	216	479	8	510	91	484	466	0
Heavy Vehicles (%)	25%	40%	50%	7%	11%	7%	14%	2%	6%	6%	5%	0%
Turn Type	Perm			Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		20.8			20.8	45.7	1.2	30.5	30.5	18.9	48.2	
Effective Green, g (s)		22.8			22.8	47.7	3.2	32.5	32.5	20.9	50.2	
Actuated g/C Ratio		0.26			0.26	0.54	0.04	0.37	0.37	0.24	0.57	
Clearance Time (s)		6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		563			339	844	57	1304	562	783	1956	
v/s Ratio Prot						c0.31	0.01	c0.14		c0.15	0.14	
v/s Ratio Perm		0.01			c0.16				0.06			
v/c Ratio		0.06			0.64	0.57	0.14	0.39	0.16	0.62	0.24	
Uniform Delay, d1		24.6			29.0	13.4	41.2	20.5	18.7	30.1	9.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			3.9	0.9	1.1	0.9	0.6	1.5	0.3	
Delay (s)		24.6			32.9	14.3	42.3	21.4	19.3	31.5	9.8	
Level of Service		C			C	B	D	C	B	C	A	
Approach Delay (s)		24.6			19.8			21.0			20.9	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	24	13	267	6	449	9	438	193	480	624	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	13	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3164			1792	1620	1626	3539	1599	3433	3566	
Flt Permitted		0.89			0.68	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2841			1282	1620	1626	3539	1599	3433	3566	
Peak-hour factor, PHF	0.73	0.73	0.73	0.97	0.97	0.97	0.88	0.88	0.88	0.86	0.86	0.86
Adj. Flow (vph)	12	33	18	275	6	463	10	498	219	558	726	10
RTOR Reduction (vph)	0	13	0	0	0	38	0	0	143	0	0	0
Lane Group Flow (vph)	0	50	0	0	281	425	10	498	76	558	736	0
Confl. Peds. (#/hr)			1	1			1					1
Heavy Vehicles (%)	11%	4%	0%	1%	0%	3%	11%	2%	1%	2%	1%	0%
Turn Type	Perm			Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		24.6			24.6	51.3	1.3	30.6	30.6	20.7	50.0	
Effective Green, g (s)		26.6			26.6	53.3	3.3	32.6	32.6	22.7	52.0	
Actuated g/C Ratio		0.28			0.28	0.57	0.04	0.35	0.35	0.24	0.55	
Clearance Time (s)		6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		805			363	920	57	1229	555	830	1975	
v/s Ratio Prot						c0.26	0.01	c0.14		c0.16	0.21	
v/s Ratio Perm		0.02			c0.22				0.05			
v/c Ratio		0.06			0.77	0.46	0.18	0.41	0.14	0.67	0.37	
Uniform Delay, d1		24.6			30.9	11.9	44.0	23.3	21.0	32.2	11.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			9.9	0.4	1.5	1.0	0.5	2.2	0.5	
Delay (s)		24.6			40.8	12.3	45.5	24.3	21.5	34.4	12.3	
Level of Service		C			D	B	D	C	C	C	B	
Approach Delay (s)		24.6			23.0			23.7			21.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	93.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
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)	4	15	7	138	37	419	7	423	205	416	400	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	13	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2364			1695	1560	1583	3539	1524	3303	3437	
Flt Permitted		0.92			0.74	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2179			1310	1560	1583	3539	1524	3303	3437	
Peak-hour factor, PHF	0.65	0.65	0.65	0.81	0.81	0.81	0.83	0.83	0.83	0.86	0.86	0.86
Adj. Flow (vph)	6	23	11	170	46	517	8	510	247	484	465	1
RTOR Reduction (vph)	0	8	0	0	0	43	0	0	158	0	0	0
Lane Group Flow (vph)	0	32	0	0	216	474	8	510	89	484	466	0
Heavy Vehicles (%)	25%	40%	50%	7%	11%	7%	14%	2%	6%	6%	5%	0%
Turn Type	Perm			Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		19.7			19.7	41.1	1.0	26.9	26.9	15.4	41.3	
Effective Green, g (s)		21.7			21.7	43.1	3.0	28.9	28.9	17.4	43.3	
Actuated g/C Ratio		0.27			0.27	0.54	0.04	0.36	0.36	0.22	0.54	
Clearance Time (s)		6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		1.8			1.8		1.5	3.8	3.8	1.5	3.8	
Lane Grp Cap (vph)		591			355	840	59	1278	551	718	1860	
v/s Ratio Prot						c0.30	0.01	c0.14		c0.15	0.14	
v/s Ratio Perm		0.01			c0.16				0.06			
v/c Ratio		0.05			0.61	0.56	0.14	0.40	0.16	0.67	0.25	
Uniform Delay, d1		21.6			25.4	12.2	37.2	19.1	17.3	28.7	9.7	
Progression Factor		1.00			1.00	1.00	1.13	0.98	2.07	1.06	1.07	
Incremental Delay, d2		0.0			2.0	0.5	0.4	0.9	0.6	1.8	0.3	
Delay (s)		21.6			27.5	12.7	42.5	19.5	36.5	32.1	10.7	
Level of Service		C			C	B	D	B	D	C	B	
Approach Delay (s)		21.6			17.1			25.2			21.6	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
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)	9	24	13	267	6	449	9	438	193	480	624	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	13	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3164			1792	1620	1626	3539	1599	3433	3566	
Flt Permitted		0.89			0.68	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2841			1282	1620	1626	3539	1599	3433	3566	
Peak-hour factor, PHF	0.73	0.73	0.73	0.97	0.97	0.97	0.88	0.88	0.88	0.86	0.86	0.86
Adj. Flow (vph)	12	33	18	275	6	463	10	498	219	558	726	10
RTOR Reduction (vph)	0	13	0	0	0	33	0	0	146	0	1	0
Lane Group Flow (vph)	0	50	0	0	281	430	10	498	73	558	735	0
Confl. Peds. (#/hr)			1	1			1					1
Heavy Vehicles (%)	11%	4%	0%	1%	0%	3%	11%	2%	1%	2%	1%	0%
Turn Type	Perm			Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		20.9			20.9	43.3	1.0	24.7	24.7	16.4	40.1	
Effective Green, g (s)		22.9			22.9	45.3	3.0	26.7	26.7	18.4	42.1	
Actuated g/C Ratio		0.29			0.29	0.57	0.04	0.33	0.33	0.23	0.53	
Clearance Time (s)		6.0			6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		1.8			1.8		1.5	3.8	3.8	1.5	3.8	
Lane Grp Cap (vph)		813			367	917	61	1181	534	790	1877	
v/s Ratio Prot						c0.27	0.01	0.14		c0.16	c0.21	
v/s Ratio Perm		0.02			c0.22				0.05			
v/c Ratio		0.06			0.77	0.47	0.16	0.42	0.14	0.71	0.39	
Uniform Delay, d1		20.7			26.1	10.2	37.3	20.7	18.6	28.3	11.3	
Progression Factor		1.00			1.00	1.00	0.84	1.12	2.42	0.80	0.44	
Incremental Delay, d2		0.0			8.3	0.1	0.5	1.1	0.5	2.2	0.6	
Delay (s)		20.8			34.4	10.4	31.9	24.3	45.6	24.8	5.5	
Level of Service		C			C	B	C	C	D	C	A	
Approach Delay (s)		20.8			19.5			30.8			13.8	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

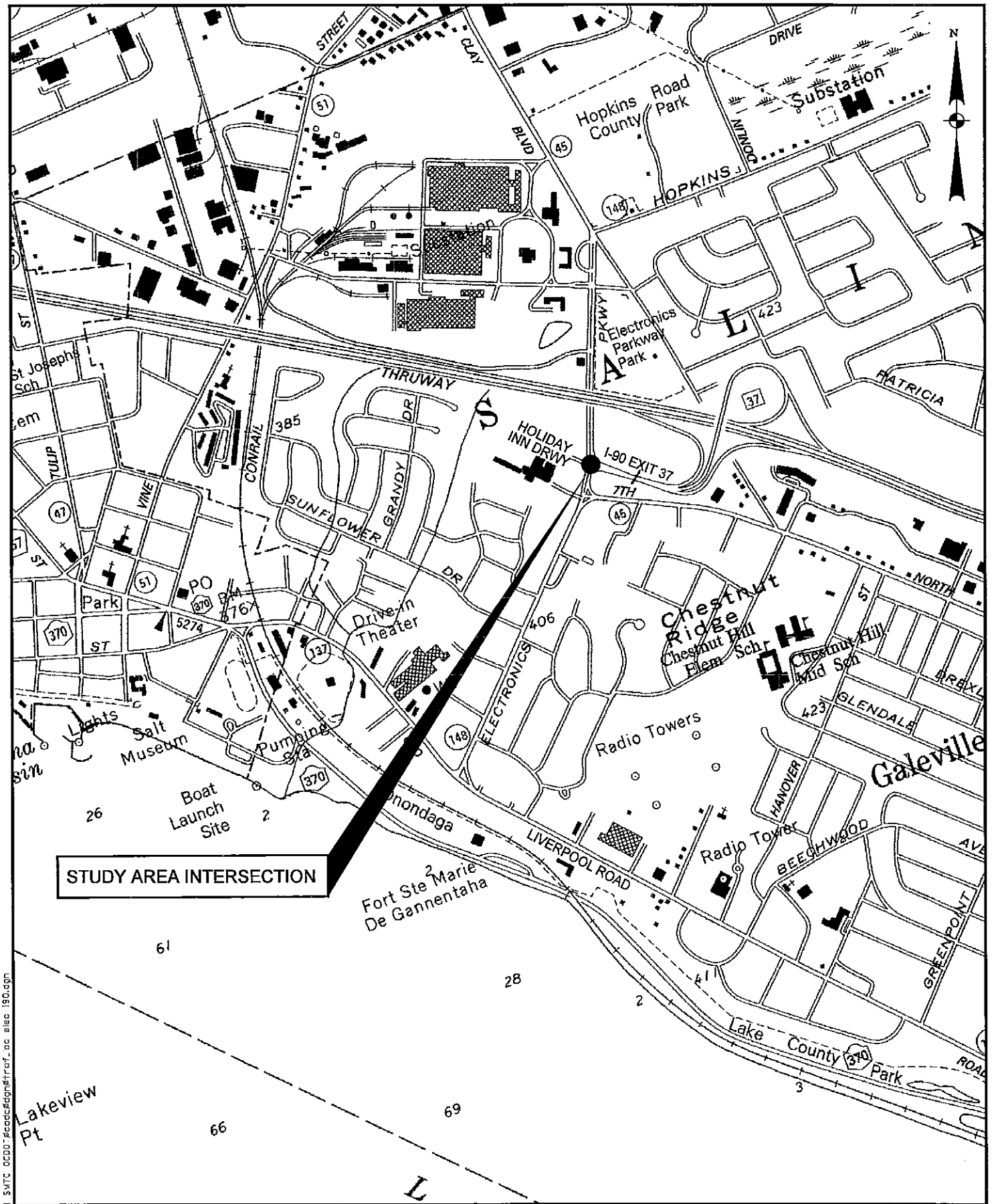
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	15	7	138	37	419	7	423	205	416	400	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	13	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2364			1695	1560	1583	3539	1524	3303	3437	
Flt Permitted		0.91			0.74	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2165			1310	1560	1583	3539	1524	3303	3437	
Peak-hour factor, PHF	0.65	0.65	0.65	0.81	0.81	0.81	0.83	0.83	0.83	0.86	0.86	0.86
Adj. Flow (vph)	6	23	11	170	46	517	8	510	247	484	465	1
RTOR Reduction (vph)	0	8	0	0	0	70	0	0	154	0	0	0
Lane Group Flow (vph)	0	32	0	0	216	447	8	510	93	484	466	0
Heavy Vehicles (%)	25%	40%	50%	7%	11%	7%	14%	2%	6%	6%	5%	0%
Turn Type	Perm			Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		16.7			16.7	39.0	3.3	28.0	28.0	15.8	40.5	
Effective Green, g (s)		18.7			18.7	41.0	5.3	30.0	30.0	17.8	42.5	
Actuated g/C Ratio		0.23			0.23	0.51	0.07	0.38	0.38	0.22	0.53	
Clearance Time (s)		6.5			6.5		6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)		0.8			0.8		1.5	3.8	3.8	1.5	3.8	
Lane Grp Cap (vph)		506			306	800	105	1327	572	735	1826	
v/s Ratio Prot						c0.29	0.01	c0.14		c0.15	0.14	
v/s Ratio Perm		0.01			c0.16				0.06			
v/c Ratio		0.06			0.71	0.56	0.08	0.38	0.16	0.66	0.26	
Uniform Delay, d1		23.8			28.1	13.3	35.1	18.3	16.6	28.3	10.2	
Progression Factor		1.00			1.00	1.00	1.05	0.58	0.54	1.24	0.94	
Incremental Delay, d2		0.0			5.9	0.5	0.1	0.8	0.6	1.5	0.3	
Delay (s)		23.9			34.1	13.8	36.9	11.4	9.5	36.6	9.9	
Level of Service		C			C	B	D	B	A	D	A	
Approach Delay (s)		23.9			19.8			11.0			23.5	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
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)	9	24	13	267	6	449	9	438	193	480	624	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	13	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3164			1792	1620	1626	3539	1599	3433	3566	
Flt Permitted		0.88			0.68	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2822			1282	1620	1626	3539	1599	3433	3566	
Peak-hour factor, PHF	0.73	0.73	0.73	0.97	0.97	0.97	0.88	0.88	0.88	0.86	0.86	0.86
Adj. Flow (vph)	12	33	18	275	6	463	10	498	219	558	726	10
RTOR Reduction (vph)	0	13	0	0	0	32	0	0	158	0	1	0
Lane Group Flow (vph)	0	50	0	0	281	431	10	498	61	558	735	0
Confl. Peds. (#/hr)			1	1			1					1
Heavy Vehicles (%)	11%	4%	0%	1%	0%	3%	11%	2%	1%	2%	1%	0%
Turn Type	Perm			Perm		pt+ov	Prot		Perm	Prot		
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		19.0			19.0	46.7	2.1	20.3	20.3	21.2	39.4	
Effective Green, g (s)		21.0			21.0	48.7	4.1	22.3	22.3	23.2	41.4	
Actuated g/C Ratio		0.26			0.26	0.61	0.05	0.28	0.28	0.29	0.52	
Clearance Time (s)		6.5			6.5		6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)		0.8			0.8		1.5	3.8	3.8	1.5	3.8	
Lane Grp Cap (vph)		741			337	986	83	986	446	996	1845	
v/s Ratio Prot						c0.27	0.01	c0.14		c0.16	0.21	
v/s Ratio Perm		0.02			c0.22				0.04			
v/c Ratio		0.07			0.83	0.44	0.12	0.51	0.14	0.56	0.40	
Uniform Delay, d1		22.1			27.9	8.3	36.2	24.2	21.6	24.1	11.7	
Progression Factor		1.00			1.00	1.00	1.11	0.75	0.90	1.10	0.36	
Incremental Delay, d2		0.0			15.4	0.1	0.2	1.8	0.6	0.4	0.6	
Delay (s)		22.2			43.3	8.5	40.5	20.0	20.2	26.8	4.8	
Level of Service		C			D	A	D	B	C	C	A	
Approach Delay (s)		22.2			21.6			20.3			14.3	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



LOCATION MAP
ELECTRONICS PKWY/I-90 EXIT 37 RAMP/HOLIDAY INN DRWY

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: 8.4

dcoran
F:\pr\projects\2009\09-094 SyTC OCDOT\acad\dgn\traf_ac elec 190.dgn

INTERSECTION DIAGRAM

Location: Electronics Parkway at Thruway Entrance (Exit 37)

Legend: Sign; Signal Head; Signal with Span Wire; ## (Feet); Utility Pole

Drawn By: KK

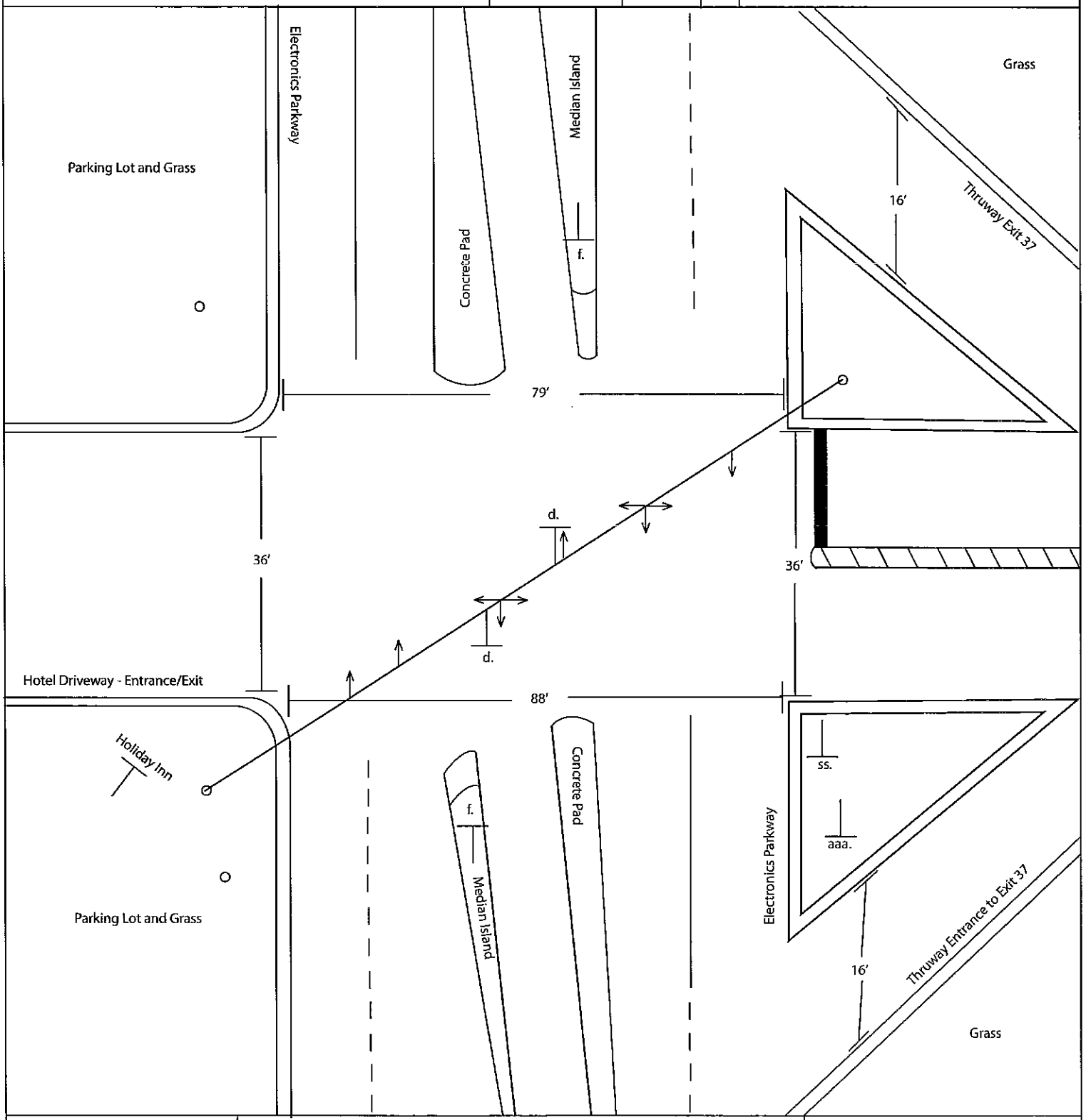
Date: May 2010

Prepared By: SMTC

N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.



Task: OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.

Diagram is not to scale.

Fisher Associates
135 Calkins Road
Rochester NY 14623
585-334-1310

Electronics Pkwy & I-90 (Exit 37)
Town of Salina
Morning Count Period

File Name : 4 Electronics & I-90 AM
Site Code : 78204000
Start Date : 3/23/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Electronics Pkwy Southbound					I-90 On/Off Ramp Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App Total	Right	Thru	Left	ROR	App Total	Right	Thru	Left	ROR	App Total	Right	Thru	Left	ROR	App Total	Int. Total
07:00 AM	4	112	45	0	161	83	9	18	0	110	25	128	5	0	158	0	0	1	0	1	430
07:15 AM	8	154	61	1	224	81	8	22	0	111	19	158	3	0	180	1	1	0	0	2	517
07:30 AM	1	166	88	5	260	124	19	31	0	174	21	173	16	0	210	0	2	0	0	2	646
07:45 AM	14	180	52	5	251	205	13	48	0	266	48	220	10	1	279	0	0	0	0	0	796
Total	27	612	246	11	896	493	49	119	0	661	113	679	34	1	827	1	3	1	0	5	2389
08:00 AM	10	139	52	5	206	117	9	42	0	168	22	133	10	0	165	1	0	2	1	4	543
08:15 AM	7	137	52	4	200	82	20	29	0	131	18	135	9	0	162	1	0	0	1	2	495
08:30 AM	8	127	35	0	170	67	6	39	0	112	26	115	12	0	153	1	1	1	0	3	438
08:45 AM	6	120	34	0	160	46	6	29	0	81	13	117	8	0	138	1	2	0	0	3	382
Total	31	523	173	9	736	312	41	139	0	492	79	500	39	0	618	4	3	3	2	12	1858
Grand Total	58	1135	419	20	1632	805	90	258	0	1153	192	1179	73	1	1445	5	6	4	2	17	4247
Apprch %	3.6	69.5	25.7	1.2		69.8	7.8	22.4	0		13.3	81.6	5.1	0.1		29.4	35.3	23.5	11.8		
Total %	1.4	26.7	9.9	0.5	38.4	19	2.1	6.1	0	27.1	4.5	27.8	1.7	0	34	0.1	0.1	0.1	0	0.4	
Cars	58	1046	385	20	1509	773	90	239	0	1102	183	1108	72	1	1364	5	6	4	2	17	3992
% Cars	100	92.2	91.9	100	92.5	96	100	92.6	0	95.6	95.3	94	98.6	100	94.4	100	100	100	100	100	94
Buses	0	24	1	0	25	5	0	0	0	5	0	19	0	0	19	0	0	0	0	0	49
% Buses	0	2.1	0.2	0	1.5	0.6	0	0	0	0.4	0	1.6	0	0	1.3	0	0	0	0	0	1.2
Trucks	0	65	33	0	98	27	0	19	0	46	9	52	1	0	62	0	0	0	0	0	206
% Trucks	0	5.7	7.9	0	6	3.4	0	7.4	0	4	4.7	4.4	1.4	0	4.3	0	0	0	0	0	4.9

Fisher Associates
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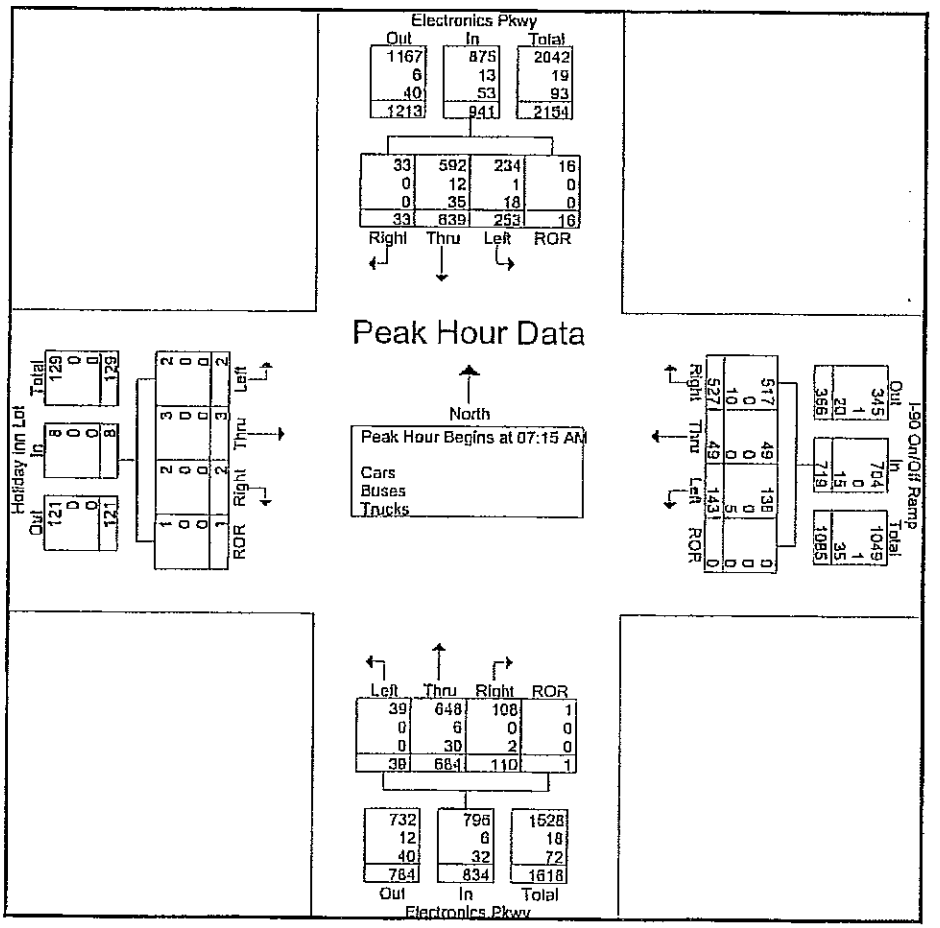
Electronics Pkwy & I-90 (Exit 37)
Town of Salina
Morning Count Period

File Name : 4 Electronics & I-90 AM
Site Code : 78204000
Start Date : 3/23/2010
Page No : 2

	Electronics Pkwy Southbound					I-90 On/Off Ramp Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	154	61	1	224	81	8	22	0	111	19	158	3	0	180	1	1	0	0	2	517
07:30 AM	1	166	88	5	260	124	19	31	0	174	21	173	16	0	210	0	2	0	0	2	646
07:45 AM	14	180	52	5	251	205	13	48	0	266	48	220	10	1	279	0	0	0	0	0	796
08:00 AM	10	139	52	5	206	117	9	42	0	168	22	133	10	0	165	1	0	2	1	4	543
Total Volume	33	639	253	16	941	527	49	143	0	719	110	684	39	1	834	2	3	2	1	8	2502
% App. Total	3.5	67.9	26.9	1.7		73.3	6.8	19.9	0		13.2	82	4.7	0.1		25	37.5	25	12.5		
PHF	.589	.888	.719	.800	.905	.643	.645	.745	.000	.676	.573	.777	.609	.250	.747	.500	.375	.250	.250	.500	.786
Cars	33	592	234	16	875	517	49	138	0	704	108	648	39	1	796	2	3	2	1	8	2383
% Cars	100	92.6	92.5	100	93.0	98.1	100	96.5	0	97.9	98.2	94.7	100	100	95.4	100	100	100	100	100	95.2
Buses	0	12	1	0	13	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	19
% Buses	0	1.9	0.4	0	1.4	0	0	0	0	0	0	0.9	0	0	0.7	0	0	0	0	0	0.8
Trucks	0	35	18	0	53	10	0	5	0	15	2	30	0	0	32	0	0	0	0	0	100
% Trucks	0	5.5	7.1	0	5.6	1.9	0	3.5	0	2.1	1.8	4.4	0	0	3.8	0	0	0	0	0	4.0



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Electronics Pkwy & I-90 (Exit 37)
Town of Salina
Evening Count Period

File Name : 4 Electronics & I-90 PM
Site Code : 78204001
Start Date : 3/23/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Electronics Pkwy Southbound					I-90 On-Off Ramp Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
04:00 PM	1	147	76	0	224	31	3	19	0	53	24	162	5	1	192	4	21	51	6	82	551
04:15 PM	3	161	55	1	220	53	1	28	0	82	23	165	0	0	188	4	3	19	4	30	520
04:30 PM	1	209	97	0	307	73	3	38	0	114	37	157	1	2	197	2	11	17	0	30	648
04:45 PM	3	226	119	0	348	71	2	44	0	117	27	192	0	0	219	1	4	2	0	7	691
Total	8	743	347	1	1099	228	9	129	0	366	111	676	6	3	796	11	39	89	10	149	2410
05:00 PM	2	268	104	1	375	94	0	38	0	132	54	178	1	1	234	4	15	20	0	39	780
05:15 PM	1	177	85	0	263	75	2	41	0	118	20	159	3	0	182	4	7	4	2	17	580
05:30 PM	3	128	59	0	190	61	6	40	0	107	20	178	3	0	201	3	14	9	0	26	524
05:45 PM	0	127	42	1	170	55	7	27	0	89	10	136	4	0	150	2	9	5	0	16	425
Total	6	700	290	2	998	285	15	146	0	446	104	651	11	1	767	13	45	38	2	98	2309
Grand Total	14	1443	637	3	2097	513	24	275	0	812	215	1327	17	4	1563	24	84	127	12	247	4719
Apprch %	0.7	68.8	30.4	0.1		63.2	3	33.9	0		13.8	84.9	1.1	0.3		9.7	34	51.4	4.9		
Total %	0.3	30.6	13.5	0.1	44.4	10.9	0.5	5.8	0	17.2	4.6	28.1	0.4	0.1	33.1	0.5	1.8	2.7	0.3	5.2	
Cars	12	1420	623	3	2058	497	24	269	0	790	209	1287	15	4	1515	23	83	127	12	245	4608
% Cars	85.7	98.4	97.8	100	98.1	96.9	100	97.8	0	97.3	97.2	97	88.2	100	96.9	95.8	98.8	100	100	99.2	97.6
Buses	2	9	5	0	16	0	0	0	0	0	3	12	0	0	15	0	1	0	0	1	32
% Buses	14.3	0.6	0.8	0	0.8	0	0	0	0	0	1.4	0.9	0	0	1	0	1.2	0	0	0.4	0.7
Trucks	0	14	9	0	23	16	0	6	0	22	3	28	2	0	33	1	0	0	0	1	79
% Trucks	0	1	1.4	0	1.1	3.1	0	2.2	0	2.7	1.4	2.1	11.8	0	2.1	4.2	0	0	0	0.4	1.7

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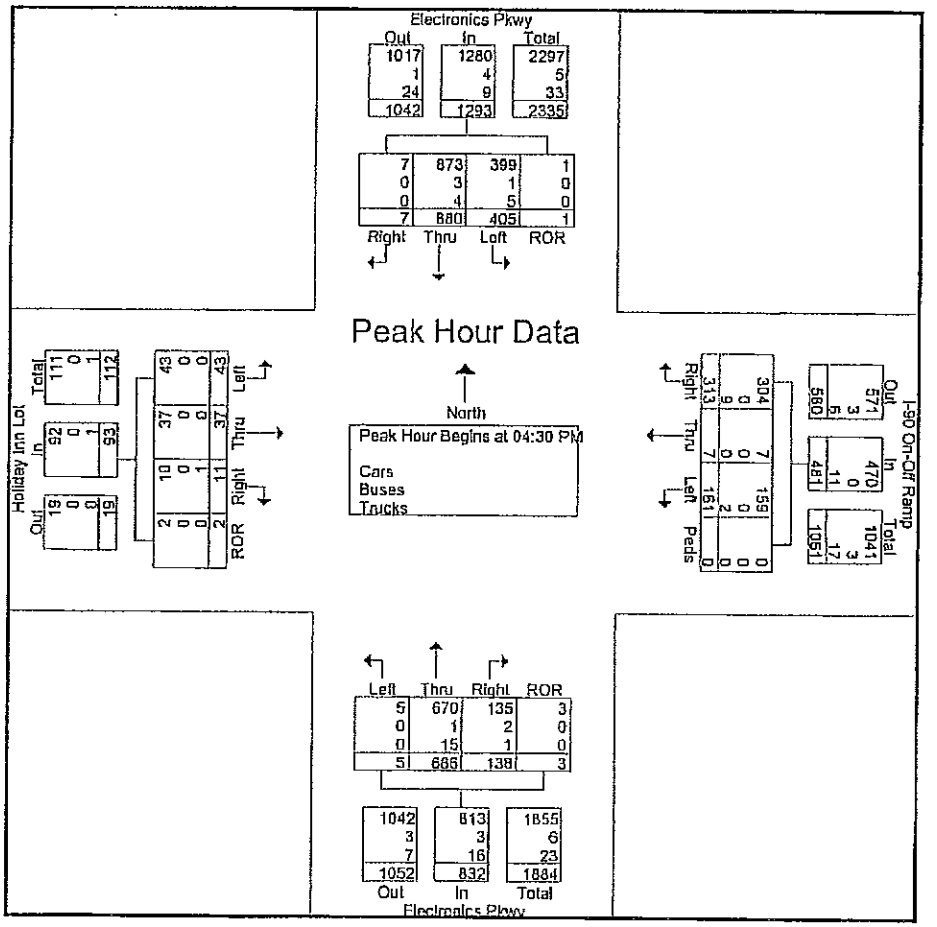
Electronics Pkwy & I-90 (Exit 37)
Town of Salina
Evening Count Period

