Tollway Contract 4383-Task Order 1

I-294 at Irving Park Road

Interchange Feasibility Study

Appendix I

Synchro Analysis Results

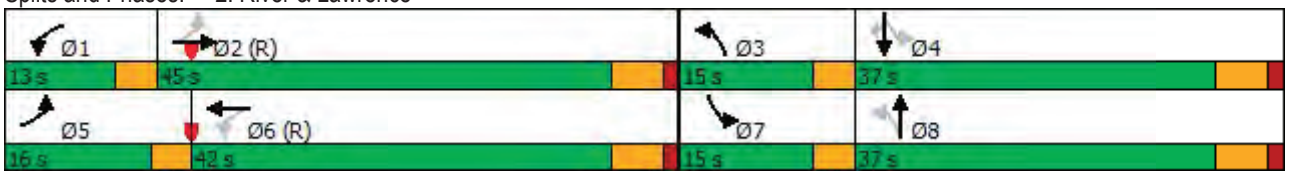
Synchro Summary Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	489	131	158	546	390	293	953	144	154	417	86
Future Volume (vph)	197	489	131	158	546	390	293	953	144	154	417	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1687	3346	0	1770	3330	0	1694	4667	0	1694	3465	1312
Flt Permitted	0.103			0.288			0.366			0.132		
Satd. Flow (perm)	183	3346	0	536	3330	0	653	4667	0	235	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			148			42				116
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	693	0	203	1015	0	349	1229	0	171	458	116
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	16.0	45.0		13.0	42.0		15.0	37.0		15.0	37.0	37.0
Total Split (%)	14.5%	40.9%		11.8%	38.2%		13.6%	33.6%		13.6%	33.6%	33.6%
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	53.5	38.9		47.9	36.1		46.0	31.7		43.7	30.2	30.2
Actuated g/C Ratio	0.49	0.35		0.44	0.33		0.42	0.29		0.40	0.27	0.27
v/c Ratio	0.85	0.57		0.60	0.85		0.89	0.89		0.72	0.48	0.26
Control Delay	54.1	27.2		24.8	37.5		51.9	46.0		38.6	35.2	7.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	54.1	27.2		24.8	37.5		51.9	46.0		38.6	35.2	7.2
LOS	D	C		C	D		D	D		D	D	A
Approach Delay		33.6			35.4			47.3			31.6	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)	76	211		79	305		170	298		73	141	0
Queue Length 95th (ft)	#222	216		106	386		#291	#386		#153	191	24
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	260	1210		340	1191		391	1376		246	976	453
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.83	0.57		0.60	0.85		0.89	0.89		0.70	0.47	0.26

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 38.6		Intersection LOS: D	
Intersection Capacity Utilization 85.3%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: River & Lawrence

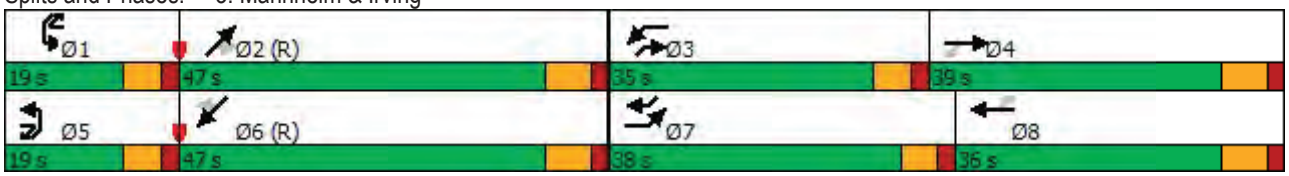


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	725	755	75	460	930	125	55	1325	400	145	1070	420
Future Volume (vph)	725	755	75	460	930	125	55	1325	400	145	1070	420
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	833	812	94	505	1022	164	64	1506	471	188	1189	525
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	38.0	39.0	19.0	35.0	36.0	19.0	19.0	47.0	35.0	19.0	47.0	38.0
Total Split (%)	27.1%	27.9%	13.6%	25.0%	25.7%	13.6%	13.6%	33.6%	25.0%	13.6%	33.6%	27.1%
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	32.0	34.1	49.6	26.9	29.0	48.1	8.5	40.9	74.8	12.1	44.5	83.5
Actuated g/C Ratio	0.23	0.24	0.35	0.19	0.21	0.34	0.06	0.29	0.53	0.09	0.32	0.60
v/c Ratio	1.15	0.65	0.17	0.84	0.95	0.31	0.36	1.06	0.35	0.67	0.77	0.33
Control Delay	128.9	51.0	32.5	67.9	72.2	35.6	86.6	77.8	10.9	59.4	56.7	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	128.9	51.0	32.5	67.9	72.2	35.6	86.6	77.8	10.9	59.4	56.7	27.3
LOS	F	D	C	E	E	D	F	E	B	E	E	C
Approach Delay		87.3			67.4			62.6			48.9	
Approach LOS		F			E			E			D	
Queue Length 50th (ft)	~457	250	60	226	339	108	31	~562	46	88	411	219
Queue Length 95th (ft)	#555	300	90	292	#430	141	56	#615	47	110	469	250
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Base Capacity (vph)	727	1244	605	647	1077	533	270	1424	1369	301	1550	1608
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.65	0.16	0.78	0.95	0.31	0.24	1.06	0.34	0.62	0.77	0.33