File Name : 4 Electronics & I-90 PM
Site Code : 78204001
Start Date : 3/23/2010

	Electronics Pkwy Southbound					I-90 On-Off Ramp Westbound					Electronics Pkwy Northbound					Holiday Inn Lot Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	209	97	0	307	73	3	38	0	114	37	157	1	2	197	2	11	17	0	30	648
04:45 PM	3	226	119	0	348	71	2	44	0	117	27	192	0	0	219	1	4	2	0	7	691
05:00 PM	2	268	104	1	375	94	0	38	0	132	54	178	1	1	234	4	15	20	0	39	780
05:15 PM	1	177	85	0	263	75	2	41	0	118	20	159	3	0	182	4	7	4	2	17	580
Total Volume	7	880	405	1	1293	313	7	161	0	481	138	686	5	3	832	11	37	43	2	93	2699
% App. Total	0.5	68.1	31.3	0.1		65.1	1.5	33.5	0		16.6	82.5	0.6	0.4		11.8	39.8	46.2	2.2		
PHF	.583	.821	.851	.250	.862	.832	.583	.915	.000	.911	.639	.893	.417	.375	.889	.688	.617	.538	.250	.596	.865
Cars	7	873	399	1	1280	304	7	159	0	470	135	670	5	3	813	10	37	43	2	92	2655
% Cars	100	99.2	98.5	100	99.0	97.1	100	98.8	0	97.7	97.8	97.7	100	100	97.7	90.9	100	100	100	98.9	98.4
Buses	0	3	1	0	4	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	7
% Buses	0	0.3	0.2	0	0.3	0	0	0	0	0	1.4	0.1	0	0	0.4	0	0	0	0	0	0.3
Trucks	0	4	5	0	9	9	0	2	0	11	1	15	0	0	16	1	0	0	0	1	37
% Trucks	0	0.5	1.2	0	0.7	2.9	0	1.2	0	2.3	0.7	2.2	0	0	1.9	9.1	0	0	0	1.1	1.4



Electronics Pkwy @ Exit 37

INTERSECTION NUMBER:

INSTALLATION DATE:

PROGRAM DATE:

LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL		X				X		
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	4.5	10	4.5		4.5	10	4	
PASSAGE	2.2	2.2	2.2		2.2	2.2	2	
YELLOW	4	4	4		4	4	4	
RED	2	2	2		2	2	2	
MAX I	25	22	25		20	22	5	
MAX II	30	30	30		30	30	5	
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X		X	X	X	

PED Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NUMBER: Electronics Pkwy @ Exit 37

INSTALLATION DATE: STANDARD COORDINATION
PROGRAM DATE: OPTIMIZATION
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY		X				X		
EXT RECALL		X				X		
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	10		5	10	7	
PASSAGE	1.5	2.6	0.8		1.5	2.6	1.8	
YELLOW	4	4	4		4	4	4	
RED	2.5	2.5	2.5		2.5	2.5	2.5	
MAX I (AM)	15.5	26.5	18.5		55.5	36.5	18.5	
MAX II (PM)	23.5	23.5	13.5		5.5	41.5	13.5	
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X		X	X	X	

PED Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NUMBER: Electronics Pkwy @ Exit 37

INSTALLATION DATE:
PROGRAM DATE:
LMD 8000

CLUSTER COORDINATION
OPTIMIZATION

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY		X				X		
EXT RECALL		X				X		
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	10		5	10	7	
PASSAGE	1.5	2.6	0.8		1.5	2.6	1.8	
YELLOW	4	4	4		4	4	4	
RED	2	2	2		2	2	2.5	
MAX I (AM)	17.5	24.5	18.5		5.5	36.5	18.5	
MAX II (PM)	20.5	18.5	21.5		5.5	33.5	21.5	
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

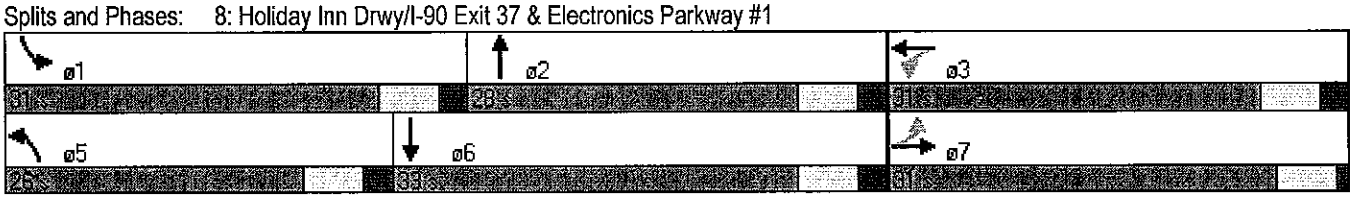
PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X		X	X	X	

PED Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	2	3	143	49	527	39	684	253	639
Turn Type	Perm		Perm		Free	Prot		Prot	
Protected Phases		7		3		5	2	1	6
Permitted Phases	7		3		Free				
Detector Phase	7	7	3	3		5		1	
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.5	4.5		4.5	10.0	4.5	10.0
Minimum Split (s)	9.0	9.0	10.5	10.5		10.5	16.0	10.5	16.0
Total Split (s)	31.0	31.0	31.0	31.0	0.0	26.0	28.0	31.0	33.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	0.0%	28.9%	31.1%	34.4%	36.7%
Maximum Green (s)	26.0	26.0	25.0	25.0		20.0	22.0	25.0	27.0
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	2.0	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	0.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Vehicle Extension (s)	2.0	2.0	2.2	2.2		2.2	2.2	2.2	2.2
Minimum Gap (s)	2.0	2.0	2.2	2.2		2.2	2.2	2.2	2.2
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	Max	None	Max
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 76.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

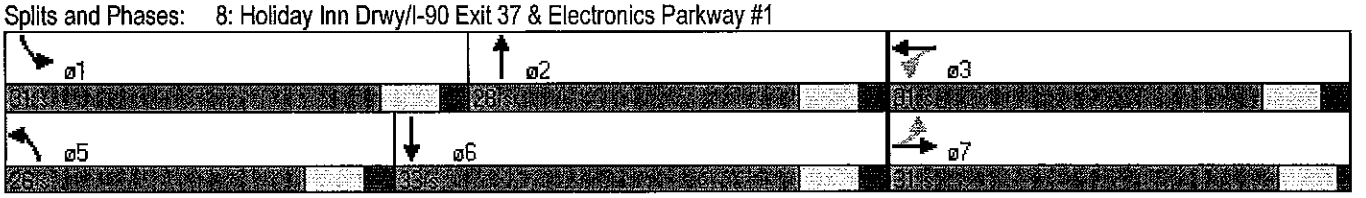
Splits and Phases: 8: Holiday Inn Drwy/I-90 Exit 37 & Electronics Parkway #1



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	43	37	161	7	313	5	686	405	880
Turn Type	Perm		Perm		Free	Prot		Prot	
Protected Phases		7		3		5	2	1	6
Permitted Phases	7		3		Free				
Detector Phase	7	7	3	3		5		1	
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.5	4.5		4.5	10.0	4.5	10.0
Minimum Split (s)	9.0	9.0	10.5	10.5		10.5	16.0	10.5	16.0
Total Split (s)	31.0	31.0	31.0	31.0	0.0	26.0	28.0	31.0	33.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	0.0%	28.9%	31.1%	34.4%	36.7%
Maximum Green (s)	26.0	26.0	25.0	25.0		20.0	22.0	25.0	27.0
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	2.0	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	0.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Vehicle Extension (s)	2.0	2.0	2.2	2.2		2.2	2.2	2.2	2.2
Minimum Gap (s)	2.0	2.0	2.2	2.2		2.2	2.2	2.2	2.2
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	Max	None	Max
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

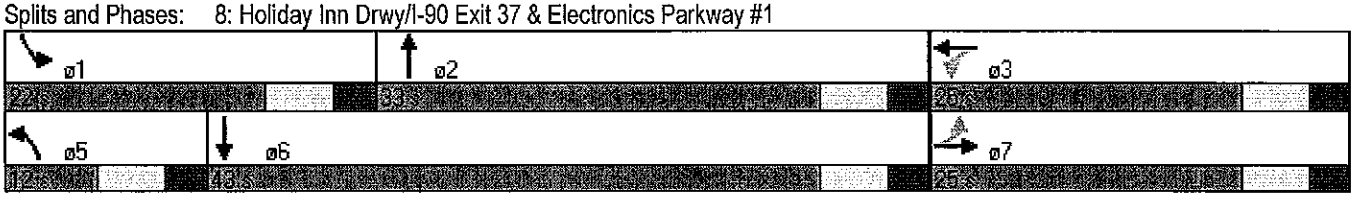
Splits and Phases: 8: Holiday Inn Drwy/I-90 Exit 37 & Electronics Parkway #1



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	2	3	143	49	527	39	684	253	639
Turn Type	Perm		Perm		Free	Prot		Prot	
Protected Phases		7		3		5	2	1	6
Permitted Phases	7		3		Free				
Detector Phase	7	7	3	3		5	2	1	6
Switch Phase									
Minimum Initial (s)	7.0	7.0	10.0	10.0		5.0	10.0	5.0	10.0
Minimum Split (s)	13.5	13.5	16.5	16.5		11.5	16.5	11.5	16.5
Total Split (s)	25.0	25.0	25.0	25.0	0.0	12.0	33.0	22.0	43.0
Total Split (%)	31.3%	31.3%	31.3%	31.3%	0.0%	15.0%	41.3%	27.5%	53.8%
Maximum Green (s)	18.5	18.5	18.5	18.5		5.5	26.5	15.5	36.5
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	0.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Vehicle Extension (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	C-Min	None	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 8: Holiday Inn Drwy/I-90 Exit 37 & Electronics Parkway #1

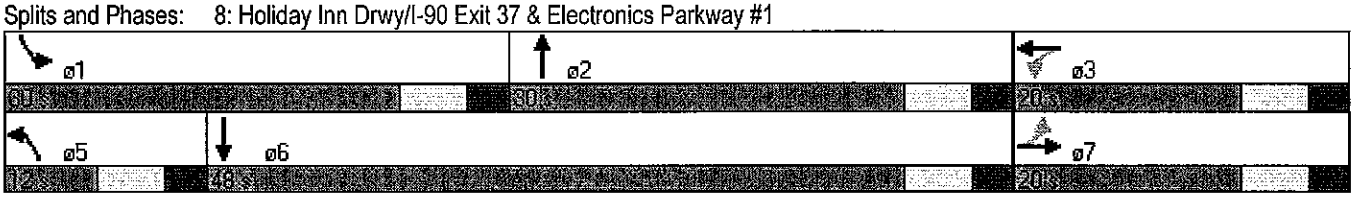


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	43	37	161	7	313	5	686	405	880
Turn Type	Perm		Perm		Free	Prot		Prot	
Protected Phases		7		3		5	2	1	6
Permitted Phases	7		3		Free				
Detector Phase	7	7	3	3		5	2	1	6
Switch Phase									
Minimum Initial (s)	7.0	7.0	10.0	10.0		5.0	10.0	5.0	10.0
Minimum Split (s)	13.5	13.5	16.5	16.5		11.5	16.5	11.5	16.5
Total Split (s)	20.0	20.0	20.0	20.0	0.0	12.0	30.0	30.0	48.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	0.0%	15.0%	37.5%	37.5%	60.0%
Maximum Green (s)	13.5	13.5	13.5	13.5		5.5	23.5	23.5	41.5
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	0.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Vehicle Extension (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	C-Min	None	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated

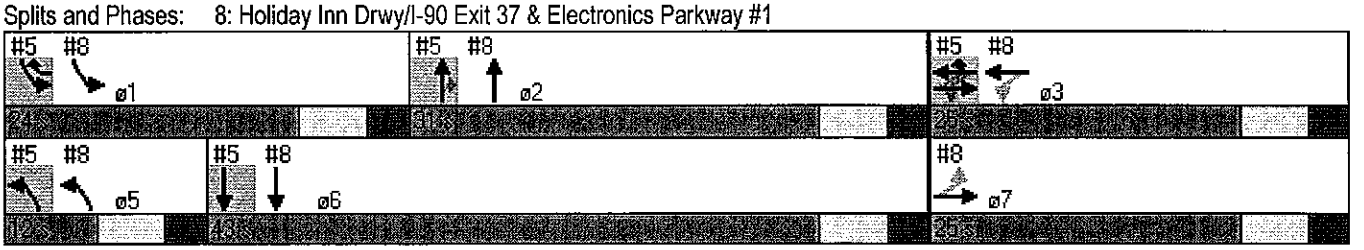
Splits and Phases: 8: Holiday Inn Drwy/I-90 Exit 37 & Electronics Parkway #1



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	2	3	143	49	527	39	684	253	639
Turn Type	Perm		Perm		Free	Prot		Prot	
Protected Phases		7		3		5	2	1	6
Permitted Phases	7		3		Free				
Detector Phase	7	7	3	3		5	2	1	6
Switch Phase									
Minimum Initial (s)	7.0	7.0	10.0	10.0		5.0	10.0	5.0	10.0
Minimum Split (s)	13.5	13.5	16.5	16.5		11.5	16.5	11.5	16.5
Total Split (s)	25.0	25.0	25.0	25.0	0.0	12.0	31.0	24.0	43.0
Total Split (%)	31.3%	31.3%	31.3%	31.3%	0.0%	15.0%	38.8%	30.0%	53.8%
Maximum Green (s)	18.5	18.5	18.5	18.5		5.5	24.5	17.5	36.5
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	0.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Vehicle Extension (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	C-Min	None	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 8: Holiday Inn Drwy/I-90 Exit 37 & Electronics Parkway #1

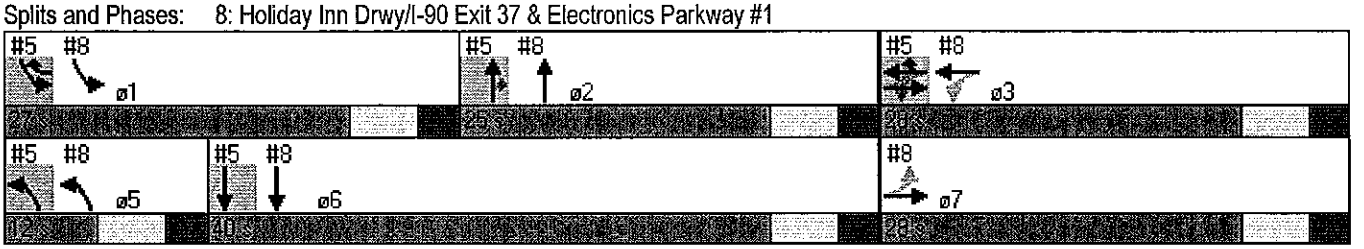


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	43	37	161	7	313	5	686	405	880
Turn Type	Perm		Perm		Free	Prot		Prot	
Protected Phases		7		3		5	2	1	6
Permitted Phases	7		3		Free				
Detector Phase	7	7	3	3		5	2	1	6
Switch Phase									
Minimum Initial (s)	7.0	7.0	10.0	10.0		5.0	10.0	5.0	10.0
Minimum Split (s)	13.5	13.5	16.5	16.5		11.5	16.5	11.5	16.5
Total Split (s)	28.0	28.0	28.0	28.0	0.0	12.0	25.0	27.0	40.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	0.0%	15.0%	31.3%	33.8%	50.0%
Maximum Green (s)	21.5	21.5	21.5	21.5		5.5	18.5	20.5	33.5
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	0.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.5	4.5
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Vehicle Extension (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	0.8	0.8		1.5	3.8	1.5	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None		None	C-Min	None	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 8: Holiday Inn Drwy/I-90 Exit 37 & Electronics Parkway #1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	3	3	143	49	527	39	684	111	253	639	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.93			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2046	1992			1805	1583	1805	3380		1671	3353	
Flt Permitted	0.40	1.00			0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	862	1992			1448	1583	1805	3380		1671	3353	
Peak-hour factor, PHF	0.50	0.50	0.50	0.68	0.68	0.68	0.75	0.75	0.75	0.91	0.91	0.91
Adj. Flow (vph)	4	6	6	210	72	775	52	912	148	278	702	54
RTOR Reduction (vph)	0	4	0	0	0	0	0	13	0	0	4	0
Lane Group Flow (vph)	4	8	0	0	282	775	52	1047	0	278	752	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	2%	0%	5%	2%	8%	7%	0%
Turn Type	Perm			Perm		Free	Prot			Prot		
Protected Phases		7			3		5	2		1	6	
Permitted Phases	7			3		Free						
Actuated Green, G (s)	19.5	19.5			18.5	78.8	4.5	25.3		17.0	37.8	
Effective Green, g (s)	21.5	21.5			20.5	78.8	6.5	27.3		19.0	39.8	
Actuated g/C Ratio	0.27	0.27			0.26	1.00	0.08	0.35		0.24	0.51	
Clearance Time (s)	5.0	5.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0			2.2		2.2	2.2		2.2	2.2	
Lane Grp Cap (vph)	235	544			377	1583	149	1171		403	1694	
v/s Ratio Prot		0.00					0.03	c0.31		c0.17	0.22	
v/s Ratio Perm	0.00				c0.19	0.49						
v/c Ratio	0.02	0.01			0.75	0.49	0.35	0.89		0.69	0.44	
Uniform Delay, d1	20.9	20.9			26.8	0.0	34.2	24.4		27.2	12.4	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0			7.2	1.1	0.7	10.6		4.1	0.8	
Delay (s)	20.9	20.9			33.9	1.1	34.9	35.0		31.3	13.3	
Level of Service	C	C			C	A	C	C		C	B	
Approach Delay (s)		20.9			9.9			35.0			18.1	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	78.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
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)	43	37	11	161	7	313	5	686	138	405	880	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	3.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97			1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2046	2039			1796	1568	1805	3450		1787	3570	
Flt Permitted	0.52	1.00			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1120	2039			1273	1568	1805	3450		1787	3570	
Peak-hour factor, PHF	0.60	0.60	0.60	0.91	0.91	0.91	0.89	0.89	0.89	0.86	0.86	0.86
Adj. Flow (vph)	72	62	18	177	8	344	6	771	155	471	1023	8
RTOR Reduction (vph)	0	13	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	72	67	0	0	185	344	6	910	0	471	1031	0
Heavy Vehicles (%)	0%	0%	9%	1%	0%	3%	0%	2%	2%	1%	1%	0%
Turn Type	Perm			Perm		Free	Prot			Prot		
Protected Phases		7			3		5	2		1	6	
Permitted Phases	7			3		Free						
Actuated Green, G (s)	17.0	17.0			16.0	84.2	1.0	27.2		23.0	49.2	
Effective Green, g (s)	19.0	19.0			18.0	84.2	3.0	29.2		25.0	51.2	
Actuated g/C Ratio	0.23	0.23			0.21	1.00	0.04	0.35		0.30	0.61	
Clearance Time (s)	5.0	5.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0			2.2		2.2	2.2		2.2	2.2	
Lane Grp Cap (vph)	253	460			272	1568	64	1196		531	2171	
v/s Ratio Prot		0.03					0.00	c0.26		c0.26	0.29	
v/s Ratio Perm	0.06				c0.15	0.22						
v/c Ratio	0.28	0.15			0.68	0.22	0.09	0.76		0.89	0.47	
Uniform Delay, d1	27.0	26.1			30.5	0.0	39.3	24.4		28.3	9.1	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.1			5.8	0.3	0.3	4.6		16.0	0.7	
Delay (s)	27.2	26.2			36.2	0.3	39.6	29.0		44.3	9.8	
Level of Service	C	C			D	A	D	C		D	A	
Approach Delay (s)		26.6			12.9			29.1			20.6	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	84.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	3	3	143	49	527	39	684	111	253	639	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.93			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2046	1992			1805	1583	1805	3380		1671	3353	
Flt Permitted	0.37	1.00			0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	798	1992			1448	1583	1805	3380		1671	3353	
Peak-hour factor, PHF	0.50	0.50	0.50	0.68	0.68	0.68	0.75	0.75	0.75	0.91	0.91	0.91
Adj. Flow (vph)	4	6	6	210	72	775	52	912	148	278	702	54
RTOR Reduction (vph)	0	5	0	0	0	0	0	15	0	0	7	0
Lane Group Flow (vph)	4	7	0	0	282	775	52	1045	0	278	749	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	2%	0%	5%	2%	8%	7%	0%
Turn Type	Perm			Perm		Free	Prot			Prot		
Protected Phases		7			3		5	2		1	6	
Permitted Phases	7			3		Free						
Actuated Green, G (s)	16.7	16.7			16.7	80.0	3.3	29.3		14.5	40.5	
Effective Green, g (s)	18.7	18.7			18.7	80.0	5.3	31.3		16.5	42.5	
Actuated g/C Ratio	0.23	0.23			0.23	1.00	0.07	0.39		0.21	0.53	
Clearance Time (s)	6.5	6.5			6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	1.8	1.8			0.8		1.5	3.8		1.5	3.8	
Lane Grp Cap (vph)	187	466			338	1583	120	1322		345	1781	
v/s Ratio Prot		0.00					0.03	c0.31		c0.17	0.22	
v/s Ratio Perm	0.01				c0.19	0.49						
v/c Ratio	0.02	0.02			0.83	0.49	0.43	0.79		0.81	0.42	
Uniform Delay, d1	23.6	23.6			29.2	0.0	35.9	21.5		30.2	11.3	
Progression Factor	1.00	1.00			1.00	1.00	0.99	0.85		1.36	0.94	
Incremental Delay, d2	0.0	0.0			15.4	1.1	0.8	4.5		11.3	0.7	
Delay (s)	23.6	23.6			44.6	1.1	36.5	22.6		52.3	11.4	
Level of Service	C	C			D	A	D	C		D	B	
Approach Delay (s)		23.6			12.7			23.3			22.4	
Approach LOS		C			B			C			C	

Intersection Summary				
HCM Average Control Delay	19.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	64.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	37	11	161	7	313	5	686	138	405	880	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97			1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2046	2039			1796	1568	1805	3450		1787	3570	
Flt Permitted	0.51	1.00			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1097	2039			1275	1568	1805	3450		1787	3570	
Peak-hour factor, PHF	0.60	0.60	0.60	0.91	0.91	0.91	0.89	0.89	0.89	0.86	0.86	0.86
Adj. Flow (vph)	72	62	18	177	8	344	6	771	155	471	1023	8
RTOR Reduction (vph)	0	13	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	72	67	0	0	185	344	6	906	0	471	1031	0
Heavy Vehicles (%)	0%	0%	9%	1%	0%	3%	0%	2%	2%	1%	1%	0%
Turn Type	Perm			Perm		Free	Prot			Prot		
Protected Phases		7			3		5	2		1	6	
Permitted Phases	7			3		Free						
Actuated Green, G (s)	12.6	12.6			12.6	80.0	1.0	25.8		22.1	46.9	
Effective Green, g (s)	14.6	14.6			14.6	80.0	3.0	27.8		24.1	48.9	
Actuated g/C Ratio	0.18	0.18			0.18	1.00	0.04	0.35		0.30	0.61	
Clearance Time (s)	6.5	6.5			6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	1.8	1.8			0.8		1.5	3.8		1.5	3.8	
Lane Grp Cap (vph)	200	372			233	1568	68	1199		538	2182	
v/s Ratio Prot		0.03					0.00	c0.26		c0.26	0.29	
v/s Ratio Perm	0.07				c0.15	0.22						
v/c Ratio	0.36	0.18			0.79	0.22	0.09	0.76		0.88	0.47	
Uniform Delay, d1	28.6	27.6			31.3	0.0	37.2	23.1		26.5	8.5	
Progression Factor	1.00	1.00			1.00	1.00	0.88	0.78		0.68	1.26	
Incremental Delay, d2	0.4	0.1			15.8	0.3	0.2	4.1		11.2	0.5	
Delay (s)	29.0	27.7			47.0	0.3	33.0	22.1		29.3	11.3	
Level of Service	C	C			D	A	C	C		C	B	
Approach Delay (s)		28.3			16.7			22.2			16.9	
Approach LOS		C			B			C			B	

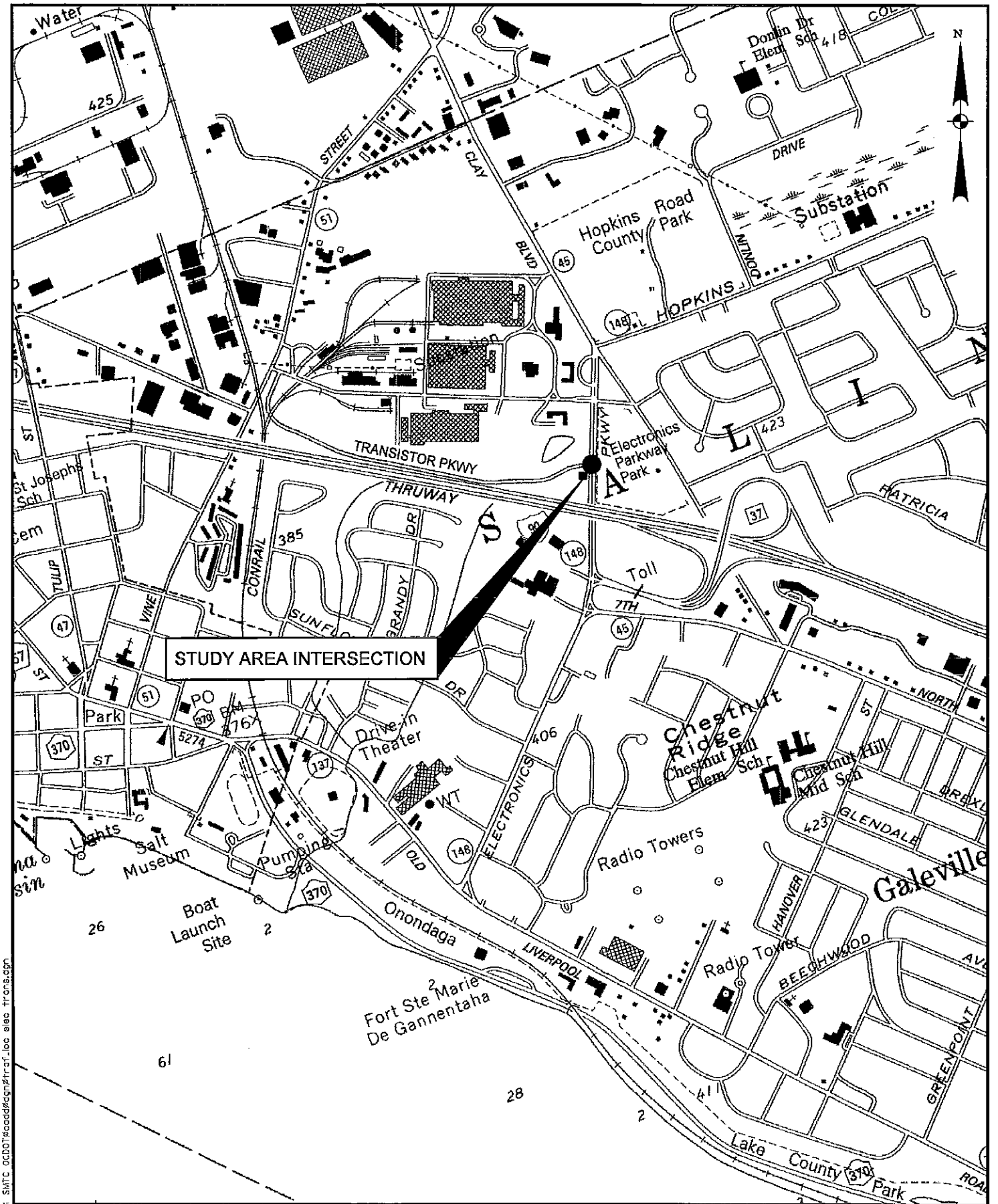
Intersection Summary				
HCM Average Control Delay	19.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	73.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	3	3	143	49	527	39	684	111	253	639	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.93			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2046	1992			1805	1583	1805	3380		1671	3353	
Flt Permitted	0.37	1.00			0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	798	1992			1448	1583	1805	3380		1671	3353	
Peak-hour factor, PHF	0.50	0.50	0.50	0.68	0.68	0.68	0.75	0.75	0.75	0.91	0.91	0.91
Adj. Flow (vph)	4	6	6	210	72	775	52	912	148	278	702	54
RTOR Reduction (vph)	0	5	0	0	0	0	0	15	0	0	7	0
Lane Group Flow (vph)	4	7	0	0	282	775	52	1045	0	278	749	0
Heavy Vehicles (%)	0%	0%	0%	2%	0%	2%	0%	5%	2%	8%	7%	0%
Turn Type	Perm			Perm		Free	Prot			Prot		
Protected Phases		7			3		5	2		1	6	
Permitted Phases	7			3		Free						
Actuated Green, G (s)	16.7	16.7			16.7	80.0	3.3	28.0		15.8	40.5	
Effective Green, g (s)	18.7	18.7			18.7	80.0	5.3	30.0		17.8	42.5	
Actuated g/C Ratio	0.23	0.23			0.23	1.00	0.07	0.38		0.22	0.53	
Clearance Time (s)	6.5	6.5			6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	1.8	1.8			0.8		1.5	3.8		1.5	3.8	
Lane Grp Cap (vph)	187	466			338	1583	120	1268		372	1781	
v/s Ratio Prot		0.00					0.03	c0.31		c0.17	0.22	
v/s Ratio Perm	0.01				c0.19	0.49						
v/c Ratio	0.02	0.02			0.83	0.49	0.43	0.82		0.75	0.42	
Uniform Delay, d1	23.6	23.6			29.2	0.0	35.9	22.6		29.0	11.3	
Progression Factor	1.00	1.00			1.00	1.00	0.99	0.81		1.64	0.29	
Incremental Delay, d2	0.0	0.0			15.4	1.1	0.8	5.7		6.3	0.7	
Delay (s)	23.6	23.6			44.6	1.1	36.3	23.9		53.9	3.9	
Level of Service	C	C			D	A	D	C		D	A	
Approach Delay (s)		23.6			12.7			24.5			17.4	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	37	11	161	7	313	5	686	138	405	880	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97			1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2046	2039			1796	1568	1805	3450		1787	3570	
Flt Permitted	0.57	1.00			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1232	2039			1275	1568	1805	3450		1787	3570	
Peak-hour factor, PHF	0.60	0.60	0.60	0.91	0.91	0.91	0.89	0.89	0.89	0.86	0.86	0.86
Adj. Flow (vph)	72	62	18	177	8	344	6	771	155	471	1023	8
RTOR Reduction (vph)	0	13	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	72	67	0	0	185	344	6	906	0	471	1031	0
Heavy Vehicles (%)	0%	0%	9%	1%	0%	3%	0%	2%	2%	1%	1%	0%
Turn Type	Perm			Perm		Free	Prot			Prot		
Protected Phases		7			3		5	2		1	6	
Permitted Phases	7			3		Free						
Actuated Green, G (s)	19.0	19.0			19.0	80.0	2.1	20.3		21.2	39.4	
Effective Green, g (s)	21.0	21.0			21.0	80.0	4.1	22.3		23.2	41.4	
Actuated g/C Ratio	0.26	0.26			0.26	1.00	0.05	0.28		0.29	0.52	
Clearance Time (s)	6.5	6.5			6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	1.8	1.8			0.8		1.5	3.8		1.5	3.8	
Lane Grp Cap (vph)	323	535			335	1568	93	962		518	1847	
v/s Ratio Prot		0.03					0.00	c0.26		c0.26	0.29	
v/s Ratio Perm	0.06				c0.15	0.22						
v/c Ratio	0.22	0.12			0.55	0.22	0.06	0.94		0.91	0.56	
Uniform Delay, d1	23.1	22.5			25.4	0.0	36.1	28.2		27.4	13.1	
Progression Factor	1.00	1.00			1.00	1.00	1.00	0.67		0.67	0.79	
Incremental Delay, d2	0.1	0.0			1.1	0.3	0.1	16.5		15.0	0.9	
Delay (s)	23.2	22.5			26.6	0.3	36.2	35.3		33.3	11.3	
Level of Service	C	C			C	A	D	D		C	B	
Approach Delay (s)		22.9			9.5			35.3			18.2	
Approach LOS		C			A			D			B	

Intersection Summary				
HCM Average Control Delay	22.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	73.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



LOCATION MAP
ELECTRONICS PKWY/TRANSISTOR PKWY

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B.5

ddoran
F:\Projects\2009\09-094 SWTC OCDOT\acad\dgn\final\loc elec trans.dgn

INTERSECTION DIAGRAM

Location

Electronics Parkway at Transistor Parkway

Legend

Sign | Signal Head | Signal with Span Wire | ## (Feet) | Light Pole | Sidewalk

Drawn By KK

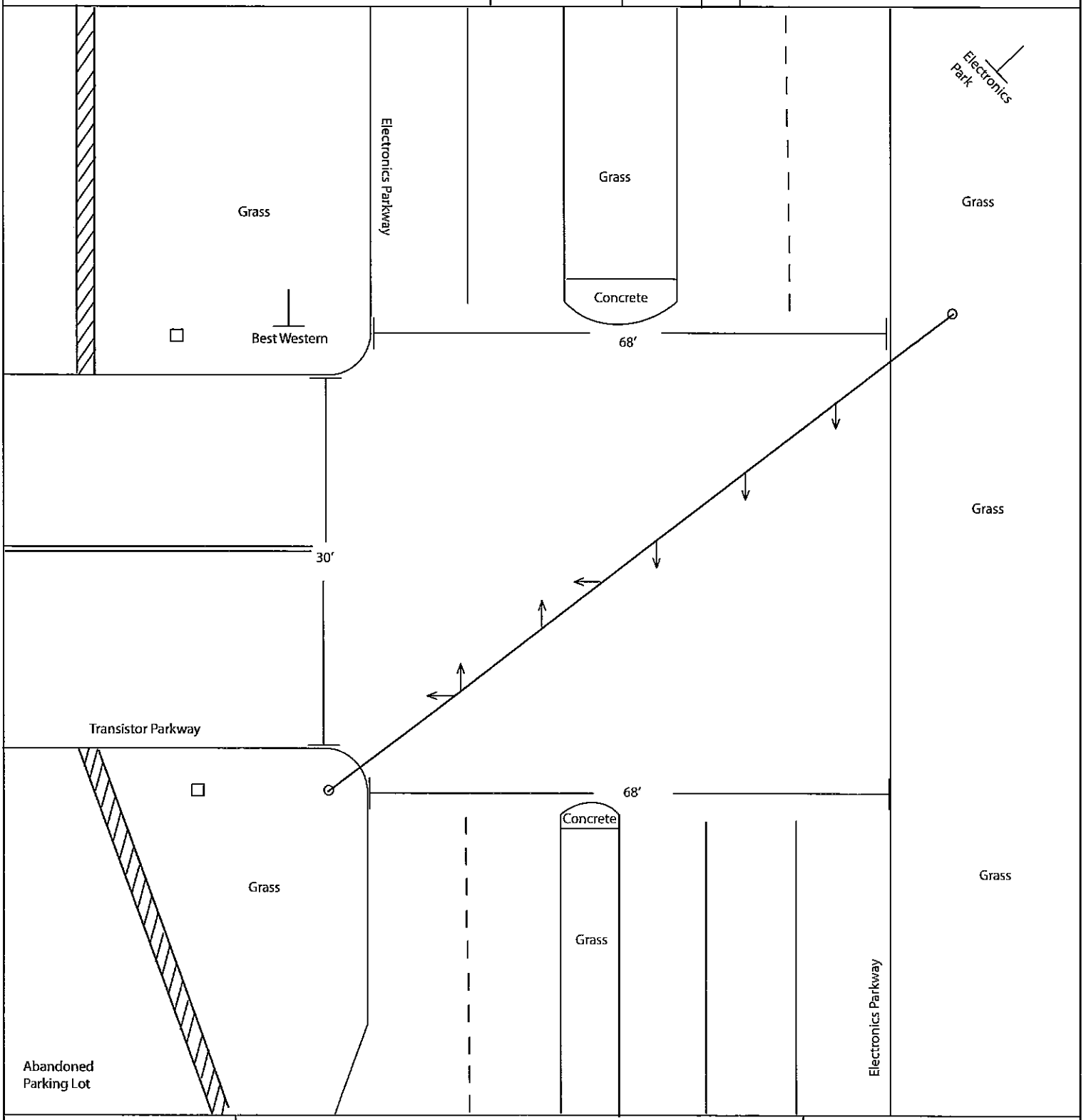
Date May 2010

Prepared By SMTC

N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.



Task

OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only. SMTC does not guarantee the accuracy or completeness of this diagram.

Diagram is not to scale.

Fisher Associates
135 Calkins Road
Rochester NY 14623
585-334-1310

Electronics Pkwy & Transistor Pkwy
Town of Salina
Morning Count Period

File Name : 5 electronics & transistor AM
Site Code : 78204100
Start Date : 3/25/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Electronics Pkwy Southbound					Westbound					Electronics Pkwy Northbound					Transistor Pkwy Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
07:00 AM	0	168	0	0	168	0	0	0	0	0	0	215	2	0	217	1	0	2	0	3	388
07:15 AM	0	216	0	0	216	0	0	0	0	0	0	269	0	0	269	0	0	1	0	1	486
07:30 AM	0	245	0	0	245	0	0	0	0	0	0	271	1	0	272	3	0	2	1	6	523
07:45 AM	0	250	0	0	250	0	0	0	0	0	0	386	0	0	386	0	0	1	0	1	637
Total	0	879	0	0	879	0	0	0	0	0	0	1141	3	0	1144	4	0	6	1	11	2034
08:00 AM	0	230	0	0	230	0	0	0	0	0	0	235	0	0	235	1	0	0	0	1	466
08:15 AM	8	204	0	0	212	0	0	0	0	0	0	216	0	0	216	0	0	0	0	0	428
08:30 AM	12	142	0	0	154	0	0	0	0	0	0	189	2	0	191	0	0	1	2	3	348
08:45 AM	1	188	1	0	190	0	0	0	0	0	0	177	6	0	183	1	0	2	0	3	376
Total	21	764	1	0	786	0	0	0	0	0	0	817	8	0	825	2	0	3	2	7	1618
Grand Total	21	1643	1	0	1665	0	0	0	0	0	0	1958	11	0	1969	6	0	9	3	18	3652
Apprch %	1.3	98.7	0.1	0		0	0	0	0		0	99.4	0.6	0		33.3	0	50	16.7		
Total %	0.6	45	0	0	45.6	0	0	0	0	0	0	53.6	0.3	0	53.9	0.2	0	0.2	0.1	0.5	
Cars	21	1534	1	0	1556	0	0	0	0	0	0	1868	10	0	1878	6	0	9	3	18	3452
% Cars	100	93.4	100	0	93.5	0	0	0	0	0	0	95.4	90.9	0	95.4	100	0	100	100	100	94.5
Buses	0	22	0	0	22	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	44
% Buses	0	1.3	0	0	1.3	0	0	0	0	0	0	1.1	0	0	1.1	0	0	0	0	0	1.2
Trucks	0	87	0	0	87	0	0	0	0	0	0	68	1	0	69	0	0	0	0	0	156
% Trucks	0	5.3	0	0	5.2	0	0	0	0	0	0	3.5	9.1	0	3.5	0	0	0	0	0	4.3

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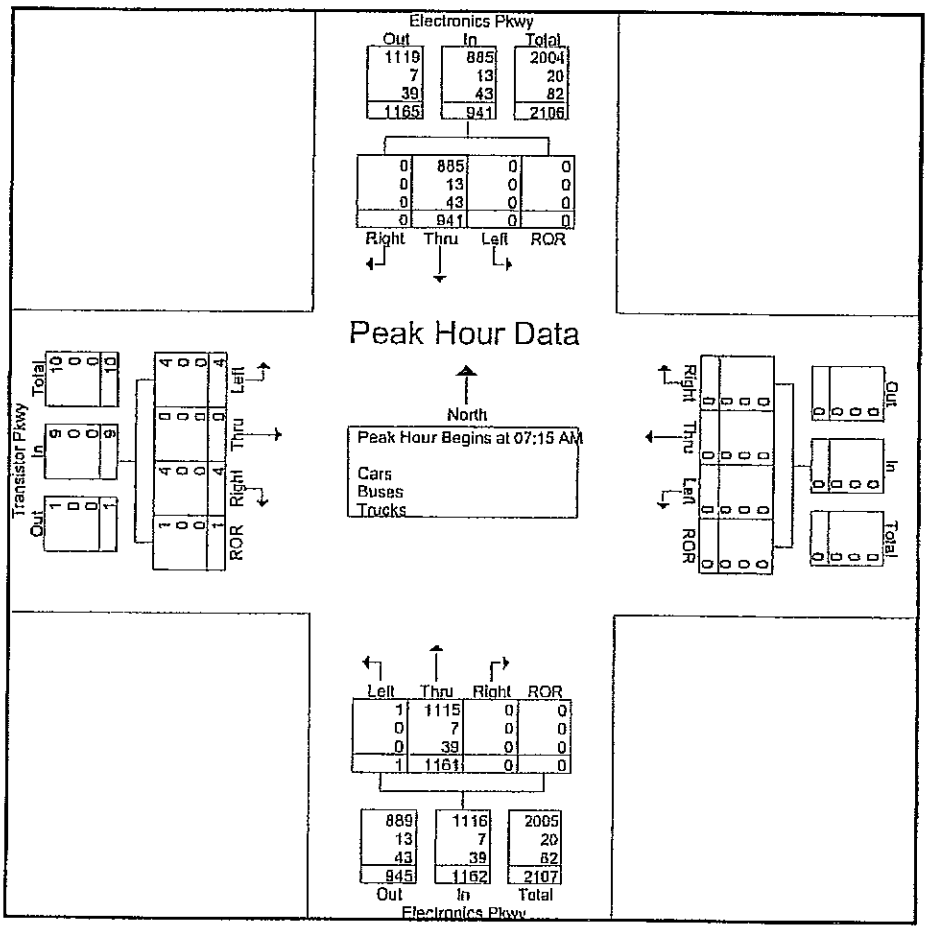
Electronics Pkwy & Transistor Pkwy
Town of Salina
Morning Count Period

File Name : 5 electronics & transistor AM
Site Code : 78204100
Start Date : 3/25/2010
Page No : 2

	Electronics Pkwy Southbound					Westbound					Electronics Pkwy Northbound					Transistor Pkwy Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	216	0	0	216	0	0	0	0	0	0	269	0	0	269	0	0	1	0	1	486
07:30 AM	0	245	0	0	245	0	0	0	0	0	0	271	1	0	272	3	0	2	1	6	523
07:45 AM	0	250	0	0	250	0	0	0	0	0	0	386	0	0	386	0	0	1	0	1	637
08:00 AM	0	230	0	0	230	0	0	0	0	0	0	235	0	0	235	1	0	0	0	1	466
Total Volume	0	941	0	0	941	0	0	0	0	0	0	1161	1	0	1162	4	0	4	1	9	2112
% App. Total	0	100	0	0		0	0	0	0		0	99.9	0.1	0		44.4	0	44.4	11.1		
PHF	.000	.941	.000	.000	.941	.000	.000	.000	.000	.000	.000	.752	.250	.000	.753	.333	.000	.500	.250	.375	.829
Cars	0	885	0	0	885	0	0	0	0	0	0	1115									
% Cars	0	94.0	0	0	94.0	0	0	0	0	0	0	96.0	100	0	96.0	100	0	100	100	100	95.2
Buses	0	13	0	0	13	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	20
% Buses	0	1.4	0	0	1.4	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0.9
Trucks	0	43	0	0	43	0	0	0	0	0	0	39	0	0	39	0	0	0	0	0	82
% Trucks	0	4.6	0	0	4.6	0	0	0	0	0	0	3.4	0	0	3.4	0	0	0	0	0	3.9



Fisher Associates
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Rochester NY 14623
585-334-1310

Electronics Pkwy & Transistor Pkwy
Town of Salina
Evening Count Period

File Name : 5 Electronics & Transistor PM
Site Code : 78204101
Start Date : 3/25/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Electronics Pkwy Southbound					Westbound					Electronics Pkwy Northbound					Transistor Pkwy Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
04:00 PM	1	249	0	0	250	0	0	0	0	0	0	216	6	0	222	1	0	0	2	3	475
04:15 PM	3	219	0	0	222	0	0	0	0	0	0	242	7	0	249	3	0	0	3	6	477
04:30 PM	1	350	1	0	352	0	0	0	0	0	0	246	4	0	250	2	0	0	3	5	607
04:45 PM	5	289	0	0	294	0	0	0	0	0	0	229	25	0	254	2	0	1	2	5	553
Total	10	1107	1	0	1118	0	0	0	0	0	0	933	42	0	975	8	0	1	10	19	2112
05:00 PM	2	412	0	0	414	0	0	0	0	0	0	324	4	0	328	2	0	2	1	5	747
05:15 PM	0	281	0	0	281	0	0	0	0	0	0	270	2	0	272	6	0	0	1	7	560
05:30 PM	0	238	0	0	238	0	0	0	0	0	0	226	1	0	227	5	0	0	1	6	471
05:45 PM	0	213	0	0	213	0	0	0	0	0	0	193	2	0	195	3	0	0	1	4	412
Total	2	1144	0	0	1146	0	0	0	0	0	0	1013	9	0	1022	16	0	2	4	22	2190
Grand Total	12	2251	1	0	2264	0	0	0	0	0	0	1946	51	0	1997	24	0	3	14	41	4302
Apprch %	0.5	99.4	0	0		0	0	0	0		0	97.4	2.6	0		58.5	0	7.3	34.1		
Total %	0.3	52.3	0	0	52.6	0	0	0	0	0	0	45.2	1.2	0	46.4	0.6	0	0.1	0.3	1	
Cars	12	2209	1	0	2222	0	0	0	0	0	0	1887	50	0	1937	24	0	3	14	41	4200
% Cars	100	98.1	100	0	98.1	0	0	0	0	0	0	97	98	0	97	100	0	100	100	100	97.6
Buses	0	9	0	0	9	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	18
% Buses	0	0.4	0	0	0.4	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0.4
Trucks	0	33	0	0	33	0	0	0	0	0	0	50	1	0	51	0	0	0	0	0	84
% Trucks	0	1.5	0	0	1.5	0	0	0	0	0	0	2.6	2	0	2.6	0	0	0	0	0	2

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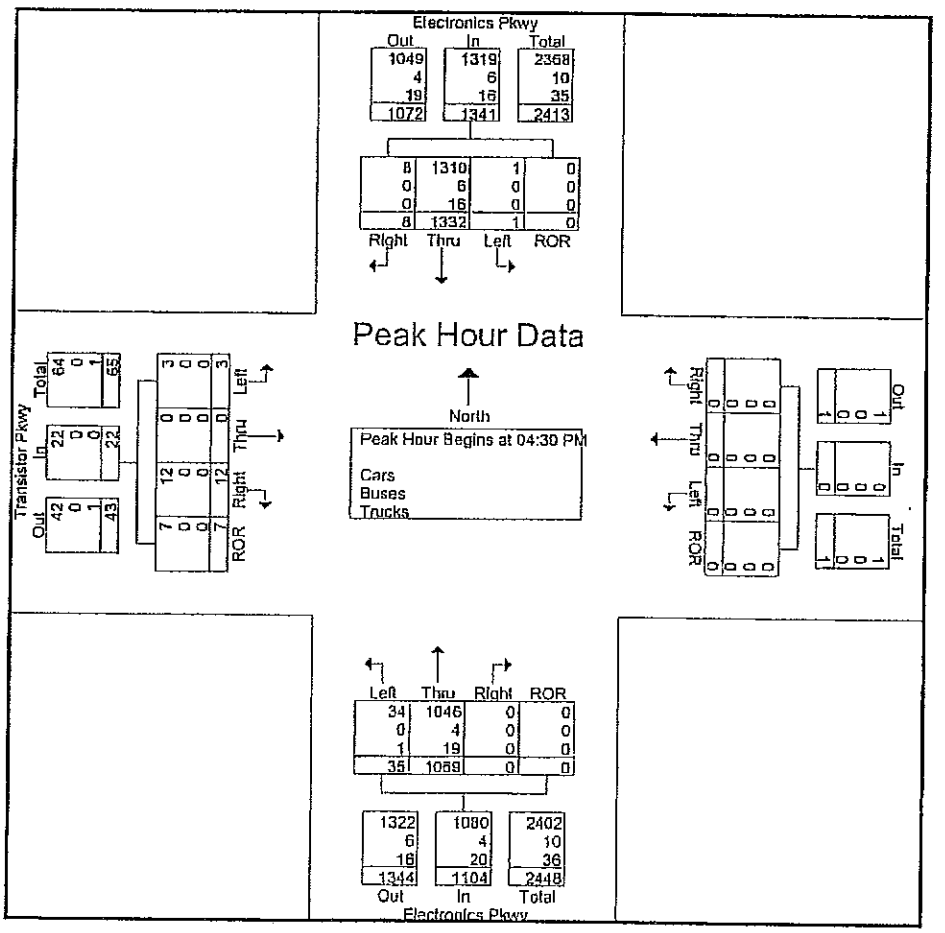
Electronics Pkwy & Transistor Pkwy
Town of Salina
Evening Count Period

File Name : 5 Electronics & Transistor PM
Site Code : 78204101
Start Date : 3/25/2010
Page No : 2

	Electronics Pkwy Southbound					Westbound					Electronics Pkwy Northbound					Transistor Pkwy Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	350	1	0	352	0	0	0	0	0	0	246	4	0	250	2	0	0	3	5	607
04:45 PM	5	289	0	0	294	0	0	0	0	0	0	229	25	0	254	2	0	1	2	5	553
05:00 PM	2	412	0	0	414	0	0	0	0	0	0	324	4	0	328	2	0	2	1	5	747
05:15 PM	0	281	0	0	281	0	0	0	0	0	0	270	2	0	272	6	0	0	1	7	560
Total Volume	8	1332	1	0	1341	0	0	0	0	0	0	1069	35	0	1104	12	0	3	7	22	2467
% App. Total	0.6	99.3	0.1	0		0	0	0	0		0	96.8	3.2	0		54.5	0	13.6	31.8		
PHF	.400	.808	.250	.000	.810	.000	.000	.000	.000	.000	.000	.825	.350	.000	.841	.500	.000	.375	.583	.786	.826
Cars	8	1310										1046									
% Cars	100	98.3	100	0	98.4	0	0	0	0	0	0	97.8	97.1	0	97.8	100	0	100	100	100	98.1
Buses	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	10
% Buses	0	0.5	0	0	0.4	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0.4
Trucks	0	16	0	0	16	0	0	0	0	0	0	19	1	0	20	0	0	0	0	0	36
% Trucks	0	1.2	0	0	1.2	0	0	0	0	0	0	1.8	2.9	0	1.8	0	0	0	0	0	1.5



INTERSECTION NAME: Electronics @ Transistor
INTERSECTION NUMBER:

INSTALLATION DATE:
PROGRAM DATE:

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL		X						
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	4.5	14	4.5					
PASSAGE	2.2	2	2.2					
YELLOW	3	4	3					
RED	1	1	1					
MAX I	22	22	30					
MAX II	30	40	30					
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X					

PED Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA	X	X						
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NAME: Electronics @ Transistor
INTERSECTION NUMBER:

INSTALLATION DATE:
PROGRAM DATE:

COORDINATION
OPTIMIZATION

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	7					
PASSAGE	1.5	2.6	1.8					
YELLOW	4.5	4.5	4.5					
RED	2	2	2					
MAX I	5.5	47.5	7.5					
MAX II	5.5	47.5	7.5					
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

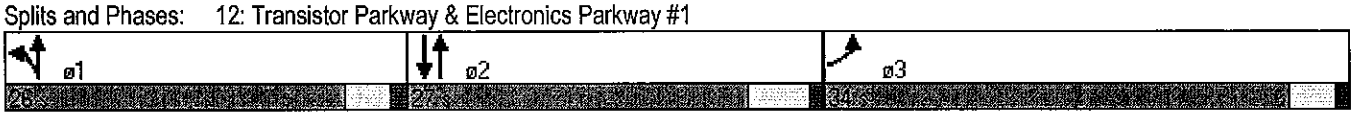
	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X					

INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	4	1	1161	941
Turn Type		Prot		
Protected Phases	3	1	1 2	2
Permitted Phases				
Detector Phase	3	1		
Switch Phase				
Minimum Initial (s)	4.5	4.5		14.0
Minimum Split (s)	8.5	8.5		19.0
Total Split (s)	34.0	26.0	53.0	27.0
Total Split (%)	39.1%	29.9%	60.9%	31.0%
Maximum Green (s)	30.0	22.0		22.0
Yellow Time (s)	3.0	3.0		4.0
All-Red Time (s)	1.0	1.0		1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	2.0	2.0	3.0
Lead/Lag		Lead		Lag
Lead-Lag Optimize?				
Vehicle Extension (s)	2.2	2.2		2.2
Minimum Gap (s)	2.2	2.2		2.2
Time Before Reduce (s)	12.0	12.0		12.0
Time To Reduce (s)	10.0	10.0		10.0
Recall Mode	None	None		Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary
Cycle Length: 87
Actuated Cycle Length: 42.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 12: Transistor Parkway & Electronics Parkway #1

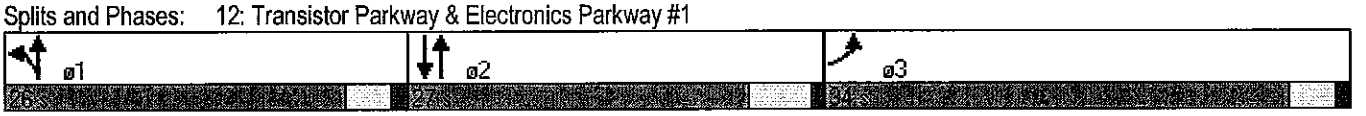


Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	3	35	1069	1332
Turn Type		Prot		
Protected Phases	3	1	1 2	2
Permitted Phases				
Detector Phase	3	1		
Switch Phase				
Minimum Initial (s)	4.5	4.5		14.0
Minimum Split (s)	8.5	8.5		19.0
Total Split (s)	34.0	26.0	53.0	27.0
Total Split (%)	39.1%	29.9%	60.9%	31.0%
Maximum Green (s)	30.0	22.0		22.0
Yellow Time (s)	3.0	3.0		4.0
All-Red Time (s)	1.0	1.0		1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.0	2.0	2.0	3.0
Lead/Lag		Lead		Lag
Lead-Lag Optimize?				
Vehicle Extension (s)	2.2	2.2		2.2
Minimum Gap (s)	2.2	2.2		2.2
Time Before Reduce (s)	12.0	12.0		12.0
Time To Reduce (s)	10.0	10.0		10.0
Recall Mode	None	None		Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary

Cycle Length: 87
Actuated Cycle Length: 40.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated

Splits and Phases: 12: Transistor Parkway & Electronics Parkway #1

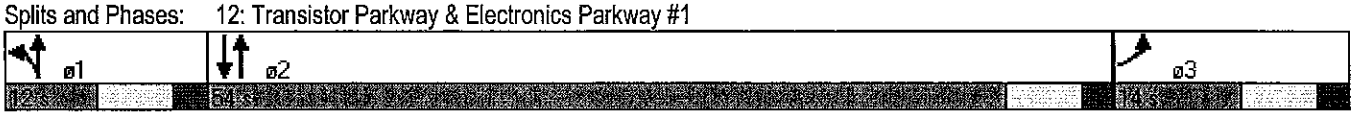


Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	4	1	1161	941
Turn Type		Prot		
Protected Phases	3	1	1 2	2
Permitted Phases				
Detector Phase	3	1	1 2	2
Switch Phase				
Minimum Initial (s)	7.0	5.0		10.0
Minimum Split (s)	13.5	11.5		16.5
Total Split (s)	14.0	12.0	66.0	54.0
Total Split (%)	17.5%	15.0%	82.5%	67.5%
Maximum Green (s)	7.5	5.5		47.5
Yellow Time (s)	4.5	4.5		4.5
All-Red Time (s)	2.0	2.0		2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lead		Lag
Lead-Lag Optimize?				
Vehicle Extension (s)	1.8	3.0		3.8
Minimum Gap (s)	1.8	3.0		3.8
Time Before Reduce (s)	12.0	12.0		12.0
Time To Reduce (s)	10.0	10.0		10.0
Recall Mode	None	None		C-Min
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 76 (95%), Referenced to phase 2:NBSB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 12: Transistor Parkway & Electronics Parkway #1

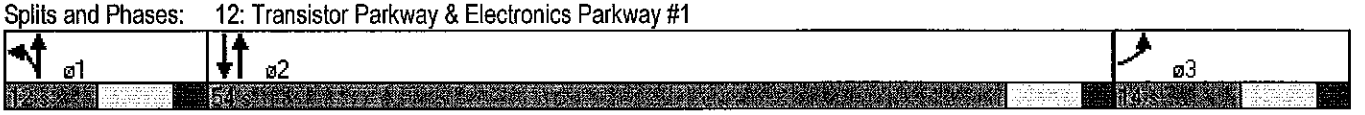


Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	3	35	1069	1332
Turn Type		Prot		
Protected Phases	3	1	1 2	2
Permitted Phases				
Detector Phase	3	1	1 2	2
Switch Phase				
Minimum Initial (s)	7.0	5.0		10.0
Minimum Split (s)	13.5	11.5		16.5
Total Split (s)	14.0	12.0	66.0	54.0
Total Split (%)	17.5%	15.0%	82.5%	67.5%
Maximum Green (s)	7.5	5.5		47.5
Yellow Time (s)	4.5	4.5		4.5
All-Red Time (s)	2.0	2.0		2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lead		Lag
Lead-Lag Optimize?				
Vehicle Extension (s)	1.8	3.0		3.8
Minimum Gap (s)	1.8	3.0		3.8
Time Before Reduce (s)	12.0	12.0		12.0
Time To Reduce (s)	10.0	10.0		10.0
Recall Mode	None	None		C-Min
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 20 (25%), Referenced to phase 2:NBSB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 12: Transistor Parkway & Electronics Parkway #1



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	4	5	1	1161	941	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	12	12	12	12	12
Total Lost time (s)	2.0		2.0	2.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.93		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1894		1805	3471	3406	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1894		1805	3471	3406	
Peak-hour factor, PHF	0.38	0.38	0.75	0.75	0.94	0.94
Adj. Flow (vph)	11	13	1	1548	1001	0
RTOR Reduction (vph)	12	0	0	0	0	0
Lane Group Flow (vph)	12	0	1	1548	1001	0
Heavy Vehicles (%)	0%	0%	0%	4%	6%	0%
Turn Type			Prot			
Protected Phases	3		1	1 2	2	
Permitted Phases						
Actuated Green, G (s)	1.1		0.9	39.1	34.2	
Effective Green, g (s)	3.1		2.9	41.1	36.2	
Actuated g/C Ratio	0.06		0.06	0.84	0.74	
Clearance Time (s)	4.0		4.0		5.0	
Vehicle Extension (s)	2.2		2.2		2.2	
Lane Grp Cap (vph)	119		106	2900	2506	
v/s Ratio Prot	c0.01		0.00	c0.45	0.29	
v/s Ratio Perm						
v/c Ratio	0.10		0.01	0.53	0.40	
Uniform Delay, d1	21.7		21.8	1.2	2.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.2		0.0	0.1	0.5	
Delay (s)	21.9		21.8	1.3	2.9	
Level of Service	C		C	A	A	
Approach Delay (s)	21.9			1.3	2.9	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	2.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	4.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	3	12	35	1069	1332	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	12	12	12	12	12
Total Lost time (s)	2.0		2.0	2.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.89		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1848		1752	3539	3536	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1848		1752	3539	3536	
Peak-hour factor, PHF	0.79	0.79	0.84	0.84	0.81	0.81
Adj. Flow (vph)	4	15	42	1273	1644	10
RTOR Reduction (vph)	14	0	0	0	0	0
Lane Group Flow (vph)	5	0	42	1273	1654	0
Heavy Vehicles (%)	0%	0%	3%	2%	2%	0%
Turn Type			Prot			
Protected Phases	3		1	1 2	2	
Permitted Phases						
Actuated Green, G (s)	1.0		1.2	37.2	32.0	
Effective Green, g (s)	3.0		3.2	39.2	34.0	
Actuated g/C Ratio	0.06		0.07	0.83	0.72	
Clearance Time (s)	4.0		4.0		5.0	
Vehicle Extension (s)	2.2		2.2		2.2	
Lane Grp Cap (vph)	117		119	2939	2547	
v/s Ratio Prot	c0.00		0.02	c0.36	c0.47	
v/s Ratio Perm						
v/c Ratio	0.04		0.35	0.43	0.65	
Uniform Delay, d1	20.8		21.0	1.1	3.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		0.9	0.1	1.3	
Delay (s)	20.8		21.9	1.1	4.8	
Level of Service	C		C	A	A	
Approach Delay (s)	20.8			1.8	4.8	
Approach LOS	C			A	A	