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 66.0	Intersection LOS: E
Intersection Capacity Utilization 87.9%	ICU Level of Service E
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	140	250	1700	1435	65
Future Volume (vph)	35	140	250	1700	1435	65
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	11	11	11	11	11	12
Storage Length (ft)	115	115	145			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1558	1473	1517	4979	4589	0
Flt Permitted	0.950		0.112			
Satd. Flow (perm)	1558	1473	179	4979	4589	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		163			10	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1753			1551	1184	
Travel Time (s)	39.8			26.4	20.2	
Peak Hour Factor	0.66	0.86	0.81	0.91	0.96	0.83
Heavy Vehicles (%)	12%	6%	15%	6%	7%	37%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	163	309	1868	1573	0
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	20.0	20.0	
Minimum Split (s)	14.5	14.5	7.0	26.5	26.5	
Total Split (s)	24.0	24.0	24.0	116.0	92.0	
Total Split (%)	17.1%	17.1%	17.1%	82.9%	65.7%	
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	2.0	2.0	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.0	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	12.0	12.0	117.5	115.0	86.1	
Actuated g/C Ratio	0.09	0.09	0.84	0.82	0.62	
v/c Ratio	0.40	0.59	0.80	0.46	0.56	
Control Delay	68.3	17.4	39.6	4.2	25.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	68.3	17.4	39.6	4.2	25.2	
LOS	E	B	D	A	C	
Approach Delay	29.9			9.2	25.2	
Approach LOS	C			A	C	
Queue Length 50th (ft)	47	0	149	144	144	
Queue Length 95th (ft)	65	58	209	197	416	
Internal Link Dist (ft)	1673			1471	1104	
Turn Bay Length (ft)	115	115	145			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	194	326	398	4088	2941	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.27	0.50	0.78	0.46	0.53	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 113 (81%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1490	190	15	1365	300	5
Future Volume (vph)	1490	190	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		211				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1620	211	37	1551	357	15
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	55.0	30.0	25.0	80.0	30.0	30.0
Total Split (%)	50.0%	27.3%	22.7%	72.7%	27.3%	27.3%
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	48.9	76.7	6.8	55.6	18.3	18.3
Actuated g/C Ratio	0.56	0.89	0.08	0.64	0.21	0.21
v/c Ratio	0.79	0.16	0.18	0.67	0.56	0.05
Control Delay	20.9	0.6	42.7	12.0	34.7	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	0.6	42.7	12.0	34.7	14.2
LOS	C	A	D	B	C	B
Approach Delay	18.5			12.7	33.9	
Approach LOS	B			B	C	
Queue Length 50th (ft)	400	0	10	260	95	0
Queue Length 95th (ft)	#600	11	12	365	131	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Base Capacity (vph)	2058	1343	609	3076	849	375
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.16	0.06	0.50	0.42	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

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

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	445	735	1830	325	220	1325
Future Volume (vph)	445	735	1830	325	220	1325
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		438		89		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	506	826	2033	357	229	1395
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	38.0		80.0	38.0	22.0	102.0
Total Split (%)	27.1%		57.1%	27.1%	15.7%	72.9%
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	29.9	140.0	76.4	113.3	15.2	96.6
Actuated g/C Ratio	0.21	1.00	0.55	0.81	0.11	0.69
v/c Ratio	0.78	0.58	0.76	0.28	0.64	0.41
Control Delay	60.7	1.7	16.7	0.8	68.2	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	1.7	16.7	0.8	68.2	9.9
LOS	E	A	B	A	E	A
Approach Delay	24.1		14.3			18.1
Approach LOS	C		B			B
Queue Length 50th (ft)	222	0	337	2	104	192
Queue Length 95th (ft)	280	0	504	12	148	220
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Base Capacity (vph)	687	1422	2691	1278	399	3435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.58	0.76	0.28	0.57	0.41

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 17.9		Intersection LOS: B	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 14: Mannheim & Lawrence

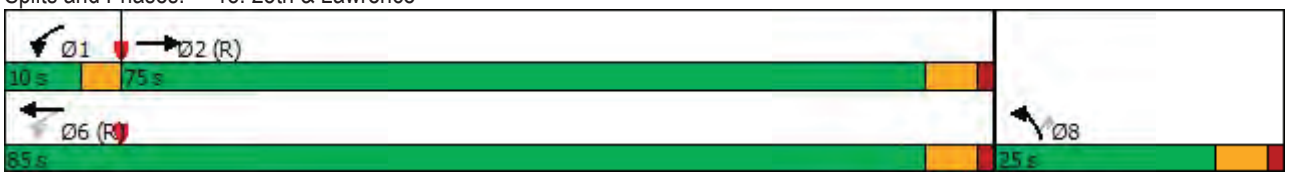
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	470	50	55	1025	175	115
Future Volume (vph)	470	50	55	1025	175	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Satd. Flow (prot)	3328	0	0	3362	1703	1495
Flt Permitted				0.850	0.950	
Satd. Flow (perm)	3328	0	0	2866	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	28					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	574	0	0	1158	211	160
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	75.0		10.0	85.0	25.0	25.0
Total Split (%)	68.2%		9.1%	77.3%	22.7%	22.7%
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	77.1			77.1	20.9	20.9
Actuated g/C Ratio	0.70			0.70	0.19	0.19
v/c Ratio	0.25			0.58	0.66	0.57
Control Delay	6.4			8.0	50.5	47.6
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	6.4			8.0	50.5	47.6
LOS	A			A	D	D
Approach Delay	6.4			8.0	49.2	
Approach LOS	A			A	D	
Queue Length 50th (ft)	64			133	139	104
Queue Length 95th (ft)	104			m275	187	125
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2342			2087	340	298
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.25			0.55	0.62	0.54