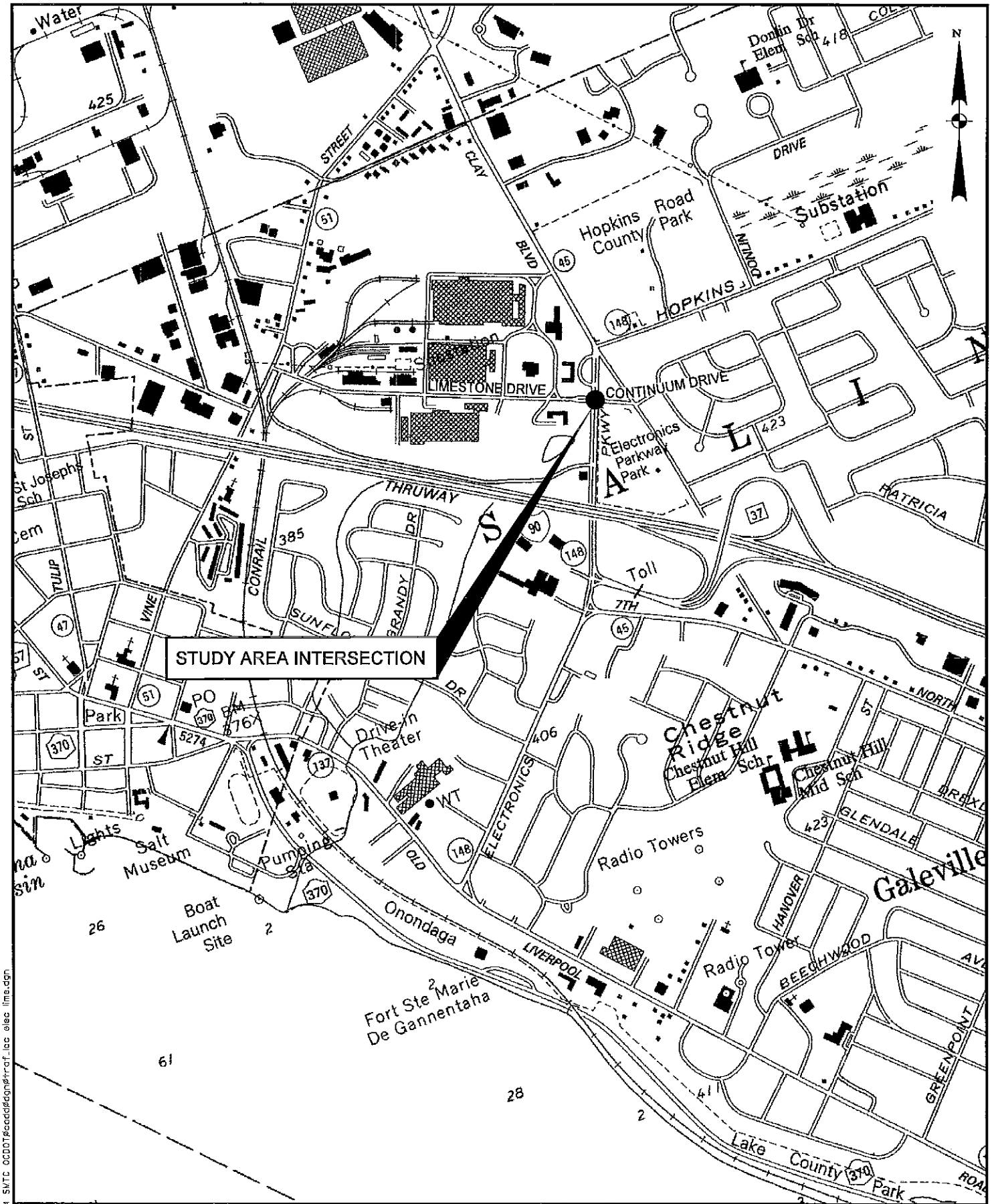
Intersection Summary			
HCM Average Control Delay	3.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	47.2	Sum of lost time (s)	7.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	4	5	1	1161	941	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	12	12	12	12	12
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.93		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1894		1805	3471	3406	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1894		1805	3471	3406	
Peak-hour factor, PHF	0.38	0.38	0.75	0.75	0.94	0.94
Adj. Flow (vph)	11	13	1	1548	1001	0
RTOR Reduction (vph)	12	0	0	0	0	0
Lane Group Flow (vph)	12	0	1	1548	1001	0
Heavy Vehicles (%)	0%	0%	0%	4%	6%	0%
Turn Type			Prot			
Protected Phases	3		1	1 2	2	
Permitted Phases						
Actuated Green, G (s)	2.8		9.2	64.2	48.5	
Effective Green, g (s)	4.8		11.2	66.2	50.5	
Actuated g/C Ratio	0.06		0.14	0.83	0.63	
Clearance Time (s)	6.5		6.5		6.5	
Vehicle Extension (s)	1.8		3.0		3.8	
Lane Grp Cap (vph)	114		253	2872	2150	
v/s Ratio Prot	c0.01		0.00	c0.45	0.29	
v/s Ratio Perm						
v/c Ratio	0.10		0.00	0.54	0.47	
Uniform Delay, d1	35.6		29.6	2.1	7.7	
Progression Factor	1.00		0.97	0.50	0.62	
Incremental Delay, d2	0.1		0.0	0.1	0.4	
Delay (s)	35.7		28.9	1.2	5.1	
Level of Service	D		C	A	A	
Approach Delay (s)	35.7			1.2	5.1	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	3.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	3	12	35	1069	1332	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	15	12	12	12	12	12
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.89		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1848		1752	3539	3536	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1848		1752	3539	3536	
Peak-hour factor, PHF	0.79	0.79	0.84	0.84	0.81	0.81
Adj. Flow (vph)	4	15	42	1273	1644	10
RTOR Reduction (vph)	14	0	0	0	0	0
Lane Group Flow (vph)	5	0	42	1273	1654	0
Heavy Vehicles (%)	0%	0%	3%	2%	2%	0%
Turn Type			Prot			
Protected Phases	3		1	1 2	2	
Permitted Phases						
Actuated Green, G (s)	2.8		7.7	64.2	50.0	
Effective Green, g (s)	4.8		9.7	66.2	52.0	
Actuated g/C Ratio	0.06		0.12	0.83	0.65	
Clearance Time (s)	6.5		6.5		6.5	
Vehicle Extension (s)	1.8		3.0		3.8	
Lane Grp Cap (vph)	111		212	2929	2298	
v/s Ratio Prot	c0.00		0.02	c0.36	c0.47	
v/s Ratio Perm						
v/c Ratio	0.04		0.20	0.43	0.72	
Uniform Delay, d1	35.4		31.6	1.9	9.2	
Progression Factor	1.00		1.42	0.26	0.51	
Incremental Delay, d2	0.1		0.4	0.1	1.7	
Delay (s)	35.5		45.4	0.6	6.4	
Level of Service	D		D	A	A	
Approach Delay (s)	35.5			2.0	6.4	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	4.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



LOCATION MAP
ELECTRONICS PKWY/LIMESTONE DR/CONTINUUM DR

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B.6

ddoran
F:\pr\projects\2009\09-094 SWTC OCDOT\acad\dgn\traf_loc elec lime.dgn

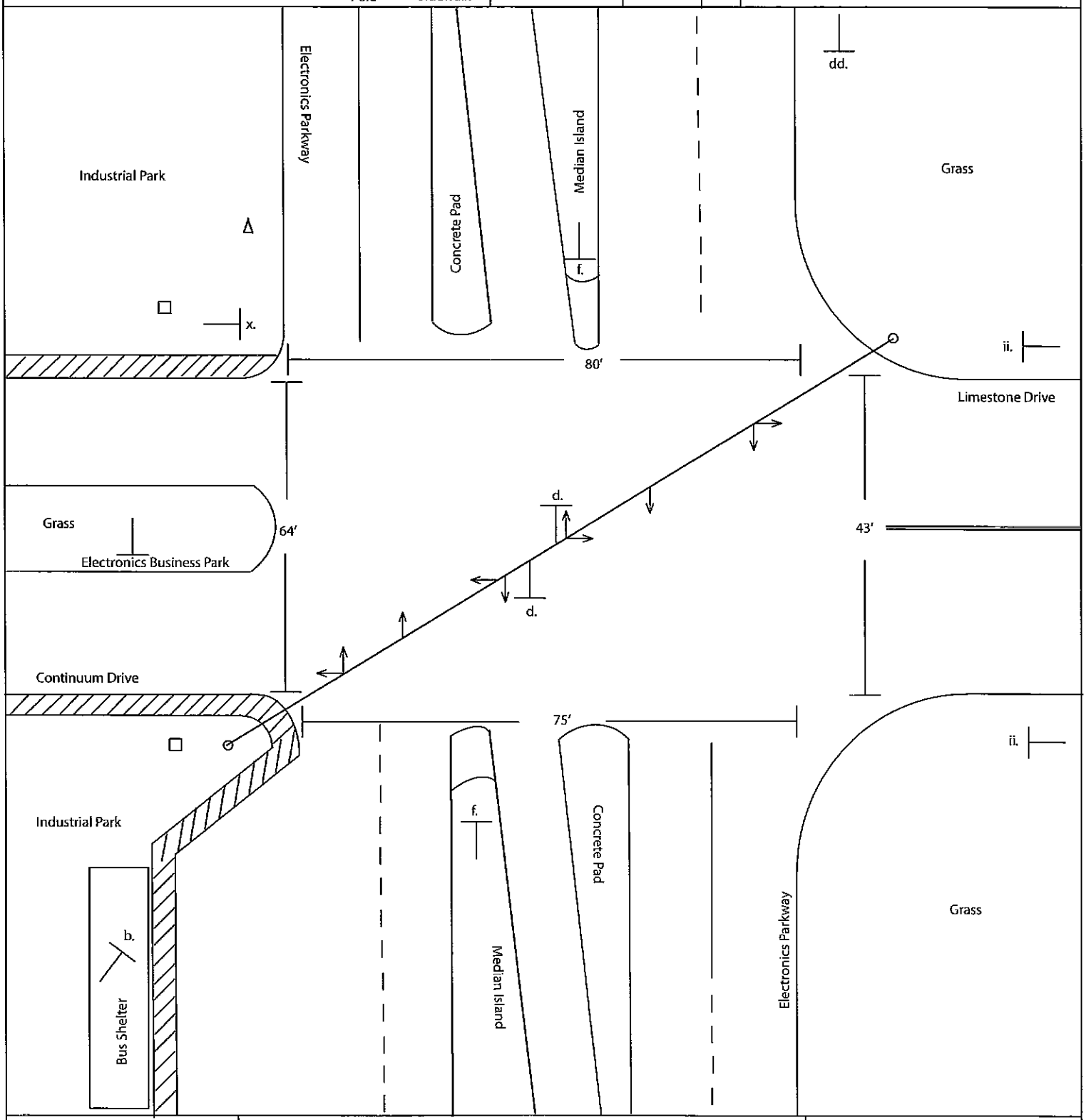
INTERSECTION DIAGRAM

Location: Electronics Parkway at Limestone Drive

Drawn By: KK | Date: May 2010 | Prepared By: SMTC

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.

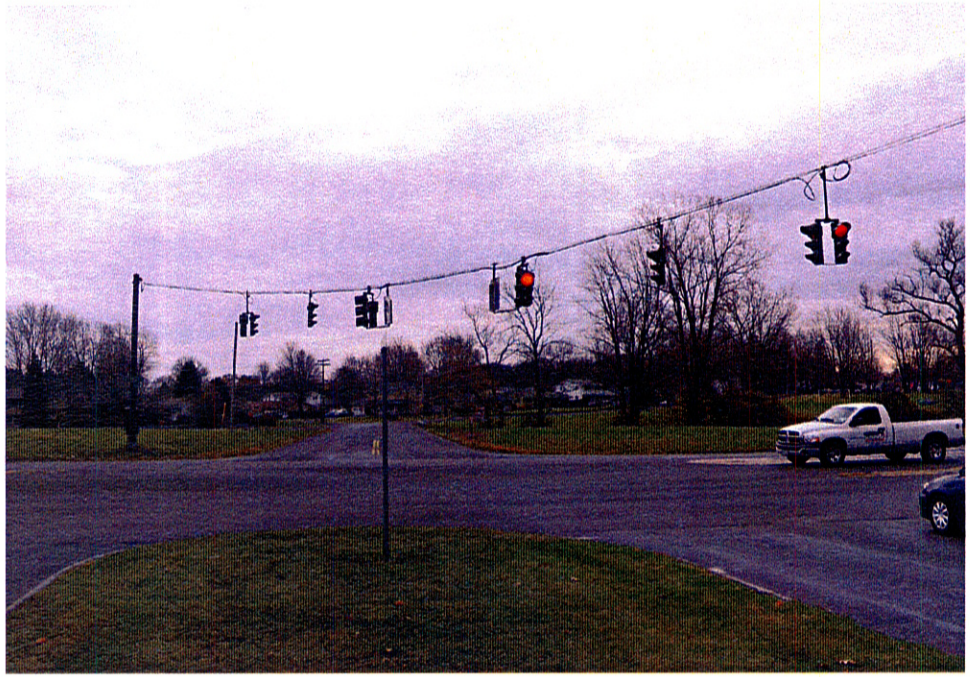


Task

OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.
Diagram is not to scale.



Fisher Associates
135 Calkins Road
Rochester NY 14623
585-334-1310

Electronics Pkwy & Limestone - Continuum
Town of Salina
Morning Count Period

File Name : 6 Electronics & Limestone AM
Site Code : 78204200
Start Date : 3/25/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Electronics Pkwy Southbound					Limestone Dr Westbound					Electronics Pkwy Northbound					Continuum Dr Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
07:00 AM	33	164	4	6	207	4	1	8	5	18	2	114	113	1	230	4	1	1	1	7	462
07:15 AM	52	223	0	2	277	2	1	12	6	21	5	160	102	1	268	3	0	4	1	8	574
07:30 AM	55	244	4	7	310	3	3	7	1	14	3	171	117	3	294	4	0	3	2	9	627
07:45 AM	52	247	4	2	305	5	17	7	4	33	15	237	119	1	372	1	1	7	7	16	726
Total	192	878	12	17	1099	14	22	34	16	86	25	682	451	6	1164	12	2	15	11	40	2389
08:00 AM	59	218	3	7	287	3	12	8	2	25	12	119	110	0	241	3	1	5	4	13	566
08:15 AM	23	210	6	2	241	3	1	10	4	18	4	127	87	1	219	3	0	3	4	10	488
08:30 AM	15	140	8	2	165	4	0	13	3	20	0	114	59	1	174	3	0	4	6	13	372
08:45 AM	21	160	1	2	184	1	1	9	2	13	2	123	62	0	187	7	0	3	3	13	397
Total	118	728	18	13	877	11	14	40	11	76	18	483	318	2	821	16	1	15	17	49	1823
Grand Total	310	1606	30	30	1976	25	36	74	27	162	43	1165	769	8	1985	28	3	30	28	89	4212
Apprch %	15.7	81.3	1.5	1.5		15.4	22.2	45.7	16.7		2.2	58.7	38.7	0.4		31.5	3.4	33.7	31.5		
Total %	7.4	38.1	0.7	0.7	46.9	0.6	0.9	1.8	0.6	3.8	1	27.7	18.3	0.2	47.1	0.7	0.1	0.7	0.7	2.1	
Cars	310	1494	25	30	1859	19	36	71	27	153	41	1091	766	5	1903	27	3	29	26	85	4000
% Cars	100	93	83.3	100	94.1	76	100	95.9	100	94.4	95.3	93.6	99.6	62.5	95.9	96.4	100	96.7	92.9	95.5	95
Buses	0	19	3	0	22	5	0	3	0	8	1	20	0	3	24	0	0	0	0	0	54
% Buses	0	1.2	10	0	1.1	20	0	4.1	0	4.9	2.3	1.7	0	37.5	1.2	0	0	0	0	0	1.3
Trucks	0	93	2	0	95	1	0	0	0	1	1	54	3	0	58	1	0	1	2	4	158
% Trucks	0	5.8	6.7	0	4.8	4	0	0	0	0.6	2.3	4.6	0.4	0	2.9	3.6	0	3.3	7.1	4.5	3.8

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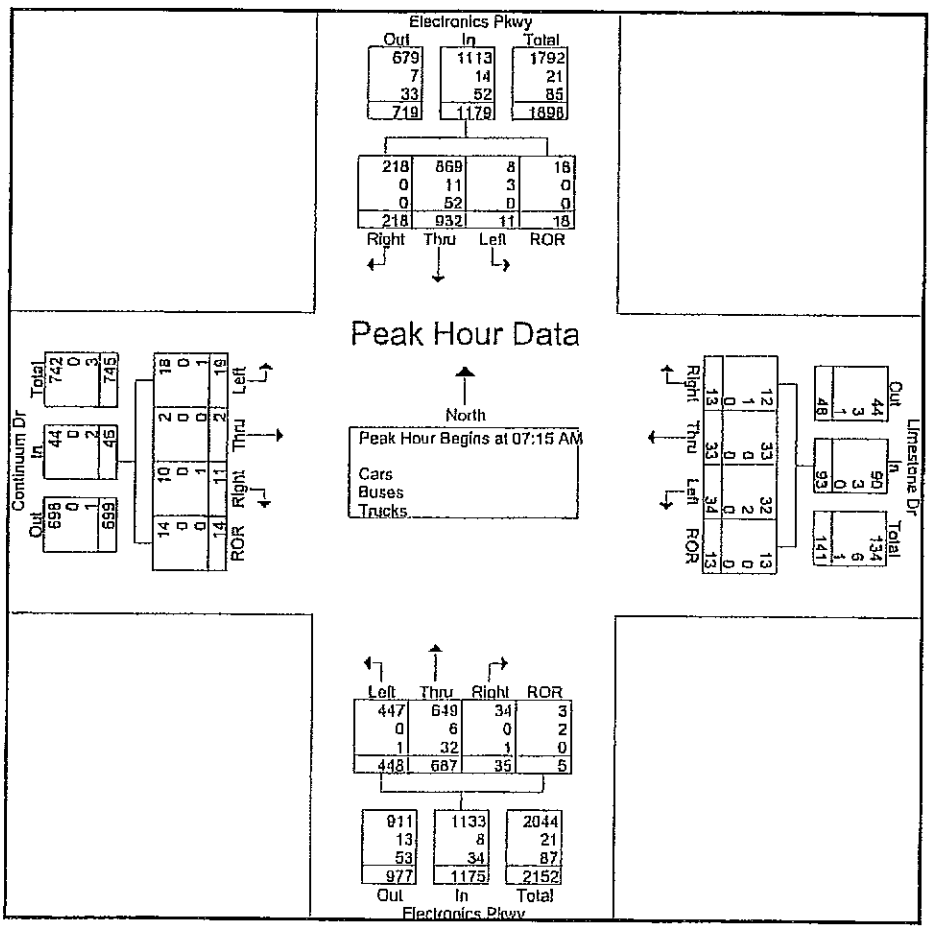
Electronics Pkwy & Limestone - Continuum
Town of Salina
Morning Count Period

File Name : 6 Electronics & Limestone AM
Site Code : 78204200
Start Date : 3/25/2010

	Electronics Pkwy Southbound					Limestone Dr Westbound					Electronics Pkwy Northbound					Continuum Dr Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	52	223	0	2	277	2	1	12	6	21	5	160	102	1	268	3	0	4	1	8	574
07:30 AM	55	244	4	7	310	3	3	7	1	14	3	171	117	3	294	4	0	3	2	9	627
07:45 AM	52	247	4	2	305	5	17	7	4	33	15	237	119	1	372	1	1	7	7	16	726
08:00 AM	59	218	3	7	287	3	12	8	2	25	12	119	110	0	241	3	1	5	4	13	566
Total Volume	218	932	11	18	1179	13	33	34	13	93	35	687	448	5	1175	11	2	19	14	46	2493
% App. Total	18.5	79.1	0.9	1.5		14	35.5	36.6	14		3	58.5	38.1	0.4		23.9	4.3	41.3	30.4		
PHF	.924	.943	.688	.643	.951	.650	.485	.708	.542	.705	.583	.725	.941	.417	.790	.688	.500	.679	.500	.719	.858
Cars	218	869	8	18	1113	12	33	32	13	90	34	649	447	3	1133	10	2	18	14	44	2380
% Cars	100	93.2	72.7	100	94.4	92.3	100	94.1	100	96.8	97.1	94.5	99.8	60.0	96.4	90.9	100	94.7	100	95.7	95.5
Buses	0	11	3	0	14	1	0	2	0	3	0	6	0	2	8	0	0	0	0	0	25
% Buses	0	1.2	27.3	0	1.2	7.7	0	5.9	0	3.2	0	0.9	0	40.0	0.7	0	0	0	0	0	1.0
Trucks	0	52	0	0	52	0	0	0	0	0	1	32	1	0	34	1	0	1	0	2	88
% Trucks	0	5.6	0	0	4.4	0	0	0	0	0	2.9	4.7	0.2	0	2.9	9.1	0	5.3	0	4.3	3.5



Fisher Associates
135 Calkins Road
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Electronics Pkwy & Limestone - Continuum
Town of Salina
Evening Count Period

File Name : 6 Electronics & Limestone PM
Site Code : 78204201
Start Date : 3/25/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

	Electronics Pkwy Southbound					Limestone Dr Westbound					Electronics Pkwy Northbound					Continuum Dr Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
04:00 PM	5	162	11	0	178	5	0	2	4	11	9	216	2	0	227	56	0	39	33	128	544
04:15 PM	1	145	13	1	160	6	0	4	1	11	9	215	13	0	237	43	1	25	34	103	511
04:30 PM	3	249	9	0	261	8	0	9	0	17	9	232	15	0	256	77	0	61	38	176	710
04:45 PM	4	216	11	0	231	9	0	3	2	14	10	260	3	0	273	65	0	34	27	126	644
Total	13	772	44	1	830	28	0	18	7	53	37	923	33	0	993	241	1	159	132	533	2409
05:00 PM	1	276	6	0	283	5	0	11	2	18	13	288	8	0	309	105	1	71	32	209	819
05:15 PM	3	170	13	0	186	8	0	10	0	18	6	266	5	0	277	50	1	36	51	138	619
05:30 PM	1	151	6	1	159	6	1	2	3	12	5	230	5	0	240	36	0	43	41	120	531
05:45 PM	0	152	10	0	162	11	0	11	1	23	4	179	4	0	187	21	1	23	32	77	449
Total	5	749	35	1	790	30	1	34	6	71	28	963	22	0	1013	212	3	173	156	544	2418
Grand Total	18	1521	79	2	1620	58	1	52	13	124	65	1886	55	0	2006	453	4	332	288	1077	4827
Apprch %	1.1	93.9	4.9	0.1		46.8	0.8	41.9	10.5		3.2	94	2.7	0		42.1	0.4	30.8	26.7		
Total %	0.4	31.5	1.6	0	33.6	1.2	0	1.1	0.3	2.6	1.3	39.1	1.1	0	41.6	9.4	0.1	6.9	6	22.3	
Cars	18	1483	79	1	1581	57	1	49	13	120	65	1826	53	0	1944	452	4	330	288	1074	4719
% Cars	100	97.5	100	50	97.6	98.3	100	94.2	100	96.8	100	96.8	96.4	0	96.9	99.8	100	99.4	100	99.7	97.8
Buses	0	5	0	1	6	1	0	3	0	4	0	11	0	0	11	0	0	0	0	0	21
% Buses	0	0.3	0	50	0.4	1.7	0	5.8	0	3.2	0	0.6	0	0	0.5	0	0	0	0	0	0.4
Trucks	0	33	0	0	33	0	0	0	0	0	0	49	2	0	51	1	0	2	0	3	87
% Trucks	0	2.2	0	0	2	0	0	0	0	0	0	2.6	3.6	0	2.5	0.2	0	0.6	0	0.3	1.8

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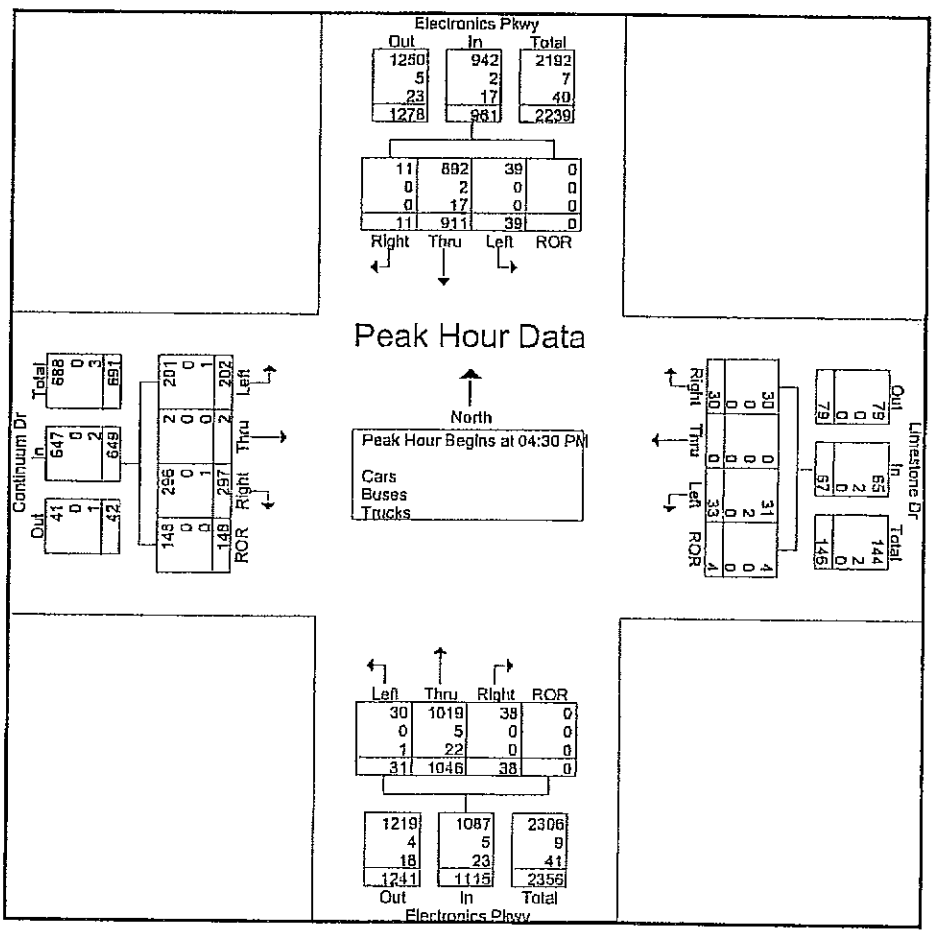
Electronics Pkwy & Limestone - Continuum
Town of Salina
Evening Count Period

File Name : 6 Electronics & Limestone PM
Site Code : 78204201
Start Date : 3/25/2010

	Electronics Pkwy Southbound					Limestone Dr Westbound					Electronics Pkwy Northbound					Continuum Dr Eastbound					
Start Time	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Right	Thru	Left	ROR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	249	9	0	261	8	0	9	0	17	9	232	15	0	256	77	0	61	38	176	710
04:45 PM	4	216	11	0	231	9	0	3	2	14	10	260	3	0	273	65	0	34	27	126	644
05:00 PM	1	276	6	0	283	5	0	11	2	18	13	288	8	0	309	105	1	71	32	209	819
05:15 PM	3	170	13	0	186	8	0	10	0	18	6	266	5	0	277	50	1	36	51	138	619
Total Volume	11	911	39	0	961	30	0	33	4	67	38	1046	31	0	1115	297	2	202	148	649	2792
% App. Total	1.1	94.8	4.1	0		44.8	0	49.3	6		3.4	93.8	2.8	0		45.8	0.3	31.1	22.8		
PHF	.688	.825	.750	.000	.849	.833	.000	.750	.500	.931	.731	.908	.517	.000	.902	.707	.500	.711	.725	.776	.852
Cars	11	892	39	0	942	30	0	31	4	65	38	1019									
% Cars	100	97.9	100	0	98.0	100	0	93.9	100	97.0	100	97.4	96.8	0	97.5	99.7	100	99.5	100	99.7	98.2
Buses	0	2	0	0	2	0	0	2	0	2	0	5	0	0	5	0	0	0	0	0	9
% Buses	0	0.2	0	0	0.2	0	0	6.1	0	3.0	0	0.5	0	0	0.4	0	0	0	0	0	0.3
Trucks	0	17	0	0	17	0	0	0	0	0	0	22	1	0	23	1	0	1	0	2	42
% Trucks	0	1.9	0	0	1.8	0	0	0	0	0	0	2.1	3.2	0	2.1	0.3	0	0.5	0	0.3	1.5



INTERSECTION NAME: Limestone @ Electronics Parkway INSTALLATION DATE:
INTERSECTION NUMBER: 67 PROGRAM DATE:

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL		X				X		
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	4.5	12	6		4.5	12	8	8
PASSAGE	2	2	2		2	2	2	2
YELLOW	3	4	3		3	4	4	4
RED	2	2	2		2	2	2	2
MAX I	22	25	30		25	25	30	30
MAX II								
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF								

INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NAME: Limestone @ Electronics Parkway
INTERSECTION NUMBER: 67

INSTALLATION DATE: COORDINATION
PROGRAM DATE: OPTIMIZATION

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY		X			X			
EXT RECALL		X			X			
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	10		5	10		
PASSAGE	1.5	2.6	1.8		1.5	2.6		
YELLOW	4.5	4.5	4.5		4.5	4.5		
RED	2	2	2		2	2		
MAX I (AM)	5.5	44.5	10.5		22.5	27.5		
MAX II (PM)	5.5	32.5	22.5		5.5	32.5		
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X		X	X		

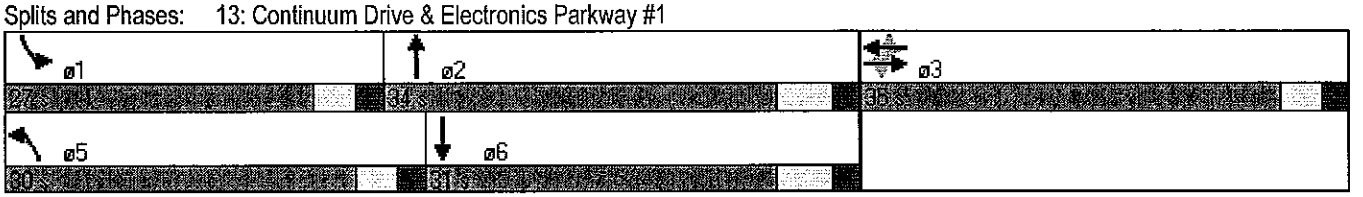
INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	19	2	34	33	448	687	11	932
Turn Type	Perm		Perm		Prot		Prot	
Protected Phases		3		3	5	2	1	6
Permitted Phases	3		3					
Detector Phase	3	3	3	3	5		1	
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.5	12.0	4.5	12.0
Minimum Split (s)	11.0	11.0	11.0	11.0	9.5	18.0	9.5	18.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	34.0	27.0	31.0
Total Split (%)	36.5%	36.5%	36.5%	36.5%	31.3%	35.4%	28.1%	32.3%
Maximum Green (s)	30.0	30.0	30.0	30.0	25.0	28.0	22.0	25.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Max	None	Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								

Intersection Summary

Cycle Length: 96
Actuated Cycle Length: 71.4
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Continuum Drive & Electronics Parkway #1

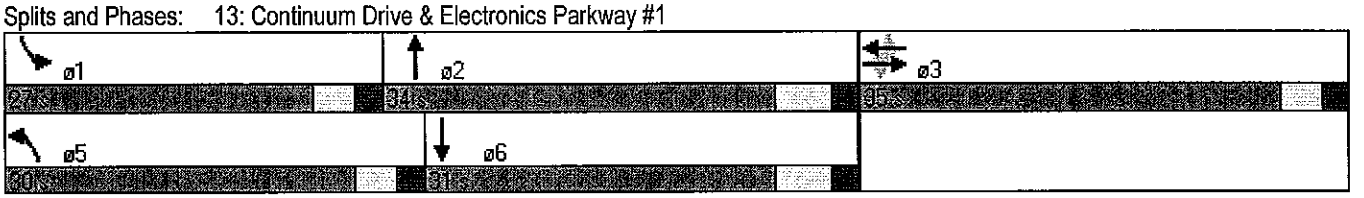


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	202	2	33	0	31	1046	39	911
Turn Type	Perm		Perm		Prot		Prot	
Protected Phases		3		3	5	2	1	6
Permitted Phases	3		3					
Detector Phase	3	3	3	3	5		1	
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.5	12.0	4.5	12.0
Minimum Split (s)	11.0	11.0	11.0	11.0	9.5	18.0	9.5	18.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	34.0	27.0	31.0
Total Split (%)	36.5%	36.5%	36.5%	36.5%	31.3%	35.4%	28.1%	32.3%
Maximum Green (s)	30.0	30.0	30.0	30.0	25.0	28.0	22.0	25.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Max	None	Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								

Intersection Summary

Cycle Length: 96
Actuated Cycle Length: 63.1
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Continuum Drive & Electronics Parkway #1

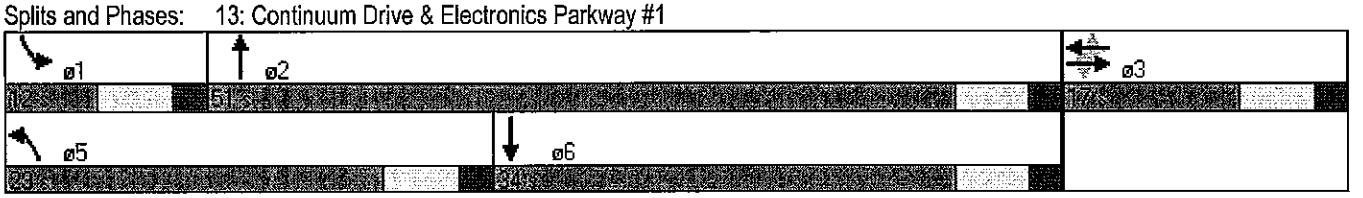


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	19	2	34	33	448	687	11	932
Turn Type	Perm		Perm		Prot		Prot	
Protected Phases		3		3	5	2	1	6
Permitted Phases	3		3					
Detector Phase	3	3	3	3	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	16.5	16.5	16.5	16.5	11.5	16.5	11.5	16.5
Total Split (s)	17.0	17.0	17.0	17.0	29.0	51.0	12.0	34.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	36.3%	63.8%	15.0%	42.5%
Maximum Green (s)	10.5	10.5	10.5	10.5	22.5	44.5	5.5	27.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	4.5	5.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Vehicle Extension (s)	1.8	1.8	1.8	1.8	1.5	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	1.8	1.8	1.5	3.8	1.5	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 56 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 13: Continuum Drive & Electronics Parkway #1

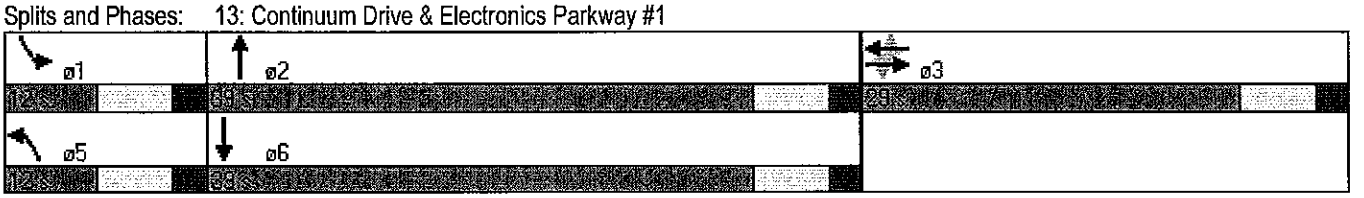


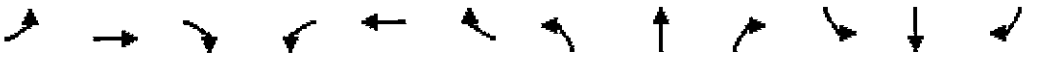
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	202	2	33	0	31	1046	39	911
Turn Type	Perm		Perm		Prot		Prot	
Protected Phases		3		3	5	2	1	6
Permitted Phases	3		3					
Detector Phase	3	3	3	3	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	16.5	16.5	16.5	16.5	11.5	16.5	11.5	16.5
Total Split (s)	29.0	29.0	29.0	29.0	12.0	39.0	12.0	39.0
Total Split (%)	36.3%	36.3%	36.3%	36.3%	15.0%	48.8%	15.0%	48.8%
Maximum Green (s)	22.5	22.5	22.5	22.5	5.5	32.5	5.5	32.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	4.5	5.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Vehicle Extension (s)	1.8	1.8	1.8	1.8	1.5	3.8	1.5	3.8
Minimum Gap (s)	1.8	1.8	1.8	1.8	1.5	3.8	1.5	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 13: Continuum Drive & Electronics Parkway #1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	2	25	34	33	26	448	687	40	11	932	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1512		1646	1655		1925	3383		1516	3315	
Flt Permitted	0.70	1.00		0.73	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1272	1512		1269	1655		1925	3383		1516	3315	
Peak-hour factor, PHF	0.72	0.72	0.72	0.71	0.71	0.71	0.79	0.79	0.79	0.95	0.95	0.95
Adj. Flow (vph)	26	3	35	48	46	37	567	870	51	12	981	248
RTOR Reduction (vph)	0	32	0	0	34	0	0	2	0	0	19	0
Lane Group Flow (vph)	26	6	0	48	49	0	567	919	0	12	1210	0
Heavy Vehicles (%)	5%	0%	9%	6%	0%	8%	0%	6%	3%	27%	7%	0%
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		3			3		5	2		1	6	
Permitted Phases	3			3								
Actuated Green, G (s)	6.2	6.2		6.2	6.2		25.2	53.2		1.2	29.2	
Effective Green, g (s)	7.2	7.2		7.2	7.2		26.2	55.2		2.2	31.2	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.34	0.72		0.03	0.41	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	120	142		119	156		658	2438		44	1350	
v/s Ratio Prot		0.00			0.03		c0.29	0.27		0.01	c0.36	
v/s Ratio Perm	0.02			c0.04								
v/c Ratio	0.22	0.04		0.40	0.32		0.86	0.38		0.27	0.90	
Uniform Delay, d1	32.1	31.6		32.7	32.4		23.5	4.1		36.4	21.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.0		0.8	0.4		10.9	0.4		1.2	9.6	
Delay (s)	32.4	31.6		33.5	32.8		34.4	4.6		37.6	30.8	
Level of Service	C	C		C	C		C	A		D	C	
Approach Delay (s)		31.9			33.1			15.9			30.8	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.7%	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)	202	2	297	33	0	30	31	1046	38	39	911	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.85		1.00	0.85		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1601		1646	1561		1869	3490		1925	3534	
Flt Permitted	0.74	1.00		0.25	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1385	1601		429	1561		1869	3490		1925	3534	
Peak-hour factor, PHF	0.78	0.78	0.78	0.93	0.93	0.93	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	259	3	381	35	0	32	34	1162	42	46	1072	13
RTOR Reduction (vph)	0	282	0	0	24	0	0	2	0	0	0	0
Lane Group Flow (vph)	259	102	0	35	8	0	34	1202	0	46	1085	0
Heavy Vehicles (%)	1%	0%	1%	6%	0%	0%	3%	3%	0%	0%	2%	0%
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		3			3		5	2		1	6	
Permitted Phases	3			3								
Actuated Green, G (s)	16.2	16.2		16.2	16.2		2.4	30.0		3.8	31.4	
Effective Green, g (s)	17.2	17.2		17.2	17.2		3.4	32.0		4.8	33.4	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.05	0.48		0.07	0.51	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	361	417		112	407		96	1692		140	1788	
v/s Ratio Prot		0.06			0.01		0.02	c0.34		c0.02	0.31	
v/s Ratio Perm	c0.19			0.08								
v/c Ratio	0.72	0.25		0.31	0.02		0.35	0.71		0.33	0.61	
Uniform Delay, d1	22.2	19.3		19.6	18.1		30.2	13.4		29.1	11.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	0.1		0.6	0.0		0.8	2.6		0.5	1.5	
Delay (s)	27.8	19.4		20.2	18.1		31.1	15.9		29.6	13.2	
Level of Service	C	B		C	B		C	B		C	B	
Approach Delay (s)		22.8			19.2			16.3			13.8	
Approach LOS		C			B			B			B	

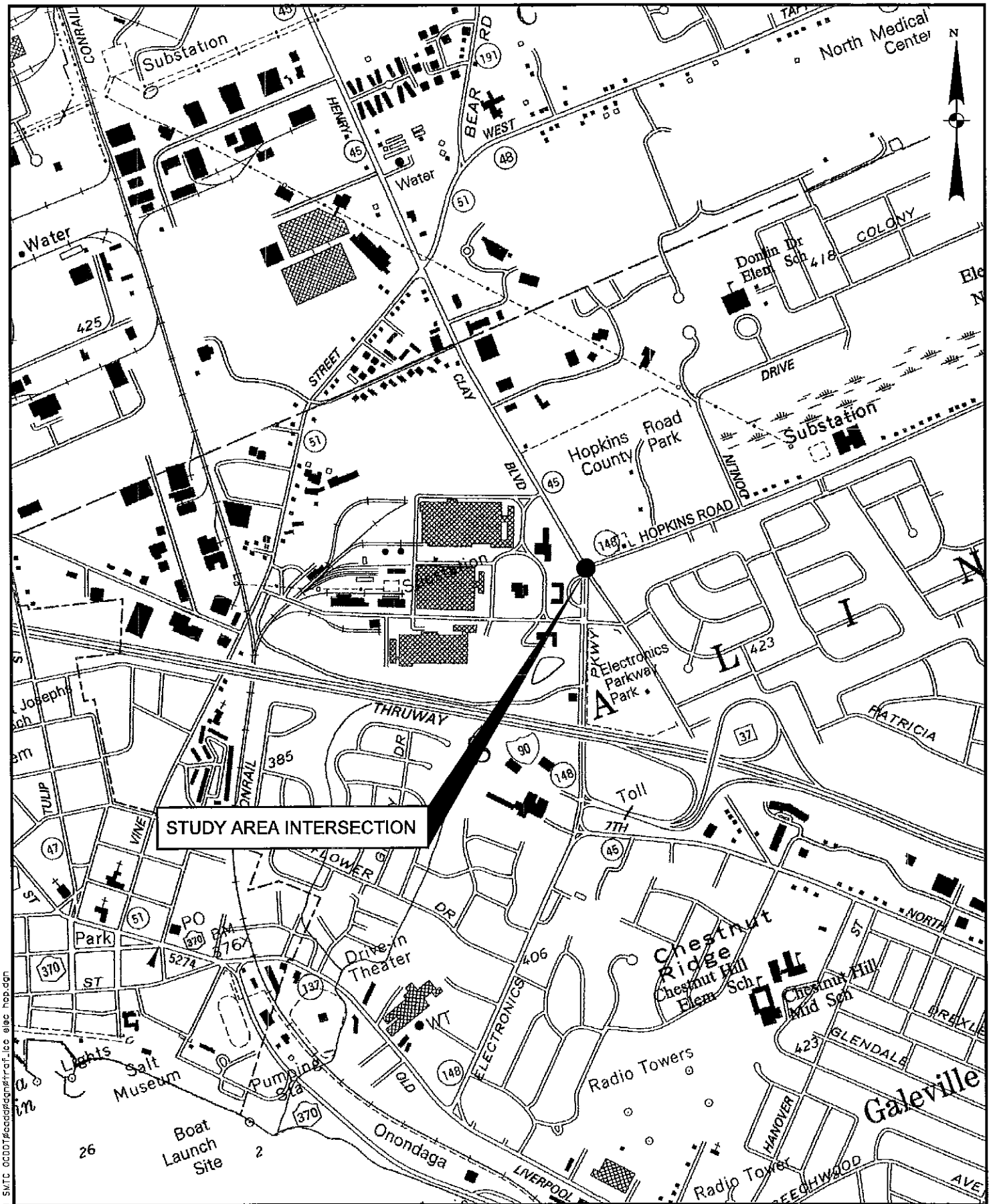
Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	2	25	34	33	26	448	687	40	11	932	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	14	12	12	14	12	12
Total Lost time (s)	5.5	5.5		5.5	5.5		5.5	4.5		5.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1512		1646	1655		1925	3383		1516	3315	
Flt Permitted	0.70	1.00		0.73	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1272	1512		1269	1655		1925	3383		1516	3315	
Peak-hour factor, PHF	0.72	0.72	0.72	0.71	0.71	0.71	0.79	0.79	0.79	0.95	0.95	0.95
Adj. Flow (vph)	26	3	35	48	46	37	567	870	51	12	981	248
RTOR Reduction (vph)	0	31	0	0	33	0	0	4	0	0	27	0
Lane Group Flow (vph)	26	7	0	48	50	0	567	917	0	12	1202	0
Heavy Vehicles (%)	5%	0%	9%	6%	0%	8%	0%	6%	3%	27%	7%	0%
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		3			3		5	2		1	6	
Permitted Phases	3			3								
Actuated Green, G (s)	8.1	8.1		8.1	8.1		23.8	51.3		1.1	28.6	
Effective Green, g (s)	9.1	9.1		9.1	9.1		24.8	53.3		2.1	30.6	
Actuated g/C Ratio	0.11	0.11		0.11	0.11		0.31	0.67		0.03	0.38	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	1.8	1.8		1.8	1.8		1.5	3.8		1.5	3.8	
Lane Grp Cap (vph)	145	172		144	188		597	2254		40	1268	
v/s Ratio Prot		0.00			0.03		c0.29	0.27		0.01	c0.36	
v/s Ratio Perm	0.02			c0.04								
v/c Ratio	0.18	0.04		0.33	0.27		0.95	0.41		0.30	0.95	
Uniform Delay, d1	32.1	31.6		32.7	32.4		27.0	6.1		38.2	23.9	
Progression Factor	1.00	1.00		1.00	1.00		0.59	0.74		1.08	0.83	
Incremental Delay, d2	0.2	0.0		0.5	0.3		22.6	0.5		1.5	15.0	
Delay (s)	32.3	31.6		33.2	32.7		38.6	5.0		42.8	35.0	
Level of Service	C	C		C	C		D	A		D	C	
Approach Delay (s)		31.9			32.9			17.8			35.1	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	78.7%	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)	202	2	297	33	0	30	31	1046	38	39	911	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	14	12	12	14	12	12
Total Lost time (s)	5.5	5.5		5.5	5.5		5.5	4.5		5.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.85		1.00	0.85		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1601		1646	1561		1869	3490		1925	3534	
Flt Permitted	0.74	1.00		0.23	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1385	1601		396	1561		1869	3490		1925	3534	
Peak-hour factor, PHF	0.78	0.78	0.78	0.93	0.93	0.93	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	259	3	381	35	0	32	34	1162	42	46	1072	13
RTOR Reduction (vph)	0	145	0	0	24	0	0	3	0	0	1	0
Lane Group Flow (vph)	259	239	0	35	8	0	34	1201	0	46	1084	0
Heavy Vehicles (%)	1%	0%	1%	6%	0%	0%	3%	3%	0%	0%	2%	0%
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		3			3		5	2		1	6	
Permitted Phases	3			3								
Actuated Green, G (s)	18.2	18.2		18.2	18.2		3.4	38.9		3.4	38.9	
Effective Green, g (s)	19.2	19.2		19.2	19.2		4.4	40.9		4.4	40.9	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.06	0.51		0.06	0.51	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	1.8	1.8		1.8	1.8		1.5	3.8		1.5	3.8	
Lane Grp Cap (vph)	332	384		95	375		103	1784		106	1807	
v/s Ratio Prot		0.15			0.00		0.02	c0.34		c0.02	0.31	
v/s Ratio Perm	c0.19			0.09								
v/c Ratio	0.78	0.62		0.37	0.02		0.33	0.67		0.43	0.60	
Uniform Delay, d1	28.4	27.2		25.3	23.2		36.4	14.6		36.6	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.33	0.47		1.29	0.86	
Incremental Delay, d2	10.4	2.3		0.9	0.0		0.6	1.9		1.0	1.4	
Delay (s)	38.9	29.4		26.2	23.2		49.1	8.7		48.3	13.2	
Level of Service	D	C		C	C		D	A		D	B	
Approach Delay (s)		33.2			24.8			9.8			14.6	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



LOCATION MAP
ELECTRONICS PKWY/HENRY CLAY BLVD/HOPKINS RD

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B.7

dgorman
F:\projects\2009\4109-094 SMTC OCDOT\acad\dgn\traffic elec hop.dgn

INTERSECTION DIAGRAM

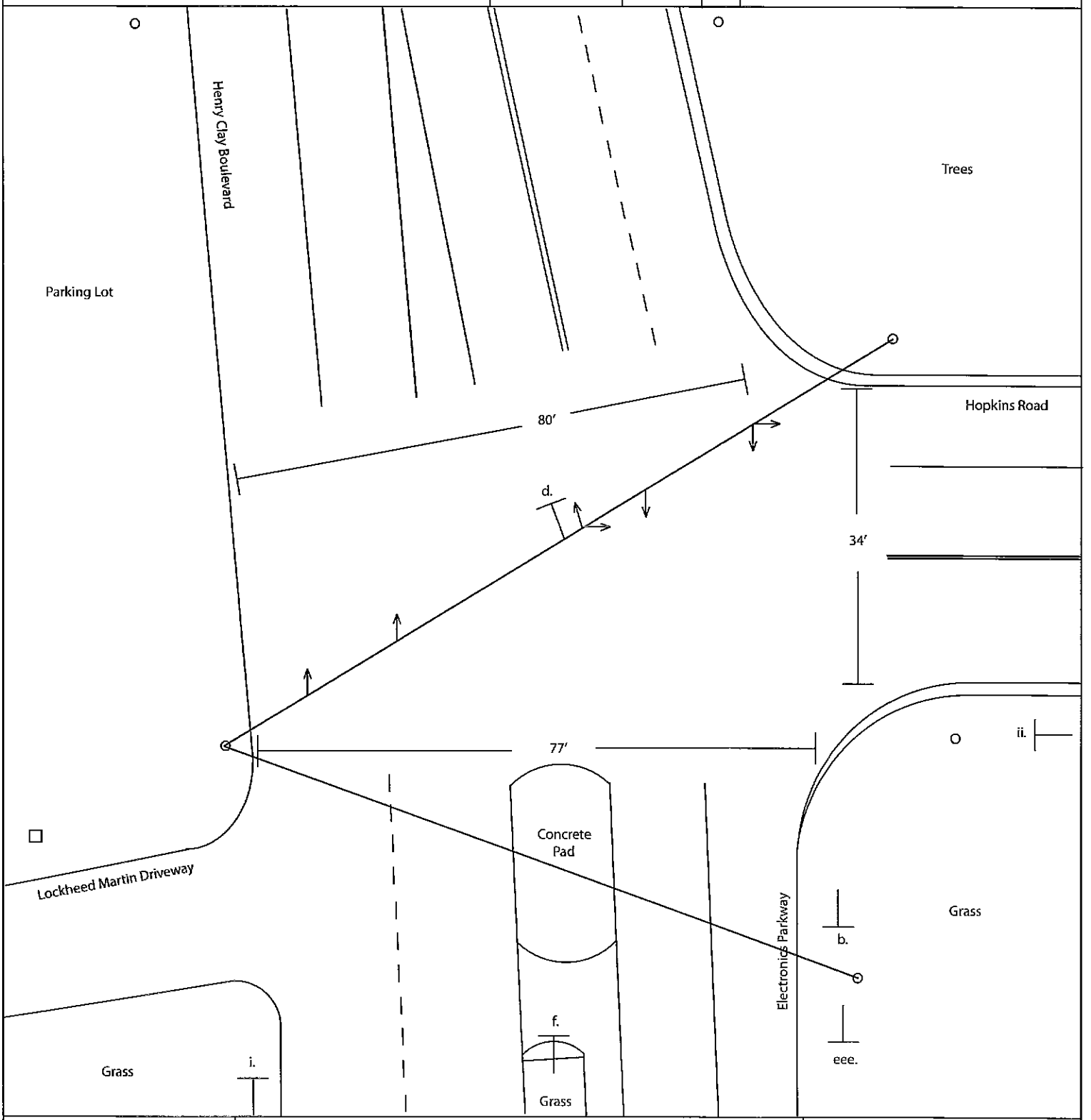
Location: Electronics Parkway at Hopkins Road

Legend: Sign; Signal Head; Signal with Span Wire; ## (Feet); Utility Pole; Light Pole

Drawn By: KK | Date: May 2010 | Prepared By: SMTC | N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.



Task: OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.

Diagram is not to scale.

Electronics Pkwy & Hopkins
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782043
Site Code : 78204301
Start Date : 3/25/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

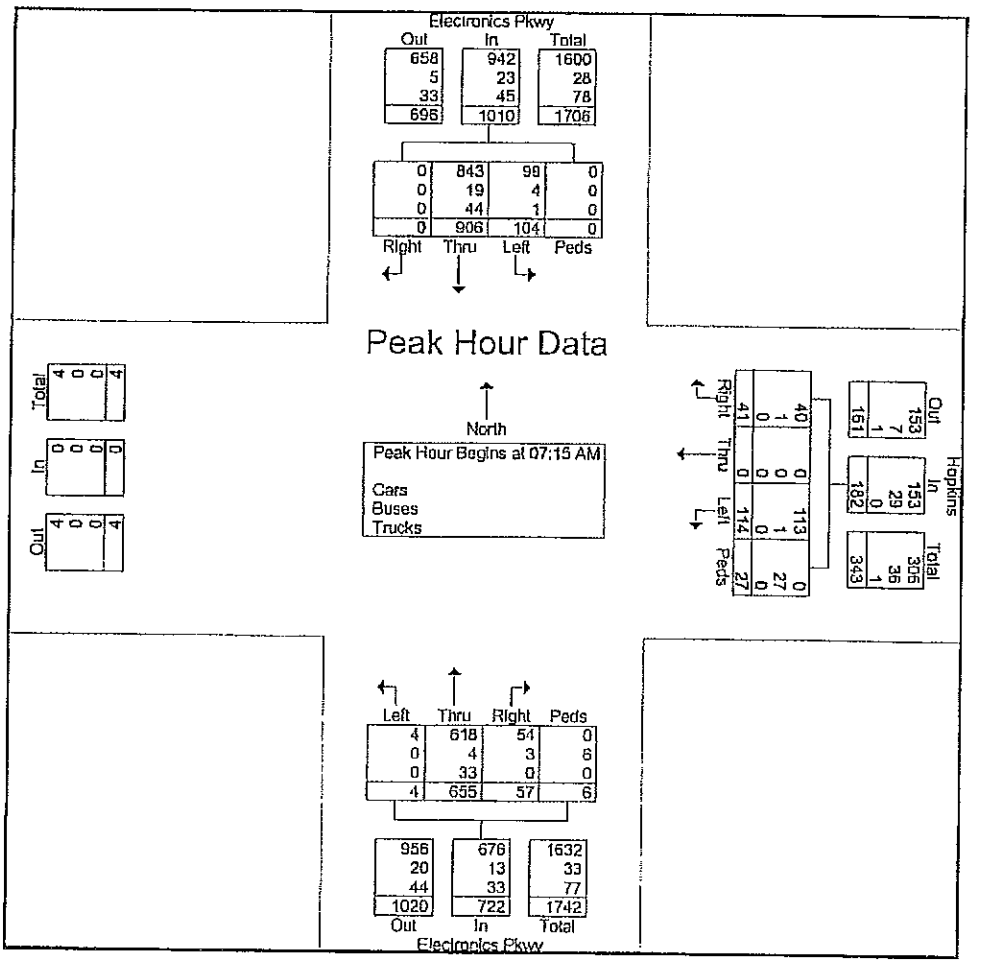
	Electronics Pkwy From North					Hopkins From East					Electronics Pkwy From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	175	15	0	190	14	0	24	10	48	6	114	0	2	122	360
07:15 AM	0	220	17	0	237	13	0	28	8	49	11	155	0	2	168	454
07:30 AM	0	226	25	0	251	8	0	29	4	41	11	162	0	0	173	465
07:45 AM	0	238	34	0	272	15	0	26	5	46	18	212	4	2	236	554
Total	0	859	91	0	950	50	0	107	27	184	46	643	4	6	699	1833
08:00 AM	0	222	28	0	250	5	0	31	10	46	17	126	0	2	145	441
08:15 AM	0	200	20	0	220	2	0	21	9	32	14	116	3	1	134	386
08:30 AM	0	128	22	0	150	9	0	24	10	43	15	118	0	0	133	326
08:45 AM	0	156	27	0	183	10	0	17	19	46	10	113	0	0	123	352
Total	0	706	97	0	803	26	0	93	48	167	56	473	3	3	535	1505
Break																
04:00 PM	0	139	25	0	164	16	0	21	13	50	29	236	0	1	266	480
04:15 PM	0	134	18	0	152	15	0	20	15	50	27	208	2	1	238	440
04:30 PM	0	215	29	0	244	37	0	24	4	65	23	254	0	2	279	588
04:45 PM	0	184	20	0	204	39	0	20	15	74	24	242	3	2	271	549
Total	0	672	92	0	764	107	0	85	47	239	103	940	5	6	1054	2057
05:00 PM	0	236	16	0	252	31	0	24	11	66	39	301	0	3	343	661
05:15 PM	0	145	22	0	167	20	0	18	13	51	27	266	0	2	295	513
05:30 PM	0	141	30	0	171	14	0	13	13	40	18	213	0	4	235	446
05:45 PM	0	135	41	0	176	22	0	20	8	50	20	176	0	3	199	425
Total	0	657	109	0	766	87	0	75	45	207	104	956	0	12	1072	2045
Grand Total	0	2894	389	0	3283	270	0	360	167	797	309	3012	12	27	3360	7440
Apprch %	0	88.2	11.8	0		33.9	0	45.2	21		9.2	89.6	0.4	0.8		
Total %	0	38.9	5.2	0	44.1	3.6	0	4.8	2.2	10.7	4.2	40.5	0.2	0.4	45.2	
Cars	0	2746	371	0	3117	242	0	354	0	596	299	2879	12	0	3190	6903
% Cars	0	94.9	95.4	0	94.9	89.6	0	98.3	0	74.8	96.8	95.6	100	0	94.9	92.8
Buses	0	28	14	0	42	28	0	5	165	198	10	26	0	27	63	303
% Buses	0	1	3.6	0	1.3	10.4	0	1.4	98.8	24.8	3.2	0.9	0	100	1.9	4.1
Trucks	0	120	4	0	124	0	0	1	2	3	0	107	0	0	107	234
% Trucks	0	4.1	1	0	3.8	0	0	0.3	1.2	0.4	0	3.6	0	0	3.2	3.1

Electronics Pkwy & Hopkins
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782043
Site Code : 78204301
Start Date : 3/25/2010
Page No : 3

	Electronics Pkwy From North					Hopkins From East					Electronics Pkwy From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:15 AM																
07:15 AM	0	220	17	0	237	13	0	28	8	49	11	155	0	2	168	454
07:30 AM	0	226	25	0	251	6	0	29	4	41	11	162	0	0	173	465
07:45 AM	0	238	34	0	272	15	0	26	5	46	18	212	4	2	236	554
08:00 AM	0	222	28	0	250	5	0	31	10	46	17	126	0	2	145	441
Total Volume	0	906	104	0	1010	41	0	114	27	182	57	655	4	6	722	1914
% App. Total	0	89.7	10.3	0		22.5	0	62.6	14.8		7.9	90.7	0.6	0.8		
PHF	.000	.952	.765	.000	.928	.683	.000	.919	.675	.929	.792	.772	.250	.750	.765	.864
Cars	0	843	99	0	942	40	0	113	0	153	54	618	4	0	676	1771
% Cars	0	93.0	95.2	0	93.3	97.6	0	99.1	0	84.1	94.7	94.4	100	0	93.6	92.5
Buses	0	19	4	0	23	1	0	1	27	29	3	4	0	6	13	65
% Buses	0	2.1	3.8	0	2.3	2.4	0	0.9	100	15.9	5.3	0.6	0	100	1.8	3.4
Trucks	0	44	1	0	45	0	0	0	0	0	0	33	0	0	33	78
% Trucks	0	4.9	1.0	0	4.5	0	0	0	0	0	0	5.0	0	0	4.6	4.1

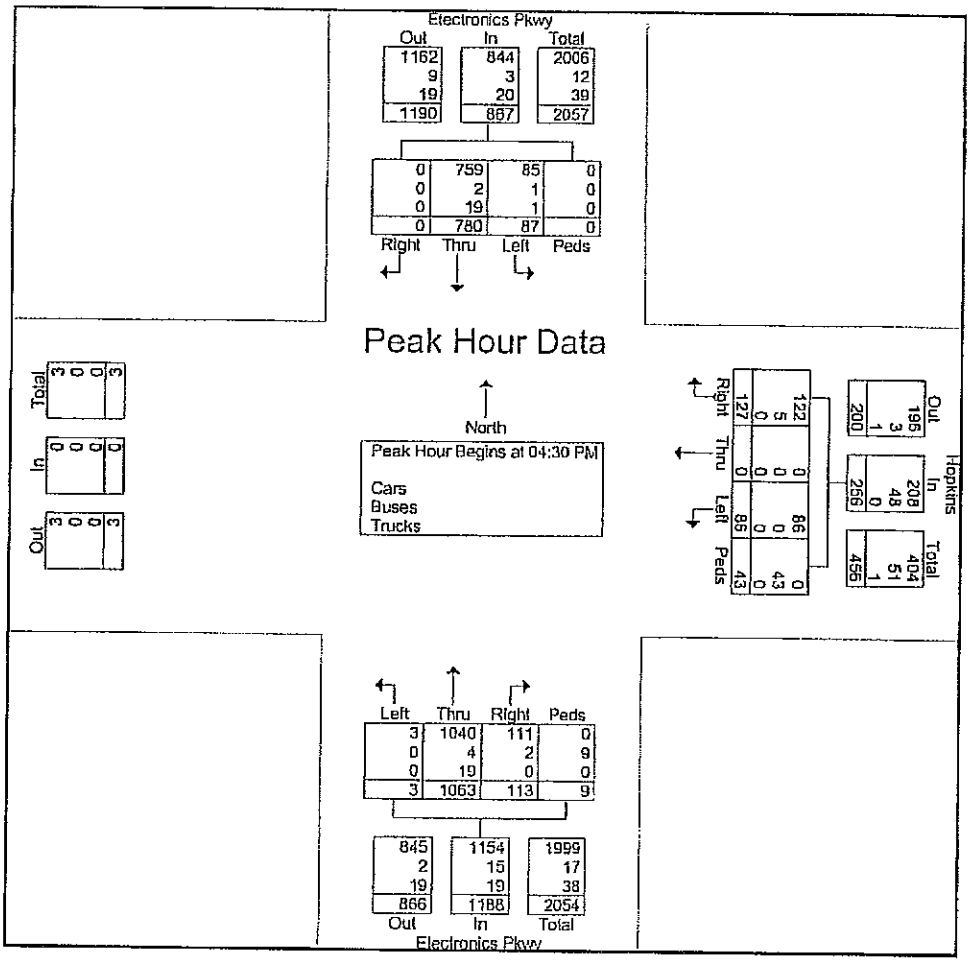


Electronics Pkwy & Hopkins
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782043
Site Code : 78204301
Start Date : 3/25/2010
Page No : 4