Intersection Summary		
Area Type:	Other	
Cycle Length: 110		
Actuated Cycle Length: 110		
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green		
Natural Cycle: 50		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.66		
Intersection Signal Delay: 14.9		Intersection LOS: B
Intersection Capacity Utilization 69.2%		ICU Level of Service C
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: 25th & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	516	384	53	934	254	334	1015	21	88	504	24
Future Volume (vph)	112	516	384	53	934	254	334	1015	21	88	504	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1589	3433	1370	1745	3312	0	1518	3334	0	1589	3286	0
Flt Permitted	0.065			0.388			0.178			0.211		
Satd. Flow (perm)	109	3433	1370	713	3312	0	284	3334	0	353	3286	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			258		31			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	567	457	68	1338	0	402	1168	0	109	602	0
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	65.0		13.0	65.0		37.0	49.0		13.0	25.0	
Total Split (%)	9.3%	46.4%		9.3%	46.4%		26.4%	35.0%		9.3%	17.9%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	72.5	62.4	99.4	69.5	59.0		58.5	43.0		29.0	19.0	
Actuated g/C Ratio	0.52	0.45	0.71	0.50	0.42		0.42	0.31		0.21	0.14	
v/c Ratio	0.88	0.37	0.44	0.17	0.95		0.97	1.14		0.74	1.34	
Control Delay	78.7	14.1	5.5	17.1	52.5		76.9	118.0		60.2	212.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	78.7	14.1	5.5	17.1	52.5		76.9	118.0		60.2	212.4	
LOS	E	B	A	B	D		E	F		E	F	
Approach Delay		18.3			50.8			107.5			189.1	
Approach LOS		B			D			F			F	
Queue Length 50th (ft)	60	127	96	29	600		315	~653		62	~375	
Queue Length 95th (ft)	m#158	m188	m226	47	#742		#453	#778		#110	#492	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	156	1531	1047	431	1413		413	1026		148	449	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.88	0.37	0.44	0.16	0.95		0.97	1.14		0.74	1.34	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.34			
Intersection Signal Delay: 81.7		Intersection LOS: F	
Intersection Capacity Utilization 90.8%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	990	170	130	1390	30	260	320	125	35	195	40
Future Volume (vph)	90	990	170	130	1390	30	260	320	125	35	195	40
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3192	0
Flt Permitted	0.087			0.178			0.216				0.763	
Satd. Flow (perm)	150	3410	1383	306	3195	0	381	3280	0	0	2450	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165		4			25			18	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	1065	236	165	1501	0	299	684	0	0	345	0
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	10.0	82.0		15.0	87.0		22.0	43.0		21.0	21.0	
Total Split (%)	7.1%	58.6%		10.7%	62.1%		15.7%	30.7%		15.0%	15.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	84.5	75.5	99.2	91.4	79.3		41.2	38.7			15.0	
Actuated g/C Ratio	0.60	0.54	0.71	0.65	0.57		0.29	0.28			0.11	
v/c Ratio	0.67	0.58	0.23	0.56	0.83		1.00	0.74			1.24	
Control Delay	40.9	16.1	1.8	14.8	17.0		97.3	50.5			182.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	40.9	16.1	1.8	14.8	17.0		97.3	50.5			182.3	
LOS	D	B	A	B	B		F	D			F	
Approach Delay		15.6			16.8			64.8			182.3	
Approach LOS		B			B			E			F	
Queue Length 50th (ft)	37	173	7	41	261		~246	294			~197	
Queue Length 95th (ft)	m#94	230	15	m45	m287		#411	218			#277	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	159	1859	1024	309	1850		298	923			278	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.67	0.57	0.23	0.53	0.81		1.00	0.74			1.24	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.24			
Intersection Signal Delay: 40.1		Intersection LOS: D	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 22: 25th & Irving

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	75	49	113	1787	1639	112
Future Volume (vph)	75	49	113	1787	1639	112
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	10	10	11	11	11	11
Storage Length (ft)	125	125	250			200
Storage Lanes	1	0	2			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	2701	1277	2918	4887	4933	1382
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	2701	1277	2918	4887	4933	1382
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		96				31
Link Speed (mph)	25			50	50	
Link Distance (ft)	663			1987	1650	
Travel Time (s)	18.1			27.1	22.5	
Peak Hour Factor	0.59	0.51	0.50	0.94	0.93	0.76
Heavy Vehicles (%)	21%	18%	16%	8%	7%	13%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	127	96	226	1901	1762	147
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	15.0	15.0	8.0	22.0	22.0	15.0
Total Split (s)	17.0	17.0	17.0	123.0	106.0	17.0
Total Split (%)	12.1%	12.1%	12.1%	87.9%	75.7%	12.1%
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	10.5	10.5	13.3	115.5	97.1	114.7
Actuated g/C Ratio	0.08	0.08	0.10	0.82	0.69	0.82
v/c Ratio	0.63	0.52	0.81	0.47	0.51	0.13
Control Delay	77.1	22.0	79.7	0.6	12.5	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.1	22.0	79.7	0.6	12.5	2.1
LOS	E	C	E	A	B	A
Approach Delay	53.4			9.0	11.7	
Approach LOS	D			A	B	
Queue Length 50th (ft)	59	0	98	5	401	10
Queue Length 95th (ft)	60	0	74	m5	445	18
Internal Link Dist (ft)	583			1907	1570	
Turn Bay Length (ft)	125	125	250			200

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Base Capacity (vph)	203	184	278	4049	3488	1137
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.52	0.81	0.47	0.51	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 55.9%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

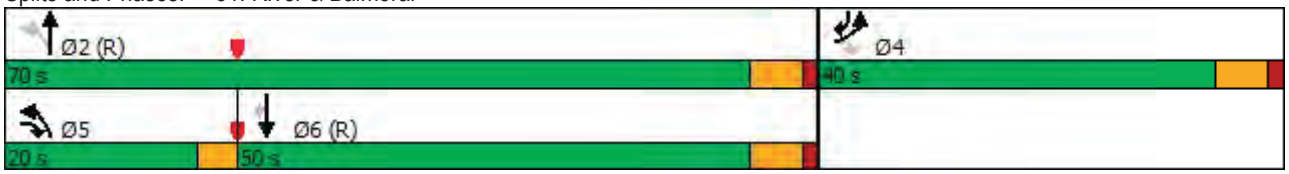
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	244	531	936	464	185
Future Volume (vph)	295	244	531	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.356			
Satd. Flow (perm)	3224	1468	638	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		194				105
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	309	565	1017	527	220
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	20.0	20.0	70.0	50.0	40.0
Total Split (%)	36.4%	18.2%	18.2%	63.6%	45.5%	36.4%
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	16.8	58.8	83.7	81.2	41.7	64.5
Actuated g/C Ratio	0.15	0.53	0.76	0.74	0.38	0.59
v/c Ratio	0.66	0.35	0.68	0.37	0.39	0.23
Control Delay	50.2	5.6	10.6	6.0	27.4	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.6	10.6	6.0	27.4	6.6
LOS	D	A	B	A	C	A
Approach Delay	28.4			7.6	21.3	
Approach LOS	C			A	C	
Queue Length 50th (ft)	112	41	117	115	135	32
Queue Length 95th (ft)	151	48	245	177	216	73
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	996	874	833	2724	1455	1169
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.35	0.68	0.37	0.36	0.19

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 76.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1565	20	90	1300	35
Future Volume (vph)	45	5	25	40	5	105	45	1565	20	90	1300	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4800	0
Flt Permitted	0.645			0.731			0.950			0.950		
Satd. Flow (perm)	996	1498	0	1199	1933	1455	1203	4933	1459	1530	4800	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				121			121		8	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1630	22	106	1426	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	17.0	16.0		17.0	16.0	16.0	15.0	87.0	87.0	20.0	92.0	
Total Split (%)	12.1%	11.4%		12.1%	11.4%	11.4%	10.7%	62.1%	62.1%	14.3%	65.7%	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	21.0	9.0		18.3	7.7	7.7	10.9	89.6	89.6	13.9	95.0	
Actuated g/C Ratio	0.15	0.06		0.13	0.06	0.06	0.08	0.64	0.64	0.10	0.68	
v/c Ratio	0.38	0.32		0.28	0.06	0.59	0.67	0.52	0.02	0.70	0.44	
Control Delay	55.3	33.7		52.1	62.8	21.3	92.1	14.8	0.1	70.0	10.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.3	33.7		52.1	62.8	21.3	92.1	14.8	0.1	70.0	10.3	
LOS	E	C		D	E	C	F	B	A	E	B	
Approach Delay		47.4			32.0			17.4			14.4	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	56	9		40	5	0	56	304	0	99	164	
Queue Length 95th (ft)	70	15		68	20	55	#91	420	m0	m132	180	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	206	137		221	138	216	99	3158	977	173	3258	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.34	0.29		0.23	0.04	0.52	0.64	0.52	0.02	0.61	0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 56.6%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1363	12	14	1870	181	28
Future Volume (vph)	1363	12	14	1870	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.929	0.959	
Satd. Flow (perm)	3599	0	0	3192	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	4				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1459	0	0	1984	281	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	26.0	
Total Split (s)	114.0		114.0	114.0	26.0	
Total Split (%)	81.4%		81.4%	81.4%	18.6%	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	102.5			102.5	25.5	
Actuated g/C Ratio	0.73			0.73	0.18	
v/c Ratio	0.55			0.85	0.81	
Control Delay	9.2			15.3	72.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	9.2			15.3	72.1	
LOS	A			B	E	
Approach Delay	9.2			15.3	72.1	
Approach LOS	A			B	E	
Queue Length 50th (ft)	303			428	239	
Queue Length 95th (ft)	273			m362	#335	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2777			2462	348	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.53			0.81	0.81	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 83.2%		ICU Level of Service E	
Analysis Period (min) 15			

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

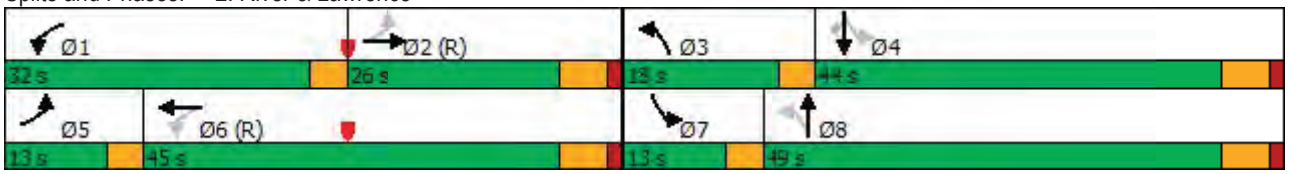
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	759	194	218	598	236	184	498	211	462	1047	256
Future Volume (vph)	103	759	194	218	598	236	184	498	211	462	1047	256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1626	3449	0	1787	3403	0	1711	4708	0	1745	3566	1501
Flt Permitted	0.126			0.114			0.094			0.281		
Satd. Flow (perm)	216	3449	0	214	3403	0	169	4708	0	516	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			57			100				229
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	1041	0	256	986	0	207	824	0	502	1163	301
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	13.0	26.0		32.0	45.0		18.0	49.0		13.0	44.0	44.0
Total Split (%)	10.8%	21.7%		26.7%	37.5%		15.0%	40.8%		10.8%	36.7%	36.7%
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	43.0	31.7		54.5	39.6		57.9	43.0		51.2	39.2	39.2
Actuated g/C Ratio	0.36	0.26		0.45	0.33		0.48	0.36		0.43	0.33	0.33
v/c Ratio	0.62	1.12		0.81	0.85		0.82	0.47		1.58	1.00	0.47
Control Delay	42.7	104.8		46.6	43.5		51.9	26.9		301.1	67.0	11.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	42.7	104.8		46.6	43.5		51.9	26.9		301.1	67.0	11.0
LOS	D	F		D	D		D	C		F	E	B
Approach Delay		98.8			44.2			31.9			118.2	
Approach LOS		F			D			C			F	
Queue Length 50th (ft)	35	~481		136	356		104	156		~473	~507	40
Queue Length 95th (ft)	m#113	#706		207	415		#216	184		#770	#643	100
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	190	926		470	1161		268	1751		317	1164	644
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.59	1.12		0.54	0.85		0.77	0.47		1.58	1.00	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.58			
Intersection Signal Delay: 80.5		Intersection LOS: F	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			
~	Volume exceeds capacity, queue is theoretically infinite.		
	Queue shown is maximum after two cycles.		
#	95th percentile volume exceeds capacity, queue may be longer.		
	Queue shown is maximum after two cycles.		
m	Volume for 95th percentile queue is metered by upstream signal.		