	Electronics Pkwy From North					Hopkins From East					Electronics Pkwy From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	0	215	29	0	244	37	0	24	4	65	23	254	0	2	279	588
04:45 PM	0	184	20	0	204	39	0	20	15	74	24	242	3	2	271	549
05:00 PM	0	236	16	0	252	31	0	24	11	66	39	301	0	3	343	661
05:15 PM	0	145	22	0	167	20	0	18	13	51	27	266	0	2	295	513
Total Volume	0	780	87	0	867	127	0	86	43	256	113	1063	3	9	1188	2311
% App. Total	0	90	10	0		49.6	0	33.6	16.8		9.5	89.5	0.3	0.8		
PHF	.000	.826	.750	.000	.860	.814	.000	.896	.717	.865	.724	.883	.250	.750	.866	.874
Cars	0	759	85	0	844	122	0	88	0	208	111	1040	3	0	1154	2206
% Cars	0	97.3	97.7	0	97.3	96.1	0	100	0	81.3	98.2	97.8	100	0	97.1	95.5
Buses	0	2	1	0	3	5	0	0	43	48	2	4	0	9	15	66
% Buses	0	0.3	1.1	0	0.3	3.9	0	0	100	18.8	1.8	0.4	0	100	1.3	2.9
Trucks	0	19	1	0	20	0	0	0	0	0	0	19	0	0	19	39
% Trucks	0	2.4	1.1	0	2.3	0	0	0	0	0	0	1.8	0	0	1.6	1.7



Bank 1 & Ped Key in the diraction of travel is counting vehicles turning Right on Red

There were a few vehicles the made U-Turn NB at Hopkins these counts were notes as left turns

INTERSECTION NAME: Electronics Parkway @ Hopkins INSTALLATION DATE:
INTERSECTION NUMBER: 68 PROGRAM DATE:

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL								
MAX RECALL		X				X		
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	4.5	12	6		4.5	12	8	8
PASSAGE	2	2	2		2	2	2	2
YELLOW	3	4	3		3	4	4	4
RED	2	2	2		2	2	2	2
MAX I	22	25	30		25	25	30	30
MAX II								
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X			X		

INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NAME: Electronics Parkway @ Hopkins
INTERSECTION NUMBER: 68

INSTALLATION DATE: COORDINATION
PROGRAM DATE: OPTIMIZATION

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY		X				X		
EXT RECALL		X				X		
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	10			10		
PASSAGE	1.5	2.6	1.4			2.6		
YELLOW	4.5	4.5	4.5			4.5		
RED	2	2	2			2		
MAX I (AM)	12.5	34.5	13.5			53.5		
MAX II (PM)	9.5	40.5	10.5			56.5		
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

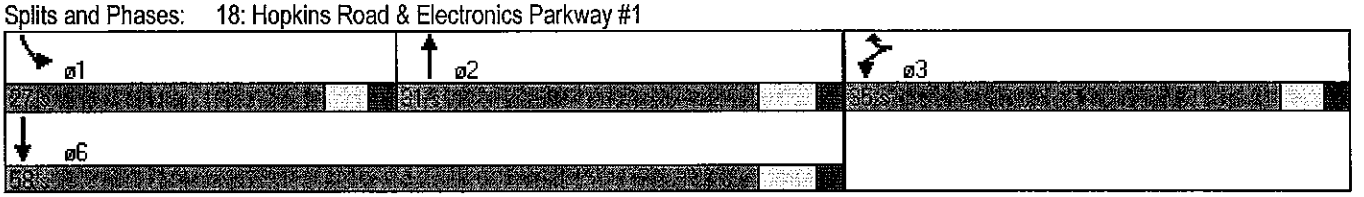
	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X			X		

INHIBIT O/L	PED Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	114	41	655	104	906
Turn Type		Prot		Prot	
Protected Phases	3	3	2	1	6
Permitted Phases					
Detector Phase	3	3		1	
Switch Phase					
Minimum Initial (s)	6.0	6.0	12.0	4.5	12.0
Minimum Split (s)	11.0	11.0	18.0	9.5	18.0
Total Split (s)	35.0	35.0	31.0	27.0	58.0
Total Split (%)	37.6%	37.6%	33.3%	29.0%	62.4%
Maximum Green (s)	30.0	30.0	25.0	22.0	52.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Max	None	Max
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary
Cycle Length: 93
Actuated Cycle Length: 70.2
Natural Cycle: 45
Control Type: Actuated-Uncoordinated

Splits and Phases: 18: Hopkins Road & Electronics Parkway #1

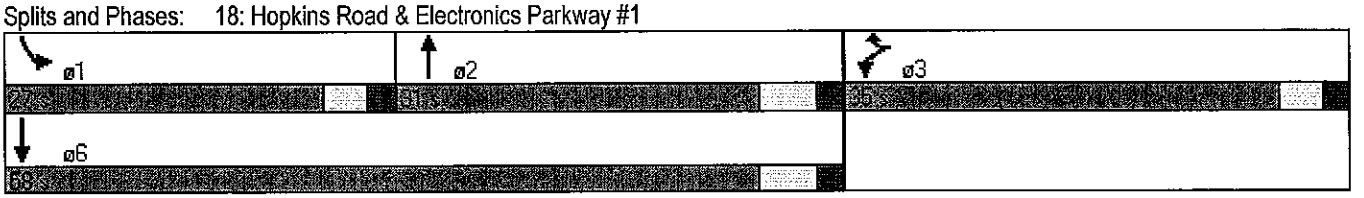


Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	86	127	1063	87	780
Turn Type		Prot		Prot	
Protected Phases	3	3	2	1	6
Permitted Phases					
Detector Phase	3	3		1	
Switch Phase					
Minimum Initial (s)	6.0	6.0	12.0	4.5	12.0
Minimum Split (s)	11.0	11.0	18.0	9.5	18.0
Total Split (s)	35.0	35.0	31.0	27.0	58.0
Total Split (%)	37.6%	37.6%	33.3%	29.0%	62.4%
Maximum Green (s)	30.0	30.0	25.0	22.0	52.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Max	None	Max
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary

Cycle Length: 93
Actuated Cycle Length: 71.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 18: Hopkins Road & Electronics Parkway #1

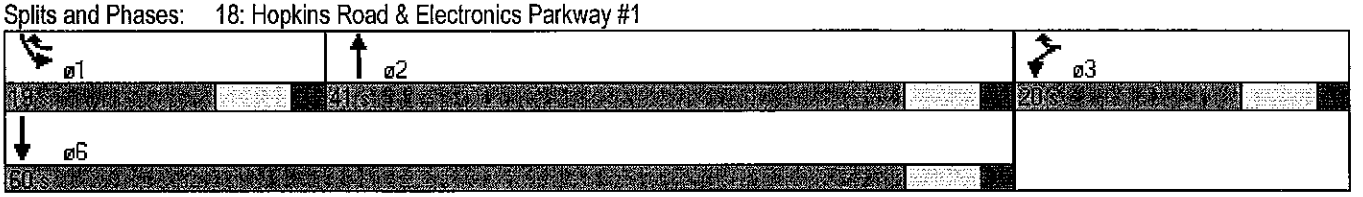


Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	114	41	655	104	906
Turn Type		pt+ov		Prot	
Protected Phases	3	3 1	2	1	6
Permitted Phases					
Detector Phase	3	3 1	2	1	6
Switch Phase					
Minimum Initial (s)	10.0		10.0	5.0	10.0
Minimum Split (s)	16.5		16.5	11.5	16.5
Total Split (s)	20.0	39.0	41.0	19.0	60.0
Total Split (%)	25.0%	48.8%	51.3%	23.8%	75.0%
Maximum Green (s)	13.5		34.5	12.5	53.5
Yellow Time (s)	4.5		4.5	4.5	4.5
All-Red Time (s)	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	5.5	5.5	4.5	5.5	4.5
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Vehicle Extension (s)	1.4		3.8	1.5	3.8
Minimum Gap (s)	1.4		3.8	1.5	3.8
Time Before Reduce (s)	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0
Recall Mode	None		C-Min	None	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 48 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

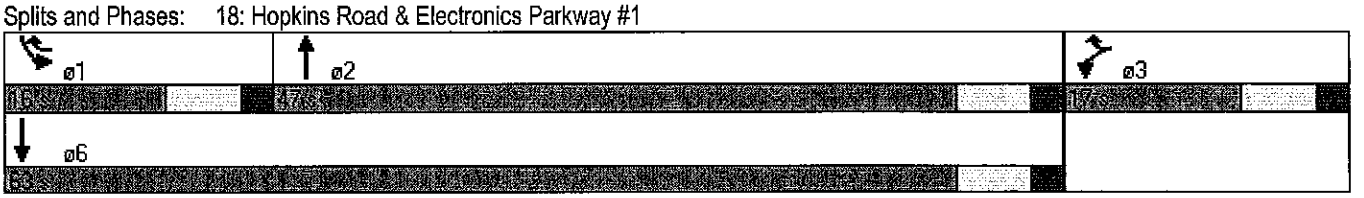
Splits and Phases: 18: Hopkins Road & Electronics Parkway #1



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	86	127	1063	87	780
Turn Type		pt+ov		Prot	
Protected Phases	3	3 1	2	1	6
Permitted Phases					
Detector Phase	3	3 1	2	1	6
Switch Phase					
Minimum Initial (s)	10.0		10.0	5.0	10.0
Minimum Split (s)	16.5		16.5	11.5	16.5
Total Split (s)	17.0	33.0	47.0	16.0	63.0
Total Split (%)	21.3%	41.3%	58.8%	20.0%	78.8%
Maximum Green (s)	10.5		40.5	9.5	56.5
Yellow Time (s)	4.5		4.5	4.5	4.5
All-Red Time (s)	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-2.0	-1.0	-2.0
Total Lost Time (s)	5.5	5.5	4.5	5.5	4.5
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Vehicle Extension (s)	1.4		3.8	1.5	3.8
Minimum Gap (s)	1.4		3.8	1.5	3.8
Time Before Reduce (s)	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0
Recall Mode	None		C-Min	None	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

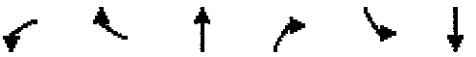
Splits and Phases: 18: Hopkins Road & Electronics Parkway #1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	114	41	655	57	104	906
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1787	1583	3356		1662	3261
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1787	1583	3356		1662	3261
Peak-hour factor, PHF	0.93	0.93	0.77	0.77	0.93	0.93
Adj. Flow (vph)	123	44	851	74	112	974
RTOR Reduction (vph)	0	39	4	0	0	0
Lane Group Flow (vph)	123	5	921	0	112	974
Confl. Peds. (#/hr)	6			27	27	
Heavy Vehicles (%)	1%	2%	6%	5%	5%	7%
Turn Type		Prot			Prot	
Protected Phases	3	3	2		1	6
Permitted Phases						
Actuated Green, G (s)	7.8	7.8	40.9		7.7	53.6
Effective Green, g (s)	8.8	8.8	42.9		8.7	55.6
Actuated g/C Ratio	0.12	0.12	0.59		0.12	0.77
Clearance Time (s)	5.0	5.0	6.0		5.0	6.0
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	217	192	1989		200	2504
v/s Ratio Prot	c0.07	0.00	c0.27		c0.07	0.30
v/s Ratio Perm						
v/c Ratio	0.57	0.03	0.46		0.56	0.39
Uniform Delay, d1	30.0	28.0	8.3		30.0	2.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.0	0.0	0.8		2.1	0.5
Delay (s)	32.0	28.1	9.1		32.2	3.2
Level of Service	C	C	A		C	A
Approach Delay (s)	31.0		9.1			6.2
Approach LOS	C		A			A

Intersection Summary				
HCM Average Control Delay	9.3	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			

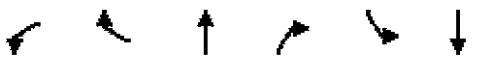
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	86	127	1063	113	87	780
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	1553	3469		1711	3388
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	1553	3469		1711	3388
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.86	0.86
Adj. Flow (vph)	99	146	1222	130	101	907
RTOR Reduction (vph)	0	127	5	0	0	0
Lane Group Flow (vph)	99	19	1347	0	101	907
Confl. Peds. (#/hr)	9			43	43	
Heavy Vehicles (%)	0%	4%	2%	2%	2%	3%
Turn Type		Prot			Prot	
Protected Phases	3	3	2		1	6
Permitted Phases						
Actuated Green, G (s)	8.4	8.4	40.7		7.4	53.1
Effective Green, g (s)	9.4	9.4	42.7		8.4	55.1
Actuated g/C Ratio	0.13	0.13	0.59		0.12	0.76
Clearance Time (s)	5.0	5.0	6.0		5.0	6.0
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	234	201	2043		198	2575
v/s Ratio Prot	c0.05	0.01	c0.39		c0.06	0.27
v/s Ratio Perm						
v/c Ratio	0.42	0.09	0.66		0.51	0.35
Uniform Delay, d1	29.1	27.8	10.0		30.1	2.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.1	1.7		0.9	0.4
Delay (s)	29.5	27.9	11.7		31.0	3.2
Level of Service	C	C	B		C	A
Approach Delay (s)	28.5		11.7			6.0
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	72.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	114	41	655	57	104	906
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11
Total Lost time (s)	5.5	5.5	4.5		5.5	4.5
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1787	1583	3356		1662	3261
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1787	1583	3356		1662	3261
Peak-hour factor, PHF	0.93	0.93	0.77	0.77	0.93	0.93
Adj. Flow (vph)	123	44	851	74	112	974
RTOR Reduction (vph)	0	30	7	0	0	0
Lane Group Flow (vph)	123	14	918	0	112	974
Confl. Peds. (#/hr)	6			27	27	
Heavy Vehicles (%)	1%	2%	6%	5%	5%	7%
Turn Type		pt+ov			Prot	
Protected Phases	3	3 1	2		1	6
Permitted Phases						
Actuated Green, G (s)	8.9	23.7	43.3		8.3	58.1
Effective Green, g (s)	9.9	24.7	45.3		9.3	60.1
Actuated g/C Ratio	0.12	0.31	0.57		0.12	0.75
Clearance Time (s)	6.5		6.5		6.5	6.5
Vehicle Extension (s)	1.4		3.8		1.5	3.8
Lane Grp Cap (vph)	221	489	1900		193	2450
v/s Ratio Prot	c0.07	0.01	c0.27		c0.07	0.30
v/s Ratio Perm						
v/c Ratio	0.56	0.03	0.48		0.58	0.40
Uniform Delay, d1	33.0	19.3	10.4		33.5	3.5
Progression Factor	1.00	1.00	0.57		1.17	0.42
Incremental Delay, d2	1.7	0.0	0.8		2.4	0.4
Delay (s)	34.7	19.3	6.7		41.5	1.9
Level of Service	C	B	A		D	A
Approach Delay (s)	30.6		6.7			6.0
Approach LOS	C		A			A

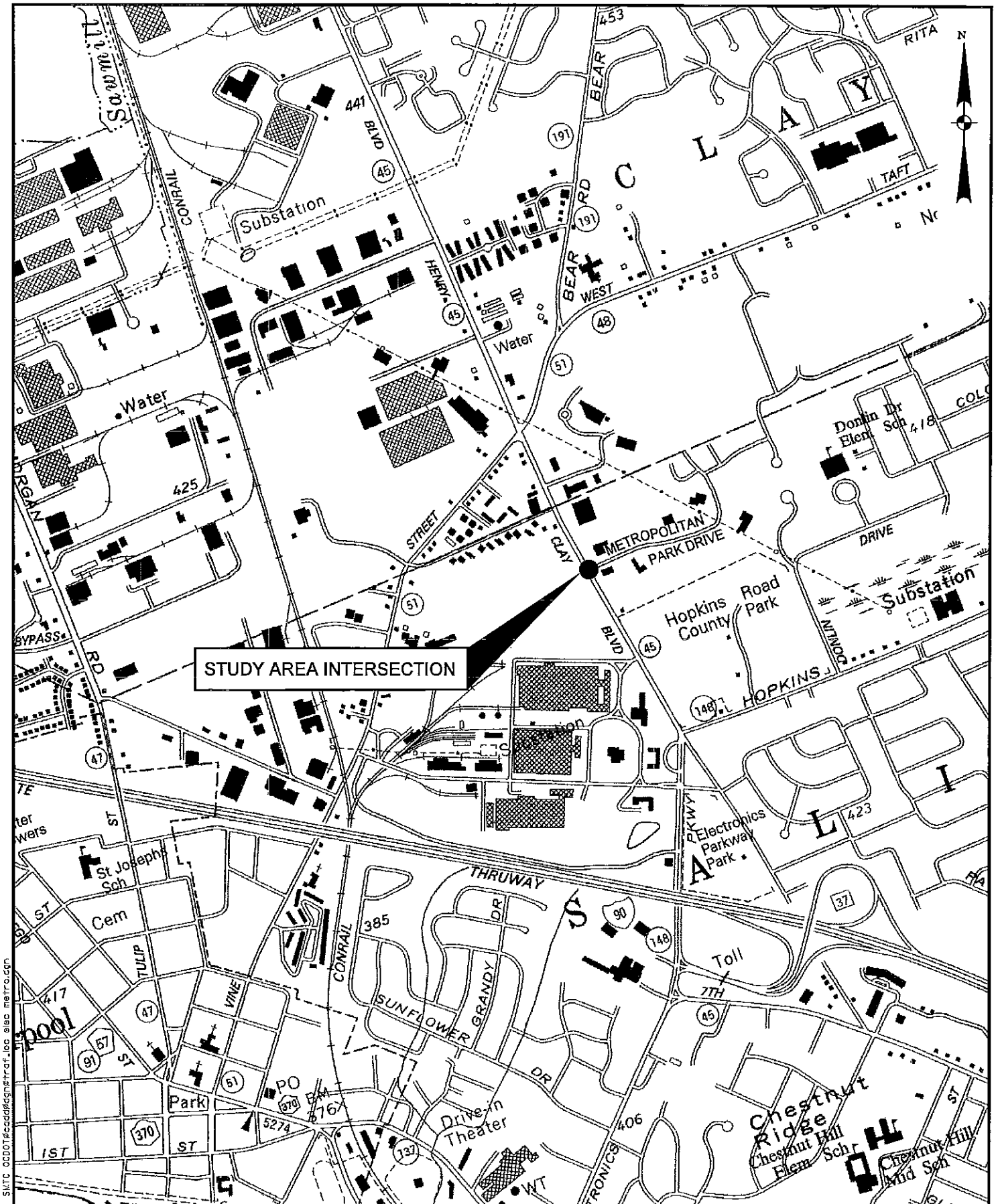
Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	86	127	1063	113	87	780
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11
Total Lost time (s)	5.5	5.5	4.5		5.5	4.5
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	1553	3469		1711	3388
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	1553	3469		1711	3388
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.86	0.86
Adj. Flow (vph)	99	146	1222	130	101	907
RTOR Reduction (vph)	0	26	9	0	0	0
Lane Group Flow (vph)	99	120	1343	0	101	907
Confl. Peds. (#/hr)	9			43	43	
Heavy Vehicles (%)	0%	4%	2%	2%	2%	3%
Turn Type		pt+ov			Prot	
Protected Phases	3	3 1	2		1	6
Permitted Phases						
Actuated Green, G (s)	10.1	24.7	42.3		8.1	56.9
Effective Green, g (s)	11.1	25.7	44.3		9.1	58.9
Actuated g/C Ratio	0.14	0.32	0.55		0.11	0.74
Clearance Time (s)	6.5		6.5		6.5	6.5
Vehicle Extension (s)	1.4		3.8		1.5	3.8
Lane Grp Cap (vph)	250	499	1921		195	2494
v/s Ratio Prot	c0.05	0.08	c0.39		c0.06	0.27
v/s Ratio Perm						
v/c Ratio	0.40	0.24	0.70		0.52	0.36
Uniform Delay, d1	31.4	20.0	13.0		33.4	3.8
Progression Factor	1.00	1.00	0.43		0.74	1.50
Incremental Delay, d2	0.4	0.1	1.7		0.8	0.4
Delay (s)	31.8	20.1	7.3		25.4	6.1
Level of Service	C	C	A		C	A
Approach Delay (s)	24.8		7.3			8.0
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



LOCATION MAP
ELECTRONICS PKWY/METROPOLITAN PARK RD

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B.8

INTERSECTION DIAGRAM

Location

Henry Clay Boulevard at Metropolitan Park Drive

Legend

Sign | Signal Head | Signal with Span Wire | ## (Feet) | Utility Pole | Fire Hydrant

Drawn By: KK

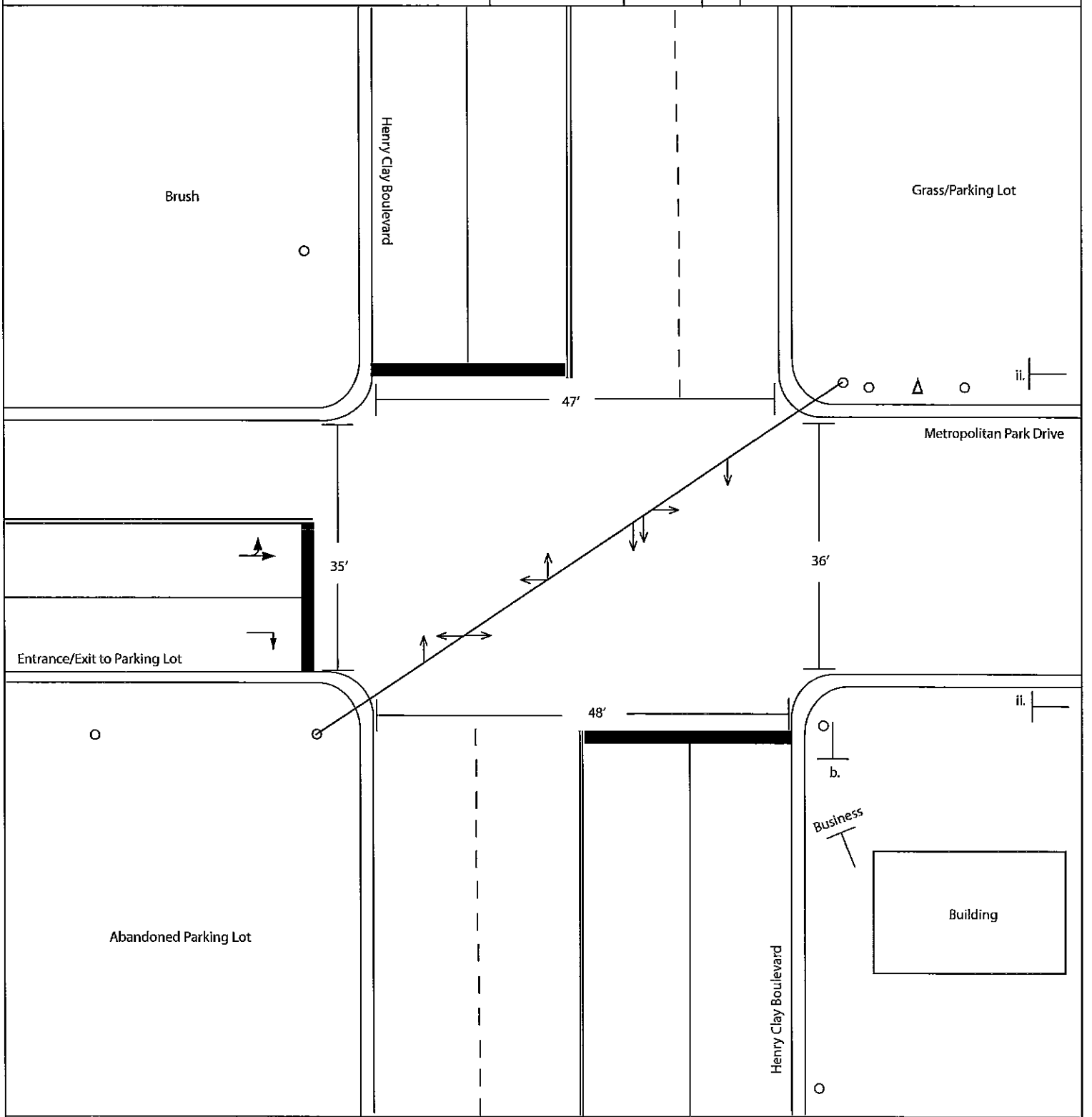
Date: May 2010

Prepared By: SMTC

N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.



Task

OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.

Diagram is not to scale.

Electronics Pkwy & Metropolitian
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782044
Site Code : 78204401
Start Date : 3/25/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

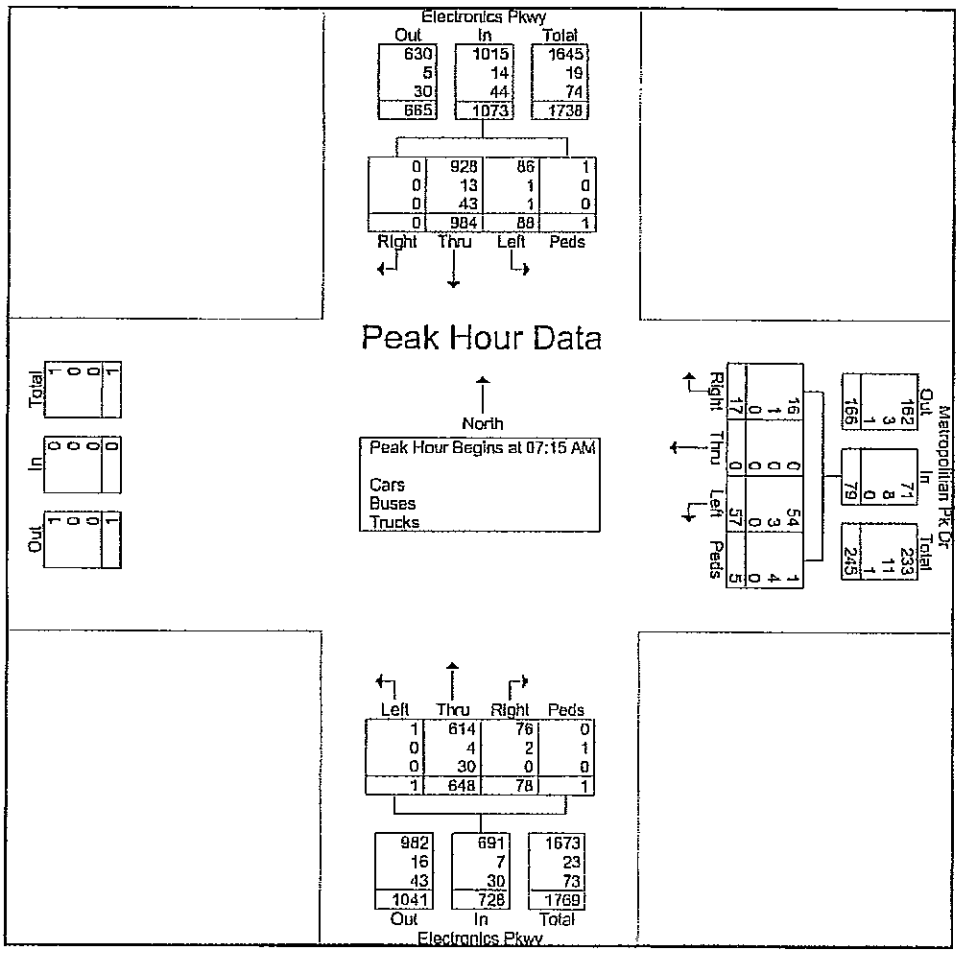
	Electronics Pkwy From North					Metropolitian Pk Dr From East					Electronics Pkwy From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	171	15	0	186	4	0	14	1	19	6	118	0	0	124	329
07:15 AM	0	239	17	0	256	7	0	8	0	15	13	164	0	0	177	448
07:30 AM	0	241	24	0	265	1	0	21	1	23	17	160	1	0	178	466
07:45 AM	0	273	29	1	303	6	0	20	3	29	34	203	0	0	237	569
Total	0	924	85	1	1010	18	0	63	5	86	70	645	1	0	716	1812
08:00 AM	0	231	18	0	249	3	0	8	1	12	14	121	0	1	136	397
08:15 AM	0	213	15	0	228	2	0	10	2	14	6	114	0	2	122	364
08:30 AM	0	138	5	0	143	3	0	12	3	18	10	121	0	1	132	293
08:45 AM	0	186	15	0	201	3	0	14	3	20	10	128	0	0	138	359
Total	0	768	53	0	821	11	0	44	9	64	40	484	0	4	528	1413
Break																
04:00 PM	0	169	5	0	174	8	0	9	3	20	16	225	0	1	242	436
04:15 PM	0	139	6	0	145	7	0	10	6	23	12	228	0	0	240	408
04:30 PM	0	238	3	0	241	8	0	16	3	27	9	285	0	1	295	563
04:45 PM	0	189	6	0	195	2	0	17	7	26	13	294	0	3	310	531
Total	0	735	20	0	755	25	0	52	19	96	50	1032	0	5	1087	1938
05:00 PM	0	214	6	0	220	50	0	49	11	110	14	310	0	2	326	656
05:15 PM	0	141	7	0	148	8	0	14	9	31	11	283	0	1	295	474
05:30 PM	0	159	7	0	166	9	0	13	6	28	14	234	0	0	248	442
05:45 PM	0	167	2	0	169	5	0	6	1	12	6	205	0	1	212	393
Total	0	681	22	0	703	72	0	82	27	181	45	1032	0	4	1081	1965
Grand Total	0	3108	180	1	3289	126	0	241	60	427	205	3193	1	13	3412	7128
Apprch %	0	94.5	5.5	0		29.5	0	56.4	14.1		6	93.6	0	0.4		
Total %	0	43.6	2.5	0	46.1	1.8	0	3.4	0.8	6	2.9	44.8	0	0.2	47.9	
Cars	0	2968	169	1	3138	114	0	229	2	345	190	3069	1	0	3260	6743
% Cars	0	95.5	93.9	100	95.4	90.5	0	95	3.3	80.8	92.7	96.1	100	0	95.5	94.6
Buses	0	31	2	0	33	5	0	6	58	69	9	26	0	13	48	150
% Buses	0	1	1.1	0	1	4	0	2.5	96.7	16.2	4.4	0.8	0	100	1.4	2.1
Trucks	0	109	9	0	118	7	0	6	0	13	6	98	0	0	104	235
% Trucks	0	3.5	5	0	3.6	5.6	0	2.5	0	3	2.9	3.1	0	0	3	3.3

Electronics Pkwy & Metropolitian
Turning Movement
Weekday Count

Buchner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782044
Site Code : 78204401
Start Date : 3/25/2010
Page No : 3

	Electronics Pkwy From North					Metropolitian Pk Dr From East					Electronics Pkwy From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:15 AM																
07:15 AM	0	239	17	0	256	7	0	8	0	15	13	164	0	0	177	448
07:30 AM	0	241	24	0	265	1	0	21	1	23	17	160	1	0	178	466
07:45 AM	0	273	29	1	303	6	0	20	3	29	34	203	0	0	237	569
08:00 AM	0	231	18	0	249	3	0	8	1	12	14	121	0	1	136	397
Total Volume	0	984	88	1	1073	17	0	57	5	79	78	648	1	1	728	1880
% App. Total	0	91.7	8.2	0.1		21.5	0	72.2	6.3		10.7	89	0.1	0.1		
PHF	.000	.901	.759	.250	.885	.607	.000	.679	.417	.681	.574	.798	.250	.250	.768	.826
Cars	0	928	86	1	1015	16	0	54	1	71	76	614	1	0	691	1777
% Cars	0	94.3	97.7	100	94.6	94.1	0	94.7	20.0	89.9	97.4	94.8	100	0	94.9	94.5
Buses	0	13	1	0	14	1	0	3	4	8	2	4	0	1	7	29
% Buses	0	1.3	1.1	0	1.3	5.9	0	5.3	80.0	10.1	2.6	0.6	0	100	1.0	1.5
Trucks	0	43	1	0	44	0	0	0	0	0	0	30	0	0	30	74
% Trucks	0	4.4	1.1	0	4.1	0	0	0	0	0	0	4.6	0	0	4.1	3.9