Splits and Phases: 2: River & Lawrence

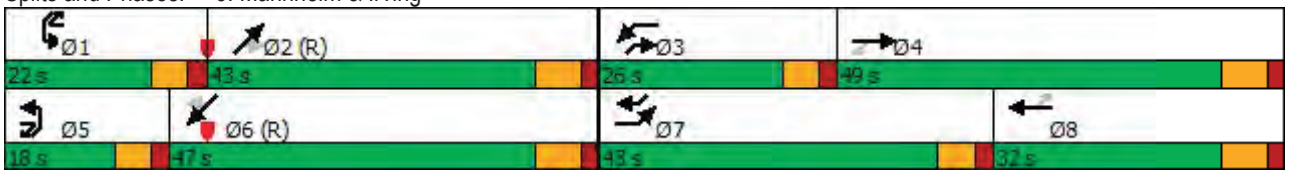


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	645	1080	100	315	710	110	55	1035	435	185	1655	740
Future Volume (vph)	645	1080	100	315	710	110	55	1035	435	185	1655	740
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	679	1350	120	362	845	131	60	1137	524	213	1724	851
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0
Minimum Split (s)	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0
Total Split (s)	43.0	49.0	18.0	26.0	32.0	22.0	18.0	43.0	26.0	22.0	47.0	43.0
Total Split (%)	30.7%	35.0%	12.9%	18.6%	22.9%	15.7%	12.9%	30.7%	18.6%	15.7%	33.6%	30.7%
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	35.0	41.6	56.8	19.3	25.9	46.9	8.2	39.1	65.4	14.0	44.9	86.9
Actuated g/C Ratio	0.25	0.30	0.41	0.14	0.18	0.34	0.06	0.28	0.47	0.10	0.32	0.62
v/c Ratio	0.85	0.86	0.19	0.85	0.89	0.27	0.34	0.81	0.42	0.67	1.06	0.50
Control Delay	60.6	52.8	27.3	77.4	68.5	35.6	71.1	49.7	27.0	54.2	74.6	34.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	52.8	27.3	77.4	68.5	35.6	71.1	49.7	27.0	54.2	74.6	34.2
LOS	E	D	C	E	E	D	E	D	C	D	E	C
Approach Delay		53.8			67.7			43.5			60.7	
Approach LOS		D			E			D			E	
Queue Length 50th (ft)	298	423	69	167	280	88	29	284	125	88	~660	440
Queue Length 95th (ft)	373	413	102	#225	#309	131	55	328	150	m124	#779	504
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Base Capacity (vph)	849	1590	666	442	945	508	261	1398	1253	367	1621	1727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.85	0.18	0.82	0.89	0.26	0.23	0.81	0.42	0.58	1.06	0.49

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 56.3		Intersection LOS: E	
Intersection Capacity Utilization 86.8%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	300	70	1335	2145	25
Future Volume (vph)	60	300	70	1335	2145	25
Ideal Flow (vphpl)	1900	1900	1900	2000	1900	1900
Lane Width (ft)	11	11	11	11	11	12
Storage Length (ft)	115	115	145			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1558	1473	1517	4979	4662	0
Flt Permitted	0.950		0.044			
Satd. Flow (perm)	1558	1473	70	4979	4662	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		130			2	
Link Speed (mph)	30			40	40	
Link Distance (ft)	1753			1551	1184	
Travel Time (s)	39.8			26.4	20.2	
Peak Hour Factor	0.82	0.83	0.87	0.93	0.87	0.88
Heavy Vehicles (%)	12%	6%	15%	6%	7%	37%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	73	361	80	1435	2494	0
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	20.0	20.0	
Minimum Split (s)	24.5	24.5	9.5	26.5	26.5	
Total Split (s)	35.0	35.0	15.0	105.0	90.0	
Total Split (%)	25.0%	25.0%	10.7%	75.0%	64.3%	
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	
All-Red Time (s)	2.0	2.0	0.5	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	4.0	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	27.1	27.1	102.4	99.9	87.4	
Actuated g/C Ratio	0.19	0.19	0.73	0.71	0.62	
v/c Ratio	0.24	0.93	0.58	0.40	0.86	
Control Delay	49.4	65.4	38.3	8.6	16.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.4	65.4	38.3	8.6	16.0	
LOS	D	E	D	A	B	
Approach Delay	62.7			10.2	16.0	
Approach LOS	E			B	B	
Queue Length 50th (ft)	56	217	26	182	811	
Queue Length 95th (ft)	94	#333	79	208	859	
Internal Link Dist (ft)	1673			1471	1104	
Turn Bay Length (ft)	115	115	145			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	317	403	165	3553	2911	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.90	0.48	0.40	0.86	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135 (96%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 71.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1825	310	10	1570	110	15
Future Volume (vph)	1825	310	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		323				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1962	323	20	1653	125	26
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	55.0	30.0	25.0	80.0	30.0	30.0
Total Split (%)	50.0%	27.3%	22.7%	72.7%	27.3%	27.3%
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.4	73.0	6.2	54.6	12.1	12.1
Actuated g/C Ratio	0.64	0.92	0.08	0.69	0.15	0.15
v/c Ratio	0.85	0.23	0.10	0.67	0.27	0.12
Control Delay	18.7	0.7	37.5	9.0	32.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	0.7	37.5	9.0	32.0	13.6
LOS	B	A	D	A	C	B
Approach Delay	16.2			9.4	28.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	277	0	4	198	25	0
Queue Length 95th (ft)	#747	13	9	326	55	10
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Base Capacity (vph)	2301	1424	661	3311	920	412
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.23	0.03	0.50	0.14	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 79.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	455	450	1270	560	860	2360
Future Volume (vph)	455	450	1270	560	860	2360
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		511		7		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	511	511	1323	609	1024	2713
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	37.0		59.0	37.0	44.0	103.0
Total Split (%)	26.4%		42.1%	26.4%	31.4%	73.6%
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	29.7	140.0	52.0	88.7	39.8	96.8
Actuated g/C Ratio	0.21	1.00	0.37	0.63	0.28	0.69
v/c Ratio	0.79	0.36	0.72	0.62	1.10	0.79
Control Delay	62.0	0.7	31.0	6.2	105.4	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	0.7	31.0	6.2	105.4	17.0
LOS	E	A	C	A	F	B
Approach Delay	31.3		23.2			41.2
Approach LOS	C		C			D
Queue Length 50th (ft)	227	0	229	43	~551	576
Queue Length 95th (ft)	290	0	253	57	#610	588
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Base Capacity (vph)	665	1422	1832	985	935	3444
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.36	0.72	0.62	1.10	0.79

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 34.5		Intersection LOS: C	
Intersection Capacity Utilization 76.2%		ICU Level of Service D	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

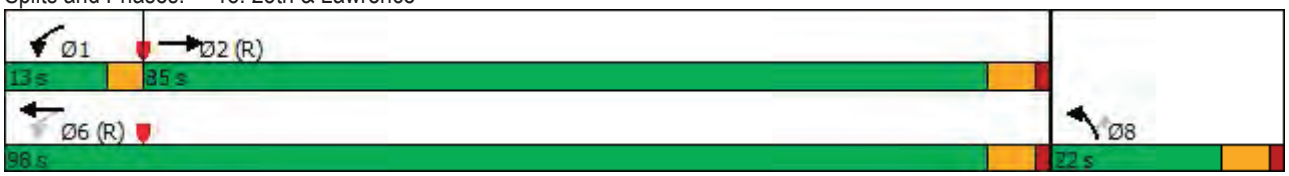
Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1040	340	115	725	125	105
Future Volume (vph)	1040	340	115	725	125	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Satd. Flow (prot)	3267	0	0	3346	1703	1495
Flt Permitted				0.532	0.950	
Satd. Flow (perm)	3267	0	0	1793	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	82					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1500	0	0	935	134	152
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	85.0		13.0	98.0	22.0	22.0
Total Split (%)	70.8%		10.8%	81.7%	18.3%	18.3%
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	90.0			90.0	18.0	18.0
Actuated g/C Ratio	0.75			0.75	0.15	0.15
v/c Ratio	0.61			0.70	0.53	0.68
Control Delay	7.9			7.8	54.8	63.9
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	7.9			7.8	54.8	63.9
LOS	A			A	D	E
Approach Delay	7.9			7.8	59.6	
Approach LOS	A			A	E	
Queue Length 50th (ft)	245			41	95	111
Queue Length 95th (ft)	255			331	167	140
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2470			1382	263	231
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.61			0.68	0.51	0.66

Intersection Summary		
Area Type:	Other	
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.70		
Intersection Signal Delay: 13.3		Intersection LOS: B
Intersection Capacity Utilization 84.9%		ICU Level of Service E
Analysis Period (min) 15		