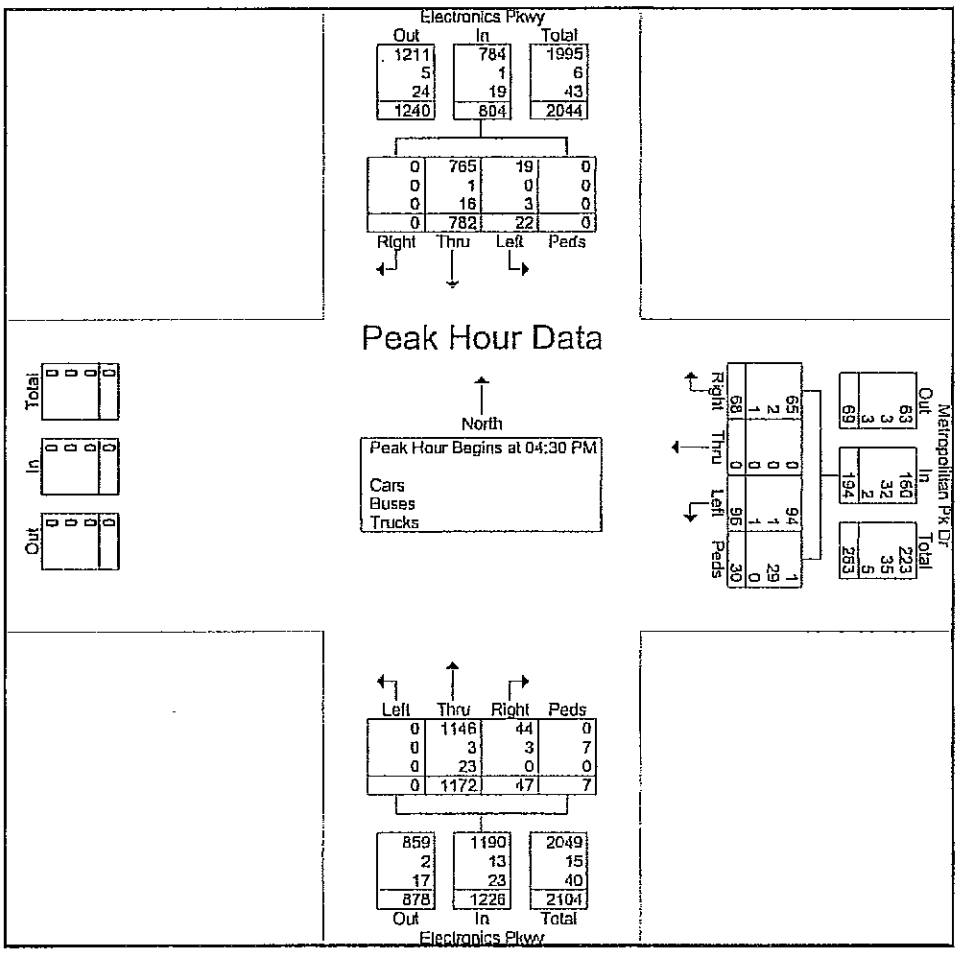


Electronics Pkwy & Metropolitian
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782044
Site Code : 78204401
Start Date : 3/25/2010
Page No : 4

	Electronics Pkwy From North					Metropolitian Pk Dr From East					Electronics Pkwy From South					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	0	238	3	0	241	8	0	16	3	27	9	285	0	1	295	563
04:45 PM	0	189	6	0	195	2	0	17	7	26	13	294	0	3	310	531
05:00 PM	0	214	6	0	220	50	0	49	11	110	14	310	0	2	326	656
05:15 PM	0	141	7	0	148	8	0	14	9	31	11	283	0	1	295	474
Total Volume	0	782	22	0	804	68	0	96	30	194	47	1172	0	7	1226	2224
% App. Total	0	97.3	2.7	0		35.1	0	49.5	15.5		3.8	95.6	0	0.6		
PHF	.000	.821	.786	.000	.834	.340	.000	.490	.682	.441	.839	.945	.000	.583	.940	.848
Cars	0	765	19	0	784	65	0	94	1	160	44	1146	0	0	1190	2134
% Cars	0	97.8	86.4	0	97.5	95.6	0	97.9	3.3	82.5	93.6	97.8	0	0	97.1	96.0
Buses	0	1	0	0	1	2	0	1	29	32	3	3	0	7	13	46
% Buses	0	0.1	0	0	0.1	2.9	0	1.0	96.7	16.5	6.4	0.3	0	100	1.1	2.1
Trucks	0	16	3	0	19	1	0	1	0	2	0	23	0	0	23	44
% Trucks	0	2.0	13.6	0	2.4	1.5	0	1.0	0	1.0	0	2.0	0	0	1.9	2.0



Bank 1 & Ped Key in the direction of
ravel is counting vehicles turning
Right on Red

INTERSECTION NAME: Henry Clay @ Metropolitan
INTERSECTION NUMBER: 83

INSTALLATION DATE:
PROGRAM DATE:

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY	X							
EXT RECALL								
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	10	8						
PASSAGE	4	4						
YELLOW	4	4						
RED	3	3						
MAX I	36	18						
MAX II	40	22						
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X						

INHIBIT O/L	Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

INTERSECTION NAME: Henry Clay @ Metropolitan
INTERSECTION NUMBER: 83

INSTALLATION DATE:
PROGRAM DATE:

COORDINATION
OPTIMIZATION

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY	X							
EXT RECALL	X							
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	10	7						
PASSAGE	2.6	1.8						
YELLOW	4.5	4.5						
RED	2	2						
MAX I (AM)	56.5	10.5						
MAX II (PM)	42.5	24.5						
WALK								
PED CLEAR								
S/A								
TBR								
TTR								
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

	PHASES USED							
	1	2	3	4	5	6	7	8
ON/OFF	X	X						

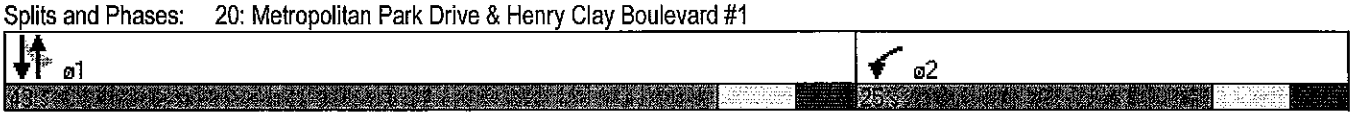
INHIBIT O/L	Overlaps							
	1	2	3	4	5	6	7	8
OLA								
OVERLAP B								
OVERLAP C								
OVERLAP D								

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Volume (vph)	57	648	88	984
Turn Type			Perm	
Protected Phases	2	1		1
Permitted Phases			1	
Detector Phase	2			
Switch Phase				
Minimum Initial (s)	8.0	10.0	10.0	10.0
Minimum Split (s)	15.0	17.0	17.0	17.0
Total Split (s)	25.0	43.0	43.0	43.0
Total Split (%)	36.8%	63.2%	63.2%	63.2%
Maximum Green (s)	18.0	36.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	4.0	4.0	4.0	4.0
Minimum Gap (s)	4.0	4.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary

Cycle Length: 68
Actuated Cycle Length: 59.8
Natural Cycle: 45
Control Type: Semi Act-Uncoord

Splits and Phases: 20: Metropolitan Park Drive & Henry Clay Boulevard #1

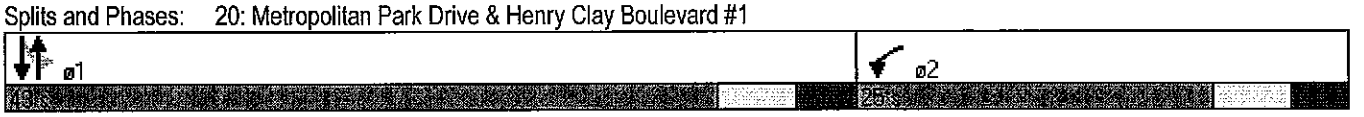


Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Volume (vph)	96	1172	22	782
Turn Type			Perm	
Protected Phases	2	1		1
Permitted Phases			1	
Detector Phase	2			
Switch Phase				
Minimum Initial (s)	8.0	10.0	10.0	10.0
Minimum Split (s)	15.0	17.0	17.0	17.0
Total Split (s)	25.0	43.0	43.0	43.0
Total Split (%)	36.8%	63.2%	63.2%	63.2%
Maximum Green (s)	18.0	36.0	36.0	36.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	4.0	4.0	4.0	4.0
Minimum Gap (s)	4.0	4.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary

Cycle Length: 68
Actuated Cycle Length: 66.2
Natural Cycle: 45
Control Type: Semi Act-Uncoord

Splits and Phases: 20: Metropolitan Park Drive & Henry Clay Boulevard #1

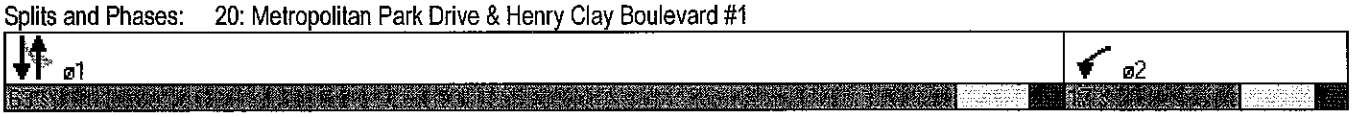


Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Volume (vph)	57	648	88	984
Turn Type			Perm	
Protected Phases	2	1		1
Permitted Phases			1	
Detector Phase	2	1	1	1
Switch Phase				
Minimum Initial (s)	7.0	10.0	10.0	10.0
Minimum Split (s)	15.5	16.5	16.5	16.5
Total Split (s)	17.0	63.0	63.0	63.0
Total Split (%)	21.3%	78.8%	78.8%	78.8%
Maximum Green (s)	10.5	56.5	56.5	56.5
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	3.5	3.5	3.5	3.5
Lead/Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	1.8	3.8	3.8	3.8
Minimum Gap (s)	1.8	3.8	3.8	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 4 (5%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

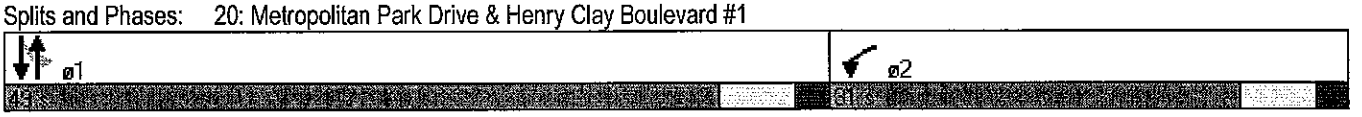
Splits and Phases: 20: Metropolitan Park Drive & Henry Clay Boulevard #1

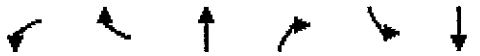


Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Volume (vph)	96	1172	22	782
Turn Type			Perm	
Protected Phases	2	1		1
Permitted Phases			1	
Detector Phase	2	1	1	1
Switch Phase				
Minimum Initial (s)	7.0	10.0	10.0	10.0
Minimum Split (s)	15.5	16.5	16.5	16.5
Total Split (s)	31.0	49.0	49.0	49.0
Total Split (%)	38.8%	61.3%	61.3%	61.3%
Maximum Green (s)	24.5	42.5	42.5	42.5
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	3.5	3.5	3.5	3.5
Lead/Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	1.8	3.8	3.8	3.8
Minimum Gap (s)	1.8	3.8	3.8	3.8
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 52 (65%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 20: Metropolitan Park Drive & Henry Clay Boulevard #1





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	57	18	648	78	88	984
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.97		0.98			1.00
Flt Protected	0.96		1.00			1.00
Satd. Flow (prot)	1678		3381			3402
Flt Permitted	0.96		1.00			0.79
Satd. Flow (perm)	1678		3381			2685
Peak-hour factor, PHF	0.68	0.68	0.77	0.77	0.89	0.89
Adj. Flow (vph)	84	26	842	101	99	1106
RTOR Reduction (vph)	20	0	10	0	0	0
Lane Group Flow (vph)	90	0	933	0	0	1205
Confl. Peds. (#/hr)	1	1		5	5	
Heavy Vehicles (%)	5%	6%	5%	3%	2%	6%
Turn Type					Perm	
Protected Phases	2		1			1
Permitted Phases					1	
Actuated Green, G (s)	8.1		39.1			39.1
Effective Green, g (s)	11.1		42.1			42.1
Actuated g/C Ratio	0.18		0.69			0.69
Clearance Time (s)	7.0		7.0			7.0
Vehicle Extension (s)	4.0		4.0			4.0
Lane Grp Cap (vph)	304		2326			1847
v/s Ratio Prot	c0.05		0.28			
v/s Ratio Perm						c0.45
v/c Ratio	0.30		0.40			0.65
Uniform Delay, d1	21.7		4.1			5.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.7		0.5			1.8
Delay (s)	22.4		4.6			7.2
Level of Service	C		A			A
Approach Delay (s)	22.4		4.6			7.2
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	96	68	1172	47	22	782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.94		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1695		3507			3522
Flt Permitted	0.97		1.00			0.89
Satd. Flow (perm)	1695		3507			3139
Peak-hour factor, PHF	0.44	0.44	0.94	0.94	0.83	0.83
Adj. Flow (vph)	218	155	1247	50	27	942
RTOR Reduction (vph)	36	0	4	0	0	0
Lane Group Flow (vph)	337	0	1293	0	0	969
Confl. Peds. (#/hr)	7			29	29	
Heavy Vehicles (%)	2%	4%	2%	6%	14%	2%
Turn Type					Perm	
Protected Phases	2		1			1
Permitted Phases					1	
Actuated Green, G (s)	16.2		36.1			36.1
Effective Green, g (s)	19.2		39.1			39.1
Actuated g/C Ratio	0.29		0.59			0.59
Clearance Time (s)	7.0		7.0			7.0
Vehicle Extension (s)	4.0		4.0			4.0
Lane Grp Cap (vph)	491		2068			1851
v/s Ratio Prot	c0.20		c0.37			
v/s Ratio Perm						0.31
v/c Ratio	0.69		0.63			0.52
Uniform Delay, d1	20.9		8.8			8.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	4.3		1.4			1.1
Delay (s)	25.2		10.3			9.1
Level of Service	C		B			A
Approach Delay (s)	25.2		10.3			9.1
Approach LOS	C		B			A

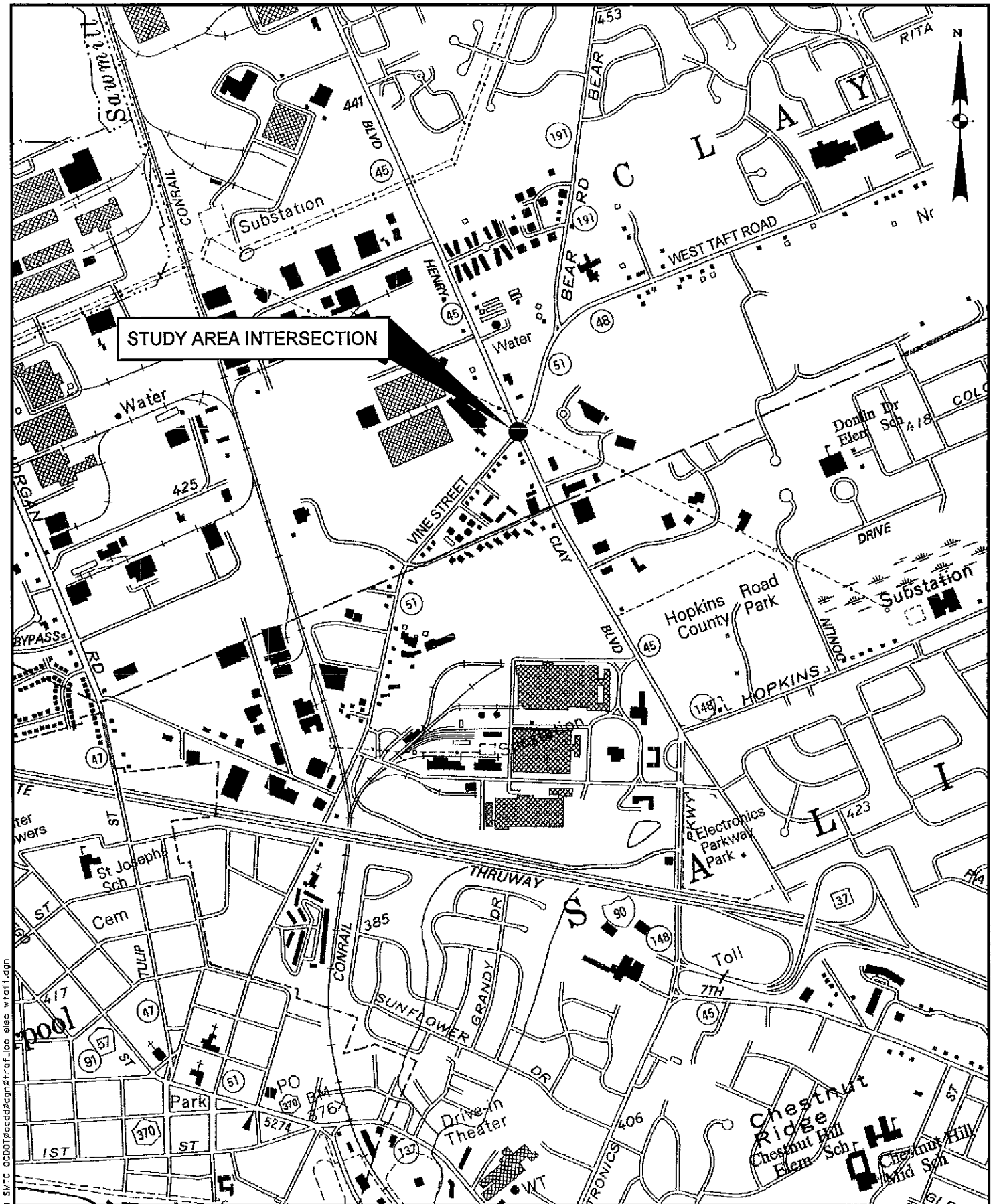
Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	57	18	648	78	88	984
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5			3.5
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.97		0.98			1.00
Flt Protected	0.96		1.00			1.00
Satd. Flow (prot)	1678		3381			3402
Flt Permitted	0.96		1.00			0.78
Satd. Flow (perm)	1678		3381			2650
Peak-hour factor, PHF	0.68	0.68	0.77	0.77	0.89	0.89
Adj. Flow (vph)	84	26	842	101	99	1106
RTOR Reduction (vph)	15	0	10	0	0	0
Lane Group Flow (vph)	95	0	933	0	0	1205
Confl. Peds. (#/hr)	1	1		5	5	
Heavy Vehicles (%)	5%	6%	5%	3%	2%	6%
Turn Type					Perm	
Protected Phases	2		1			1
Permitted Phases					1	
Actuated Green, G (s)	7.3		59.7			59.7
Effective Green, g (s)	10.3		62.7			62.7
Actuated g/C Ratio	0.13		0.78			0.78
Clearance Time (s)	6.5		6.5			6.5
Vehicle Extension (s)	1.8		3.8			3.8
Lane Grp Cap (vph)	216		2650			2077
v/s Ratio Prot	c0.06		0.28			
v/s Ratio Perm						c0.45
v/c Ratio	0.44		0.35			0.58
Uniform Delay, d1	32.2		2.6			3.4
Progression Factor	1.00		1.86			0.75
Incremental Delay, d2	0.5		0.3			0.9
Delay (s)	32.7		5.1			3.5
Level of Service	C		A			A
Approach Delay (s)	32.7		5.1			3.5
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	5.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	96	68	1172	47	22	782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5			3.5
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.94		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1695		3508			3522
Flt Permitted	0.97		1.00			0.89
Satd. Flow (perm)	1695		3508			3137
Peak-hour factor, PHF	0.44	0.44	0.94	0.94	0.83	0.83
Adj. Flow (vph)	218	155	1247	50	27	942
RTOR Reduction (vph)	35	0	3	0	0	0
Lane Group Flow (vph)	338	0	1294	0	0	969
Confl. Peds. (#/hr)	7			29	29	
Heavy Vehicles (%)	2%	4%	2%	6%	14%	2%
Turn Type					Perm	
Protected Phases	2		1			1
Permitted Phases					1	
Actuated Green, G (s)	19.2		47.8			47.8
Effective Green, g (s)	22.2		50.8			50.8
Actuated g/C Ratio	0.28		0.63			0.63
Clearance Time (s)	6.5		6.5			6.5
Vehicle Extension (s)	1.8		3.8			3.8
Lane Grp Cap (vph)	470		2228			1992
v/s Ratio Prot	c0.20		c0.37			
v/s Ratio Perm						0.31
v/c Ratio	0.72		0.58			0.49
Uniform Delay, d1	26.1		8.4			7.7
Progression Factor	1.00		0.20			0.46
Incremental Delay, d2	4.3		0.8			0.6
Delay (s)	30.4		2.6			4.2
Level of Service	C		A			A
Approach Delay (s)	30.4		2.6			4.2
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



LOCATION MAP
ELECTRONICS PKWY/WEST TAFT RD/VINE ST

TRAFFIC SIGNAL OPTIMIZATION
ONONDAGA COUNTY
SYRACUSE, NEW YORK

CME
CREIGHTON MANNING ENGINEERING, LLP

PROJECT: 09-094d	DATE: 7/10	FIGURE: B-9

INTERSECTION DIAGRAM

Location: Henry Clay at Vine Street/West Taft Road

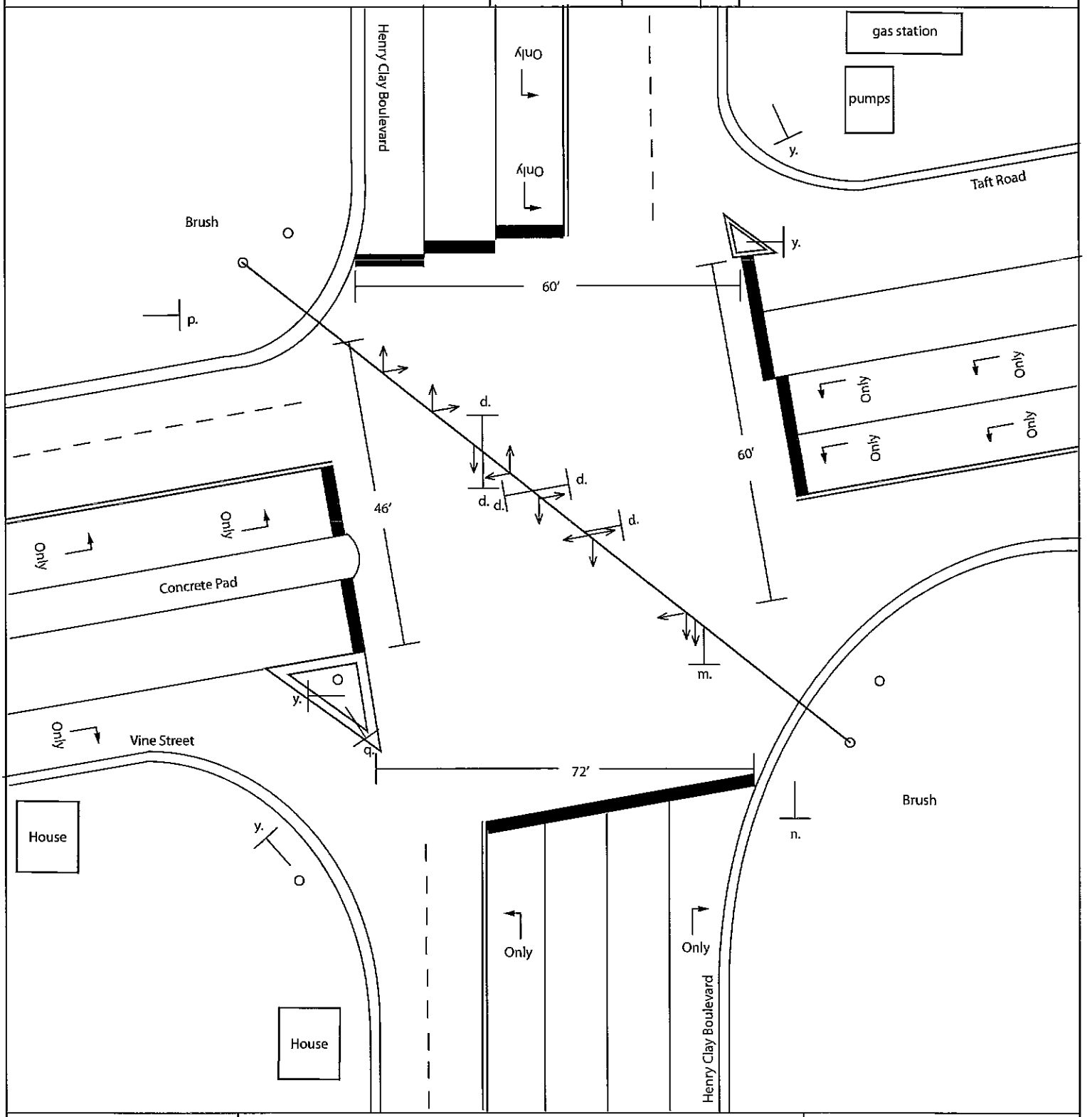
Legend: Sign; Signal Head; Signal with Span Wire; ## (Feet); Utility Pole

Drawn By: KK | Date: May 2010 | Prepared By: SMTC

N

Note:
Only actual pavement markings were drawn. An absence of arrows/striping indicates no pavement markings.

For sign definitions see Intersection Diagram Sign Index.



Task: OCDOT Signal Optimization

Data Source: SMTC, OCDOT, 2009.

Diagram is for presentation purposes only.
SMTC does not guarantee the accuracy or completeness of this diagram.

Diagram is not to scale.


BRENNTAG
HESS
ONLY


ONLY
ONLY

Henry Clay & Vine & Taft
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782045 Combined
Site Code : 78204501
Start Date : 3/25/2010
Page No : 1

Groups Printed- Cars - Buses - Trucks

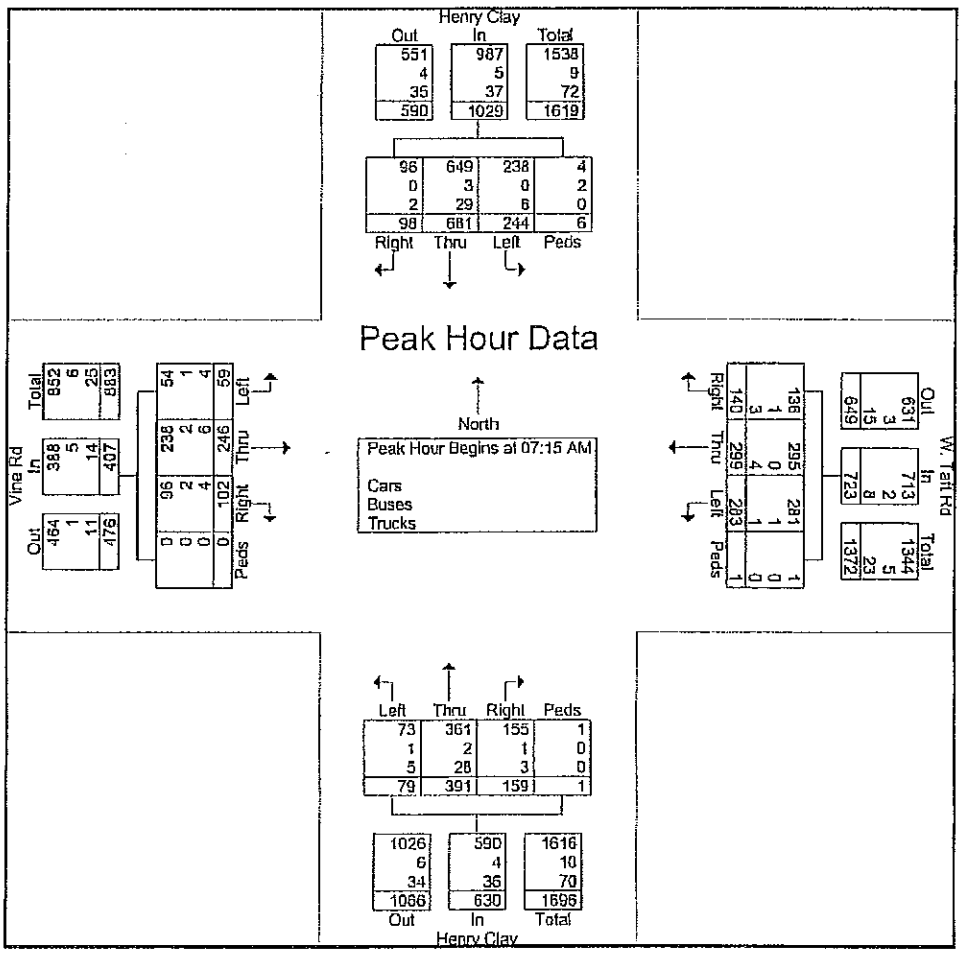
	Henry Clay From North					W. Taft Rd From East					Henry Clay From South					Vine Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	11	109	32	2	154	28	42	60	0	130	23	76	17	1	117	26	34	11	0	71	472
07:15 AM	27	159	53	1	240	43	62	65	0	170	26	98	16	0	140	18	31	11	0	60	610
07:30 AM	28	187	51	3	269	36	69	61	0	166	41	107	21	0	169	33	66	12	0	111	715
07:45 AM	19	185	83	2	289	32	92	85	0	209	60	119	26	0	205	26	80	16	0	122	825
Total	85	640	219	8	952	139	265	271	0	675	150	400	80	1	631	103	211	50	0	364	2622
08:00 AM	24	150	57	0	231	29	76	72	1	178	32	67	16	1	116	25	69	20	0	114	639
08:15 AM	12	149	48	1	210	35	62	47	0	144	56	62	16	1	135	9	47	8	0	64	553
08:30 AM	9	108	43	4	164	29	64	36	0	129	27	71	20	0	118	23	52	13	0	88	499
08:45 AM	18	97	41	1	157	25	63	45	0	133	45	64	25	0	134	26	58	13	0	97	521
Total	63	504	189	6	762	118	265	200	1	584	160	264	77	2	503	83	226	54	0	363	2212
Break																					
04:00 PM	15	84	52	3	154	53	69	62	0	184	69	131	26	0	226	25	45	29	0	99	663
04:15 PM	8	67	36	4	115	61	70	45	0	176	72	130	27	1	230	29	73	21	0	123	644
04:30 PM	23	166	71	2	262	63	88	63	0	214	108	160	24	0	292	23	110	30	1	164	932
04:45 PM	19	91	35	5	150	58	69	58	0	185	73	176	30	0	279	33	82	24	0	139	753
Total	65	408	194	14	681	235	296	228	0	759	322	597	107	1	1027	110	310	104	1	525	2992
05:00 PM	15	110	43	3	171	64	72	58	0	194	115	214	66	0	395	32	80	57	0	169	929
05:15 PM	11	76	35	1	123	57	66	55	0	178	101	167	33	0	301	22	106	36	0	164	766
05:30 PM	13	86	46	0	145	61	78	56	0	195	101	143	30	1	275	20	71	37	0	128	743
05:45 PM	12	101	24	5	142	48	67	49	0	164	71	126	19	0	216	30	74	21	0	125	647
Total	51	373	148	9	581	230	283	218	0	731	388	650	148	1	1187	104	331	151	0	586	3085
Grand Total	264	1925	750	37	2976	722	1109	917	1	2749	1020	1911	412	5	3348	400	1078	359	1	1838	10911
Apprch %	8.9	64.7	25.2	1.2		26.3	40.3	33.4	0		30.5	57.1	12.3	0.1		21.8	58.7	19.5	0.1		
Total %	2.4	17.6	6.9	0.3	27.3	6.6	10.2	8.4	0	25.2	9.3	17.5	3.8	0	30.7	3.7	9.9	3.3	0	16.8	
Cars	258	1855	730	27	2870	702	1095	904	1	2702	1003	1834	386	4	3227	375	1061	340	1	1777	10576
% Cars	97.7	96.4	97.3	73	96.4	97.2	98.7	98.6	100	98.3	98.3	96	93.7	80	96.4	93.8	98.4	94.7	100	96.7	96.9
Buses	1	9	0	10	20	7	4	5	0	16	3	10	11	1	25	7	4	2	0	13	74
% Buses	0.4	0.5	0	27	0.7	1	0.4	0.5	0	0.6	0.3	0.5	2.7	20	0.7	1.8	0.4	0.6	0	0.7	0.7
Trucks	5	61	20	0	86	13	10	8	0	31	14	67	15	0	96	18	13	17	0	48	261
% Trucks	1.9	3.2	2.7	0	2.9	1.8	0.9	0.9	0	1.1	1.4	3.5	3.6	0	2.9	4.5	1.2	4.7	0	2.6	2.4