Splits and Phases: 18: 25th & Lawrence

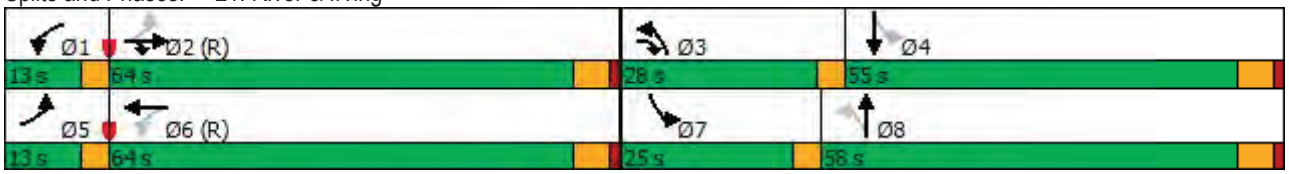


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	1069	480	47	633	112	315	640	47	204	950	22
Future Volume (vph)	95	1069	480	47	633	112	315	640	47	204	950	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1589	3433	1370	1745	3332	0	1518	3296	0	1589	3317	0
Flt Permitted	0.189			0.069			0.076			0.205		
Satd. Flow (perm)	316	3433	1370	127	3332	0	121	3296	0	343	3317	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			89		17			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	1201	527	52	803	0	350	792	0	240	1116	0
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	64.0		13.0	64.0		28.0	58.0		25.0	55.0	
Total Split (%)	8.1%	40.0%		8.1%	40.0%		17.5%	36.3%		15.6%	34.4%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	71.5	61.4	89.4	68.7	58.2		79.3	54.4		70.6	49.0	
Actuated g/C Ratio	0.45	0.38	0.56	0.43	0.36		0.50	0.34		0.44	0.31	
v/c Ratio	0.56	0.91	0.66	0.39	0.66		1.28	0.70		0.80	1.10	
Control Delay	24.6	43.7	19.5	32.7	44.7		191.0	50.0		46.0	109.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.6	43.7	19.5	32.7	44.7		191.0	50.0		46.0	109.2	
LOS	C	D	B	C	D		F	D		D	F	
Approach Delay		35.6			44.0			93.2			98.0	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	41	663	415	30	363		~417	381		146	~693	
Queue Length 95th (ft)	m55	m#750	m536	57	438		#629	444		198	#804	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	216	1317	804	151	1223		274	1124		323	1017	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.56	0.91	0.66	0.34	0.66		1.28	0.70		0.74	1.10	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.28			
Intersection Signal Delay: 65.9		Intersection LOS: E	
Intersection Capacity Utilization 92.5%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1215	135	180	985	65	240	250	140	155	340	25
Future Volume (vph)	50	1215	135	180	985	65	240	250	140	155	340	25
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.990	
Flt Protected	0.950			0.950			0.950				0.985	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3268	0
Flt Permitted	0.155			0.102			0.117				0.688	
Satd. Flow (perm)	267	3410	1383	176	3181	0	207	3187	0	0	2282	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91		7			77			4	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	83	1240	147	217	1048	77	258	316	184	189	400	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	83	1240	147	217	1125	0	258	500	0	0	629	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	13.0	88.0		15.0	90.0		18.0	57.0		39.0	39.0	
Total Split (%)	8.1%	55.0%		9.4%	56.3%		11.3%	35.6%		24.4%	24.4%	
Maximum Green (s)	9.5	82.0		11.5	84.0		14.5	51.0		33.0	33.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	88.4	77.4	100.0	94.2	80.4		58.1	55.6			33.0	
Actuated g/C Ratio	0.55	0.48	0.62	0.59	0.50		0.36	0.35			0.21	
v/c Ratio	0.38	0.75	0.16	1.04	0.70		1.03	0.43			1.33	
Control Delay	13.6	28.1	3.9	104.9	19.0		107.1	35.8			209.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	13.6	28.1	3.9	104.9	19.0		107.1	35.8			209.2	
LOS	B	C	A	F	B		F	D			F	
Approach Delay		24.8			32.9			60.0			209.2	
Approach LOS		C			C			E			F	
Queue Length 50th (ft)	16	517	12	~117	417		~278	185			~447	
Queue Length 95th (ft)	34	471	m27	m#192	m391		#476	203			#531	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	230	1747	889	208	1674		250	1157			473	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.36	0.71	0.17	1.04	0.67		1.03	0.43			1.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay: 61.4		Intersection LOS: E	
Intersection Capacity Utilization 88.2%		ICU Level of Service E	

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

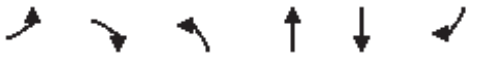
Splits and Phases: 22: 25th & Irving

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	116	80	70	1564	2529	75
Future Volume (vph)	116	80	70	1564	2529	75
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	10	10	11	11	11	11
Storage Length (ft)	125	125	250			200
Storage Lanes	1	0	2			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	2724	1225	2367	4979	4933	1259
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	2724	1225	2367	4979	4933	1259
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		100				109
Link Speed (mph)	25			50	50	
Link Distance (ft)	663			1987	1650	
Travel Time (s)	18.1			27.1	22.5	
Peak Hour Factor	0.64	0.80	0.92	0.96	0.98	0.69
Heavy Vehicles (%)	20%	23%	43%	6%	7%	24%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	181	100	76	1629	2581	109
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	15.0	15.0	8.0	22.0	22.0	15.0
Total Split (s)	19.0	19.0	19.0	121.0	102.0	19.0
Total Split (%)	13.6%	13.6%	13.6%	86.4%	72.9%	13.6%
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	12.0	12.0	10.8	114.0	98.2	117.2
Actuated g/C Ratio	0.09	0.09	0.08	0.81	0.70	0.84
v/c Ratio	0.78	0.51	0.42	0.40	0.75	0.10
Control Delay	84.8	20.5	66.5	5.4	21.8	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.8	20.5	66.5	5.4	21.8	1.5
LOS	F	C	E	A	C	A
Approach Delay	61.9			8.1	21.0	
Approach LOS	E			A	C	
Queue Length 50th (ft)	84	0	28	318	715	7
Queue Length 95th (ft)	88	41	m36	174	813	11
Internal Link Dist (ft)	583			1907	1570	
Turn Bay Length (ft)	125	125	250			200

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Base Capacity (vph)	233	196	236	4054	3460	1071
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.51	0.32	0.40	0.75	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 24 (17%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 64.8%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 25: Mannheim & Montrose