Henry Clay & Vine & Taft
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782045 Combined
Site Code : 78204501
Start Date : 3/25/2010
Page No : 3

	Henry Clay From North					W. Taft Rd From East					Henry Clay From South					Vine Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	27	159	53	1	240	43	62	65	0	170	26	98	16	0	140	18	31	11	0	60	610
07:30 AM	28	187	51	3	269	36	69	61	0	166	41	107	21	0	169	33	66	12	0	111	715
07:45 AM	19	185	83	2	289	32	92	85	0	209	60	119	26	0	205	26	80	16	0	122	825
08:00 AM	24	150	57	0	231	29	76	72	1	178	32	67	16	1	116	25	69	20	0	114	639
Total Volume	98	681	244	6	1029	140	299	283	1	723	159	391	79	1	630	102	246	59	0	407	2789
% App. Total	9.5	66.2	23.7	0.6		19.4	41.4	39.1	0.1		25.2	62.1	12.5	0.2		25.1	60.4	14.5	0		
PHF	.875	.910	.735	.500	.890	.814	.813	.832	.250	.865	.663	.821	.760	.250	.768	.773	.769	.738	.000	.834	.845
Cars	96	649	236	4	987	136	295	281	1	713	155	361	73	1	590	96	238	54	0	388	2678
% Cars	98.0	95.3	97.5	66.7	95.9	97.1	98.7	99.3	100	98.6	97.5	92.3	92.4	100	93.7	94.1	96.7	91.5	0	95.3	96.0
Buses	0	3	0	2	5	1	0	1	0	2	1	2	1	0	4	2	2	1	0	5	16
% Buses	0	0.4	0	33.3	0.5	0.7	0	0.4	0	0.3	0.6	0.5	1.3	0	0.6	2.0	0.8	1.7	0	1.2	0.6
Trucks	2	29	6	0	37	3	4	1	0	8	3	28	5	0	36	4	6	4	0	14	95
% Trucks	2.0	4.3	2.5	0	3.6	2.1	1.3	0.4	0	1.1	1.9	7.2	6.3	0	5.7	3.9	2.4	6.8	0	3.4	3.4

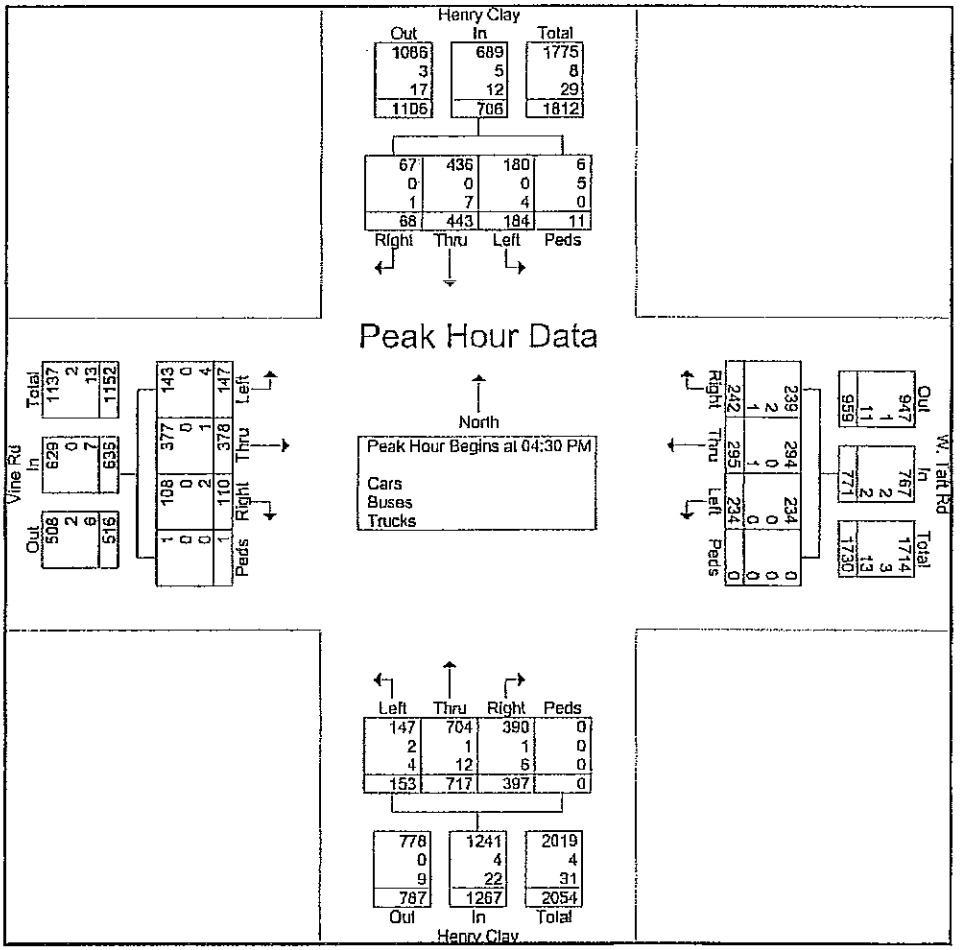


Henry Clay & Vine & Taft
Turning Movement
Weekday Count

Lochner Engineering
181 Genesee St.
Utica, N.Y. 13501
Phone: 315-793-9500

File Name : 782045 Combined
Site Code : 78204501
Start Date : 3/25/2010
Page No : 4

	Henry Clay From North					W. Taft Rd From East					Henry Clay From South					Vine Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	23	186	71	2	282	63	80	63	0	214	108	160	24	0	292	23	110	30	1	164	952
04:45 PM	19	91	35	5	150	58	69	58	0	185	73	176	30	0	279	33	82	24	0	139	753
05:00 PM	15	110	43	3	171	64	72	58	0	194	115	214	66	0	395	32	80	57	0	169	929
05:15 PM	11	76	35	1	123	57	66	55	0	178	101	167	33	0	301	22	106	36	0	164	766
Total Volume	68	443	184	11	706	242	295	234	0	771	397	717	153	0	1267	110	378	147	1	636	3380
% App. Total	9.6	62.7	26.1	1.6		31.4	38.3	30.4	0		31.3	56.6	12.1	0		17.3	59.4	23.1	0.2		
PHF	.739	.667	.648	.550	.674	.945	.838	.929	.000	.901	.863	.838	.580	.000	.802	.833	.859	.645	.250	.941	.907
Cars	67	436	180	6	689	239	294	234	0	767	390	704	147	0	1241	108	377	143	1	629	3326
% Cars	98.5	98.4	97.8	54.5	97.6	98.8	99.7	100	0	99.5	98.2	98.2	96.1	0	97.9	98.2	99.7	97.3	100	98.9	98.4
Buses	0	0	0	5	5	2	0	0	0	2	1	1	2	0	4	0	0	0	0	0	11
% Buses	0	0	0	45.5	0.7	0.8	0	0	0	0.3	0.3	0.1	1.3	0	0.3	0	0	0	0	0	0.3
Trucks	1	7	4	0	12	1	1	0	0	2	6	12	4	0	22	2	1	4	0	7	43
% Trucks	1.5	1.6	2.2	0	1.7	0.4	0.3	0	0	0.3	1.5	1.7	2.6	0	1.7	1.8	0.3	2.7	0	1.1	1.3



Bank 1 & Ped Key in the direction of travel is counting vehicles turning Right on Red

INTERSECTION NAME: Henry Clay Pkwy/Vine St/West Taft Rd **INSTALLATION DATE:**
INTERSECTION NUMBER: **PROGRAM DATE:**
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL		X				X		
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	5	10	5	10	5	8
PASSAGE	3.5	5	3.5	6	3.5	5	3.5	4
YELLOW	3.5	3.8	3.5	3.5	3.5	3.8	3.5	3.5
RED	1.5	2	1.5	2	1.5	2	1.5	2
MAX I	25	32	25	30	15	40	25	30
MAX II	25	40	30	40	30	40	30	40
WALK								
PED CLEAR								
S/A								
TBR	10	15	10	8	10	15	10	8
TTR	5	40	5	10	5	40	5	10
MIN GAP	2.5	2.7	2.5	2.5	2.5	2.7	2.5	2.5
MAX VI	30	30	30	30	30	30	30	30
MAX EXT								
AUTO MAX								
AMR								

PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X	X	X	X	X	X

Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA								

INTERSECTION NAME: Henry Clay Pkwy/Vine St/West Taft Rd **INSTALLATION DATE:** COORDINATION
INTERSECTION NUMBER: **PROGRAM DATE:** OPTMIZATION
LMD 8000

INTERVAL	PHASE (ON/OFF)							
	1	2	3	4	5	6	7	8
MEMORY								
EXT RECALL				X				X
MAX RECALL								
CNA I								
CNA II								
FL WALK								
SOFT RECALL								
WALK REST								
COND PED								
FWTPCL								

INTERVAL	PHASE TIMINGS							
	1	2	3	4	5	6	7	8
MIN GREEN	5	10	5	10	5	10	5	10
PASSAGE	1.5	1.5	1.7	1.5	1.5	1.5	1.5	1.7
YELLOW	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
RED	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
MAX I (AM)	8	17	7	24	9	16	15	16
MAX II (PM)	10	13	10	23	6	17	14	19
WALK								
PED CLEAR								
S/A								
TBR	10	15	10	8	10	15	10	8
TTR	5	40	5	10	5	40	5	10
MIN GAP								
MAX VI								
MAX EXT								
AUTO MAX								
AMR								

PHASES USED								
	1	2	3	4	5	6	7	8
ON/OFF	X	X	X	X	X	X	X	X

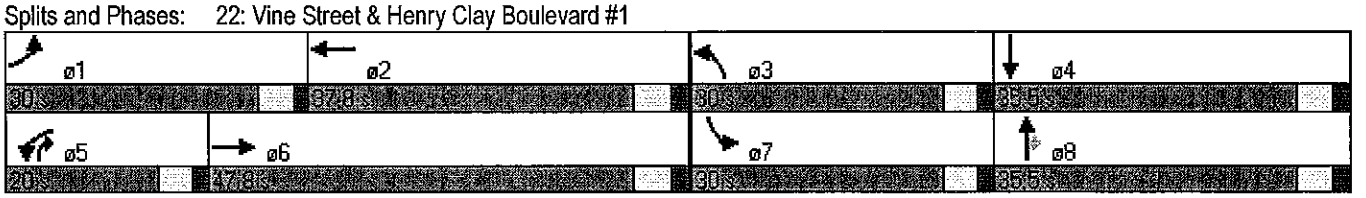
Overlaps								
INHIBIT O/L	1	2	3	4	5	6	7	8
OLA								

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	59	248	102	283	299	79	391	160	244	681
Turn Type	Prot		Free	Prot		Prot		pm+ov	Prot	
Protected Phases	1	6		5	2	3	8	5	7	4
Permitted Phases			Free					8		
Detector Phase	1	6		5	2	3	8	5	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	8.0	5.0	5.0	10.0
Minimum Split (s)	10.0	15.8		10.0	15.8	10.0	13.5	10.0	10.0	15.5
Total Split (s)	30.0	47.8	0.0	20.0	37.8	30.0	35.5	20.0	30.0	35.5
Total Split (%)	22.5%	35.9%	0.0%	15.0%	28.4%	22.5%	26.6%	15.0%	22.5%	26.6%
Maximum Green (s)	25.0	42.0		15.0	32.0	25.0	30.0	15.0	25.0	30.0
Yellow Time (s)	3.5	3.8		3.5	3.8	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	2.0		1.5	2.0	1.5	2.0	1.5	1.5	2.0
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-1.0	-1.8	-1.0	-1.5	-1.0	-1.0	-1.5
Total Lost Time (s)	4.0	4.0	2.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	3.5	5.0		3.5	5.0	3.5	4.0	3.5	3.5	6.0
Minimum Gap (s)	2.5	2.7		2.5	2.7	2.5	2.5	2.5	2.5	2.5
Time Before Reduce (s)	10.0	15.0		10.0	15.0	10.0	8.0	10.0	10.0	8.0
Time To Reduce (s)	5.0	40.0		5.0	40.0	5.0	10.0	5.0	5.0	10.0
Recall Mode	None	Min		None	Min	None	None	None	None	None
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary

Cycle Length: 133.3
Actuated Cycle Length: 104.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 22: Vine Street & Henry Clay Boulevard #1

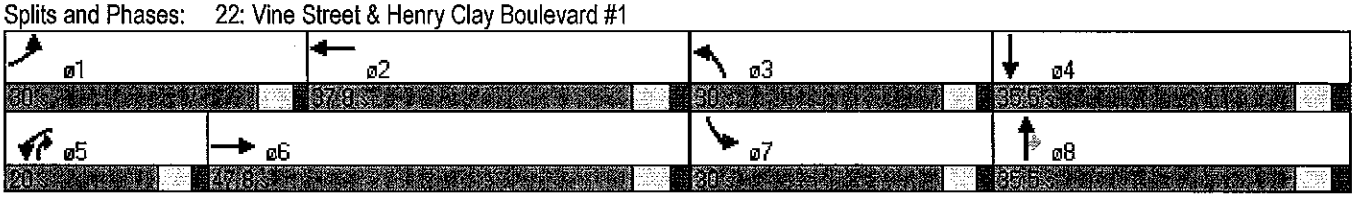


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	147	378	110	234	295	153	717	397	184	443
Turn Type	Prot		Free	Prot		Prot		pm+ov	Prot	
Protected Phases	1	6		5	2	3	8	5	7	4
Permitted Phases			Free					8		
Detector Phase	1	6		5	2	3	8	5	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	8.0	5.0	5.0	10.0
Minimum Split (s)	10.0	15.8		10.0	15.8	10.0	13.5	10.0	10.0	15.5
Total Split (s)	30.0	47.8	0.0	20.0	37.8	30.0	35.5	20.0	30.0	35.5
Total Split (%)	22.5%	35.9%	0.0%	15.0%	28.4%	22.5%	26.6%	15.0%	22.5%	26.6%
Maximum Green (s)	25.0	42.0		15.0	32.0	25.0	30.0	15.0	25.0	30.0
Yellow Time (s)	3.5	3.8		3.5	3.8	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	2.0		1.5	2.0	1.5	2.0	1.5	1.5	2.0
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-1.0	-1.8	-1.0	-1.5	-1.0	-1.0	-1.5
Total Lost Time (s)	4.0	4.0	2.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	3.5	5.0		3.5	5.0	3.5	4.0	3.5	3.5	6.0
Minimum Gap (s)	2.5	2.7		2.5	2.7	2.5	2.5	2.5	2.5	2.5
Time Before Reduce (s)	10.0	15.0		10.0	15.0	10.0	8.0	10.0	10.0	8.0
Time To Reduce (s)	5.0	40.0		5.0	40.0	5.0	10.0	5.0	5.0	10.0
Recall Mode	None	Min		None	Min	None	None	None	None	None
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary

Cycle Length: 133.3
Actuated Cycle Length: 119.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 22: Vine Street & Henry Clay Boulevard #1

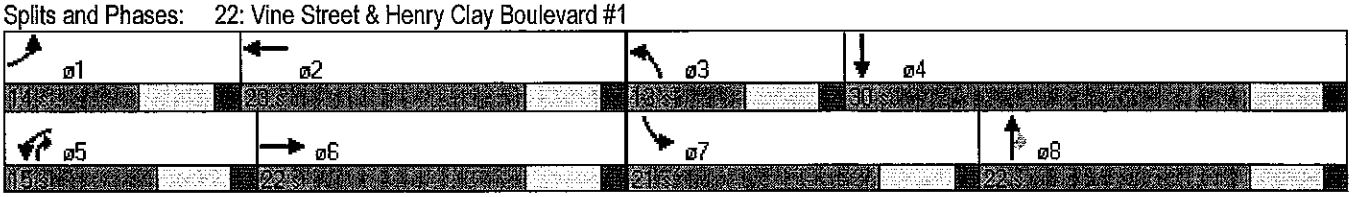


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	59	248	102	283	299	79	391	160	244	681
Turn Type	Prot		Free	Prot		Prot		pm+ov	Prot	
Protected Phases	1	6		5	2	3	8	5	7	4
Permitted Phases			Free					8		
Detector Phase	1	6		5	2	3	8	5	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	11.0	16.0		11.0	16.0	11.0	16.0	11.0	11.0	16.0
Total Split (s)	14.0	22.0	0.0	15.0	23.0	13.0	22.0	15.0	21.0	30.0
Total Split (%)	17.5%	27.5%	0.0%	18.8%	28.8%	16.3%	27.5%	18.8%	26.3%	37.5%
Maximum Green (s)	8.0	16.0		9.0	17.0	7.0	16.0	9.0	15.0	24.0
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-1.0	-1.8	-1.0	-1.5	-1.0	-1.0	-1.5
Total Lost Time (s)	5.0	4.2	2.2	5.0	4.2	5.0	4.5	5.0	5.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.7	1.7	1.5	1.5	1.5
Minimum Gap (s)	1.5	1.5		1.5	1.5	1.7	1.7	1.5	1.5	1.5
Time Before Reduce (s)	10.0	15.0		10.0	15.0	10.0	8.0	10.0	10.0	8.0
Time To Reduce (s)	5.0	40.0		5.0	40.0	5.0	10.0	5.0	5.0	10.0
Recall Mode	None	None		None	None	None	C-Min	None	None	C-Min
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 76 (95%), Referenced to phase 4:SBT and 8:NBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 22: Vine Street & Henry Clay Boulevard #1

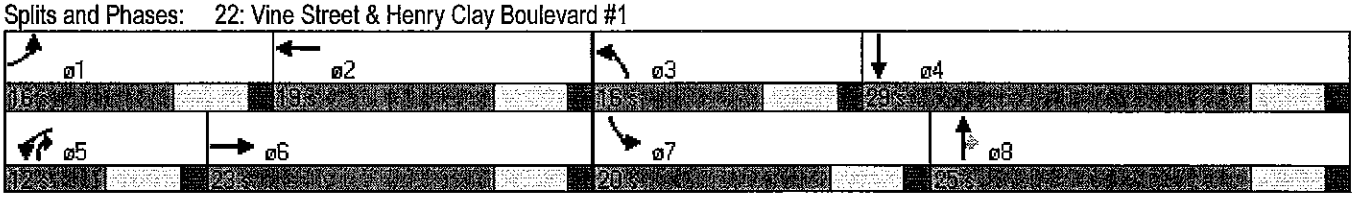


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	147	378	110	234	295	153	717	397	184	443
Turn Type	Prot		Free	Prot		Prot		pm+ov	Prot	
Protected Phases	1	6		5	2	3	8	5	7	4
Permitted Phases			Free					8		
Detector Phase	1	6		5	2	3	8	5	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	11.0	16.0		11.0	16.0	11.0	16.0	11.0	11.0	16.0
Total Split (s)	16.0	23.0	0.0	12.0	19.0	16.0	25.0	12.0	20.0	29.0
Total Split (%)	20.0%	28.8%	0.0%	15.0%	23.8%	20.0%	31.3%	15.0%	25.0%	36.3%
Maximum Green (s)	10.0	17.0		6.0	13.0	10.0	19.0	6.0	14.0	23.0
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-1.0	-1.8	-1.0	-1.5	-1.0	-1.0	-1.5
Total Lost Time (s)	5.0	4.2	2.2	5.0	4.2	5.0	4.5	5.0	5.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.7	1.7	1.5	1.5	1.5
Minimum Gap (s)	1.5	1.5		1.5	1.5	1.7	1.7	1.5	1.5	1.5
Time Before Reduce (s)	10.0	15.0		10.0	15.0	10.0	8.0	10.0	10.0	8.0
Time To Reduce (s)	5.0	40.0		5.0	40.0	5.0	10.0	5.0	5.0	10.0
Recall Mode	None	None		None	None	None	C-Min	None	None	C-Min
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:SBT and 8:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 22: Vine Street & Henry Clay Boulevard #1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	248	102	283	299	141	79	391	160	244	681	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0	2.2	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1656	1845	1473	3467	3364		1671	3343	1568	1752	3383	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1656	1845	1473	3467	3364		1671	3343	1568	1752	3383	
Peak-hour factor, PHF	0.83	0.83	0.83	0.87	0.87	0.87	0.77	0.77	0.77	0.89	0.89	0.89
Adj. Flow (vph)	71	299	123	325	344	162	103	508	208	274	765	115
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	129	0	8	0
Lane Group Flow (vph)	71	299	123	325	467	0	103	508	79	274	872	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	9%	3%	6%	1%	1%	3%	8%	8%	3%	3%	5%	2%
Turn Type	Prot		Free	Prot			Prot		pm+ov	Prot		
Protected Phases	1	6		5	2		3	8	5	7	4	
Permitted Phases			Free						8			
Actuated Green, G (s)	8.4	25.0	105.4	13.8	30.4		12.1	24.4	38.2	20.9	33.2	
Effective Green, g (s)	9.4	26.8	105.4	14.8	32.2		13.1	25.9	40.2	21.9	34.7	
Actuated g/C Ratio	0.09	0.25	1.00	0.14	0.31		0.12	0.25	0.38	0.21	0.33	
Clearance Time (s)	5.0	5.8		5.0	5.8		5.0	5.5	5.0	5.0	5.5	
Vehicle Extension (s)	3.5	5.0		3.5	5.0		3.5	4.0	3.5	3.5	6.0	
Lane Grp Cap (vph)	148	469	1473	487	1028		208	821	598	364	1114	
v/s Ratio Prot	0.04	c0.16		c0.09	0.14		0.06	0.15	0.02	c0.16	c0.26	
v/s Ratio Perm			0.08						0.03			
v/c Ratio	0.48	0.64	0.08	0.67	0.45		0.50	0.62	0.13	0.75	0.78	
Uniform Delay, d1	45.7	35.0	0.0	43.0	29.5		43.1	35.4	21.2	39.2	31.9	
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	2.9	3.9	0.1	3.6	0.7		2.2	1.6	0.1	8.8	4.5	
Delay (s)	48.6	38.9	0.1	46.6	30.2		45.3	37.0	21.4	48.0	36.5	
Level of Service	D	D	A	D	C		D	D	C	D	D	
Approach Delay (s)		30.6			36.6			34.0			39.2	
Approach LOS		C			D			C			D	

Intersection Summary				
HCM Average Control Delay	36.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	105.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	60.9%	ICU Level of Service	B	
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)	147	378	110	234	295	242	153	717	397	184	443	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0	2.2	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	1881	1531	3502	3306		1736	3539	1583	1770	3469	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	1881	1531	3502	3306		1736	3539	1583	1770	3469	
Peak-hour factor, PHF	0.94	0.94	0.94	0.90	0.90	0.90	0.80	0.80	0.80	0.67	0.67	0.67
Adj. Flow (vph)	156	402	117	260	328	269	191	896	496	275	661	101
RTOR Reduction (vph)	0	0	0	0	111	0	0	0	124	0	8	0
Lane Group Flow (vph)	156	402	117	260	486	0	191	896	372	275	754	0
Confl. Peds. (#/hr)	5					5						
Heavy Vehicles (%)	3%	1%	2%	0%	1%	1%	4%	2%	2%	2%	2%	2%
Turn Type	Prot		Free	Prot			Prot		pm+ov	Prot		
Protected Phases	1	6		5	2		3	8	5	7	4	
Permitted Phases			Free						8			
Actuated Green, G (s)	16.5	32.0	119.7	13.8	29.3		18.5	30.3	44.1	22.3	34.1	
Effective Green, g (s)	17.5	33.8	119.7	14.8	31.1		19.5	31.8	46.1	23.3	35.6	
Actuated g/C Ratio	0.15	0.28	1.00	0.12	0.26		0.16	0.27	0.39	0.19	0.30	
Clearance Time (s)	5.0	5.8		5.0	5.8		5.0	5.5	5.0	5.0	5.5	
Vehicle Extension (s)	3.5	5.0		3.5	5.0		3.5	4.0	3.5	3.5	6.0	
Lane Grp Cap (vph)	256	531	1531	433	859		283	940	610	345	1032	
v/s Ratio Prot	c0.09	c0.21		0.07	0.15		0.11	c0.25	0.08	c0.16	c0.22	
v/s Ratio Perm			c0.08						0.16			
v/c Ratio	0.61	0.76	0.08	0.60	0.57		0.67	0.95	0.61	0.80	0.73	
Uniform Delay, d1	47.9	39.2	0.0	49.7	38.4		47.1	43.2	29.6	45.9	37.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.3	7.2	0.1	2.5	1.4		6.5	19.0	1.9	12.4	3.7	
Delay (s)	52.2	46.4	0.1	52.1	39.8		53.6	62.3	31.5	58.3	41.4	
Level of Service	D	D	A	D	D		D	E	C	E	D	
Approach Delay (s)		39.7			43.6			51.6			45.9	
Approach LOS		D			D			D			D	

Intersection Summary				
HCM Average Control Delay	46.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	119.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	69.9%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	248	102	283	299	141	79	391	160	244	681	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	4.2	2.2	5.0	4.2		5.0	4.5	5.0	5.0	4.5	
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1656	1845	1473	3467	3363		1671	3343	1568	1752	3383	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1656	1845	1473	3467	3363		1671	3343	1568	1752	3383	
Peak-hour factor, PHF	0.83	0.83	0.83	0.87	0.87	0.87	0.77	0.77	0.77	0.89	0.89	0.89
Adj. Flow (vph)	71	299	123	325	344	162	103	508	208	274	765	115
RTOR Reduction (vph)	0	0	0	0	68	0	0	0	120	0	15	0
Lane Group Flow (vph)	71	299	123	325	438	0	103	508	88	274	865	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	9%	3%	6%	1%	1%	3%	8%	8%	3%	3%	5%	2%
Turn Type	Prot		Free	Prot			Prot		pm+ov	Prot		
Protected Phases	1	6		5	2		3	8	5	7	4	
Permitted Phases			Free						8			
Actuated Green, G (s)	5.8	15.9	80.0	9.0	19.1		5.7	17.1	26.1	14.0	25.4	
Effective Green, g (s)	6.8	17.7	80.0	10.0	20.9		6.7	18.6	28.1	15.0	26.9	
Actuated g/C Ratio	0.08	0.22	1.00	0.12	0.26		0.08	0.23	0.35	0.19	0.34	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.7	1.7	1.5	1.5	1.5	
Lane Grp Cap (vph)	141	408	1473	433	879		140	777	649	329	1138	
v/s Ratio Prot	0.04	c0.16		c0.09	c0.13		0.06	0.15	0.02	c0.16	c0.26	
v/s Ratio Perm			0.08						0.04			
v/c Ratio	0.50	0.73	0.08	0.75	0.50		0.74	0.65	0.14	0.83	0.76	
Uniform Delay, d1	35.0	29.0	0.0	33.8	25.1		35.8	27.8	17.7	31.3	23.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.88	1.26	3.03	1.00	1.00	
Incremental Delay, d2	1.0	5.8	0.1	6.4	0.2		15.2	4.1	0.0	15.7	4.8	
Delay (s)	36.0	34.7	0.1	40.2	25.3		46.6	39.1	53.6	46.9	28.5	
Level of Service	D	C	A	D	C		D	D	D	D	C	
Approach Delay (s)		26.3			31.1			43.7			32.9	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM Average Control Delay	34.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.4	
Intersection Capacity Utilization	63.2%	ICU Level of Service	B	
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)	147	378	110	234	295	242	153	717	397	184	443	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.0	4.2	2.2	5.0	4.2		5.0	4.5	5.0	5.0	4.5	
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	1881	1531	3502	3303		1736	3539	1583	1770	3469	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	1881	1531	3502	3303		1736	3539	1583	1770	3469	
Peak-hour factor, PHF	0.94	0.94	0.94	0.90	0.90	0.90	0.80	0.80	0.80	0.67	0.67	0.67
Adj. Flow (vph)	156	402	117	260	328	269	191	896	496	275	661	101
RTOR Reduction (vph)	0	0	0	0	185	0	0	0	87	0	15	0
Lane Group Flow (vph)	156	402	117	260	412	0	191	896	409	275	747	0
Confl. Peds. (#/hr)	5					5						
Heavy Vehicles (%)	3%	1%	2%	0%	1%	1%	4%	2%	2%	2%	2%	2%
Turn Type	Prot		Free	Prot			Prot		pm+ov	Prot		
Protected Phases	1	6		5	2		3	8	5	7	4	
Permitted Phases			Free						8			
Actuated Green, G (s)	9.1	16.8	80.0	6.0	13.7		9.7	19.8	25.8	13.4	23.5	
Effective Green, g (s)	10.1	18.6	80.0	7.0	15.5		10.7	21.3	27.8	14.4	25.0	
Actuated g/C Ratio	0.13	0.23	1.00	0.09	0.19		0.13	0.27	0.35	0.18	0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.7	1.7	1.5	1.5	1.5	
Lane Grp Cap (vph)	221	437	1531	306	640		232	942	649	319	1084	
v/s Ratio Prot	c0.09	c0.21		0.07	0.12		0.11	c0.25	0.06	c0.16	c0.22	
v/s Ratio Perm			0.08						0.20			
v/c Ratio	0.71	0.92	0.08	0.85	0.64		0.82	0.95	0.63	0.86	0.69	
Uniform Delay, d1	33.5	30.0	0.0	36.0	29.7		33.7	28.8	21.8	31.8	24.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.93	0.96	1.23	1.00	1.00	
Incremental Delay, d2	8.1	23.9	0.1	18.6	1.7		17.4	17.8	1.3	20.0	3.6	
Delay (s)	41.6	53.8	0.1	54.6	31.4		48.7	45.5	28.2	51.8	27.7	
Level of Service	D	D	A	D	C		D	D	C	D	C	
Approach Delay (s)		41.7			38.4			40.4			34.1	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group