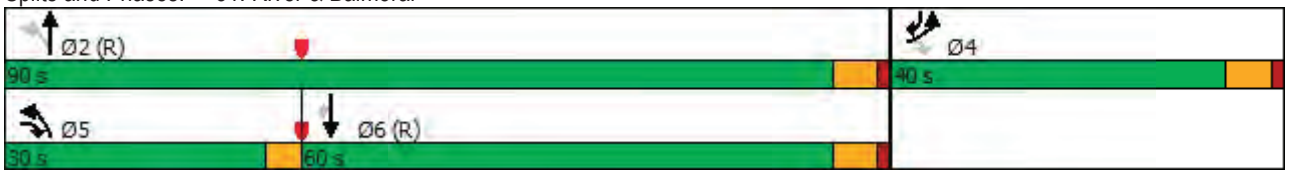


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	482	287	586	995	533
Future Volume (vph)	343	482	287	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.156			
Satd. Flow (perm)	3319	1553	293	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		28				263
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	518	305	689	1118	586
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	30.0	30.0	90.0	60.0	40.0
Total Split (%)	30.8%	23.1%	23.1%	69.2%	46.2%	30.8%
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	24.3	52.7	96.2	93.7	67.8	98.1
Actuated g/C Ratio	0.19	0.41	0.74	0.72	0.52	0.75
v/c Ratio	0.70	0.80	0.64	0.26	0.59	0.46
Control Delay	55.3	41.0	17.8	7.0	25.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	41.0	17.8	7.0	25.2	4.8
LOS	E	D	B	A	C	A
Approach Delay	47.5			10.3	18.2	
Approach LOS	D			B	B	
Queue Length 50th (ft)	178	360	78	93	334	78
Queue Length 95th (ft)	189	419	190	133	488	169
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	868	706	533	2633	1897	1371
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.73	0.57	0.26	0.59	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 65.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral

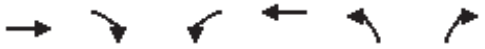


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1352	10	55	1808	20
Future Volume (vph)	110	5	70	45	5	90	20	1352	10	55	1808	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4843	0
Flt Permitted	0.528			0.698			0.950			0.950		
Satd. Flow (perm)	816	1479	0	1145	1933	1455	1203	4933	1459	1530	4843	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				121			121		4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1572	11	65	1963	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	20.0	15.0		20.0	15.0	15.0	15.0	85.0	85.0	20.0	90.0	
Total Split (%)	14.3%	10.7%		14.3%	10.7%	10.7%	10.7%	60.7%	60.7%	14.3%	64.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	27.5	13.2		20.6	7.4	7.4	8.8	89.2	89.2	11.2	93.8	
Actuated g/C Ratio	0.20	0.09		0.15	0.05	0.05	0.06	0.64	0.64	0.08	0.67	
v/c Ratio	0.53	0.43		0.35	0.07	0.58	0.45	0.50	0.01	0.53	0.60	
Control Delay	57.1	23.0		51.2	63.6	20.6	75.5	13.7	0.0	71.4	8.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.1	23.0		51.2	63.6	20.6	75.5	13.7	0.0	71.4	8.3	
LOS	E	C		D	E	C	E	B	A	E	A	
Approach Delay		42.4			33.7			14.9			10.3	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	96	10		54	6	0	30	230	0	63	120	
Queue Length 95th (ft)	155	0		68	19	37	43	265	m0	m65	m121	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	236	211		259	124	206	91	3142	973	169	3245	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.51	0.43		0.27	0.06	0.53	0.37	0.50	0.01	0.38	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 100 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1837	26	54	1228	52	162
Future Volume (vph)	1837	26	54	1228	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Satd. Flow (prot)	3463	0	0	3470	1800	0
Flt Permitted				0.606	0.987	
Satd. Flow (perm)	3463	0	0	2107	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	4				43	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1970	0	0	1326	263	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	135.0		135.0	135.0	25.0	
Total Split (%)	84.4%		84.4%	84.4%	15.6%	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	121.6			121.6	26.4	
Actuated g/C Ratio	0.76			0.76	0.16	
v/c Ratio	0.75			0.83	0.79	
Control Delay	12.6			28.4	69.9	
Queue Delay	0.0			0.0	0.0	
Total Delay	12.6			28.4	69.9	
LOS	B			C	E	
Approach Delay	12.6			28.4	69.9	
Approach LOS	B			C	E	
Queue Length 50th (ft)	626			444	217	
Queue Length 95th (ft)	478			m323	#337	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2792			1698	333	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.71			0.78	0.79	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 22.7		Intersection LOS: C	
Intersection Capacity Utilization 96.5%		ICU Level of Service F	
Analysis Period (min) 15			

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

Splits and Phases: 42: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	509	136	158	571	365	293	900	144	134	347	71
Future Volume (vph)	202	509	136	158	571	365	293	900	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.966			0.945			0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3346	0	1770	3345	0	1694	4658	0	1694	3465	1312
Flt Permitted	0.107			0.248			0.429			0.134		
Satd. Flow (perm)	190	3346	0	462	3345	0	765	4658	0	239	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			114			46				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	222	559	162	203	642	376	349	957	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	222	721	0	203	1018	0	349	1172	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.4	37.3		49.8	36.4		46.4	31.6		43.6	29.8	29.8
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.27	0.27
v/c Ratio	0.90	0.62		0.60	0.86		0.81	0.86		0.61	0.41	0.22
Control Delay	67.1	29.4		24.4	39.2		39.5	43.0		30.9	34.0	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	67.1	29.4		24.4	39.2		39.5	43.0		30.9	34.0	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		38.3			36.8			42.2			29.1	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	115	229		80	319		166	278		62	114	0
Queue Length 95th (ft)	#257	253		108	#402		#240	338		111	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	247	1157		348	1184		433	1370		262	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.90	0.62		0.58	0.86		0.81	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 37.9		Intersection LOS: D	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

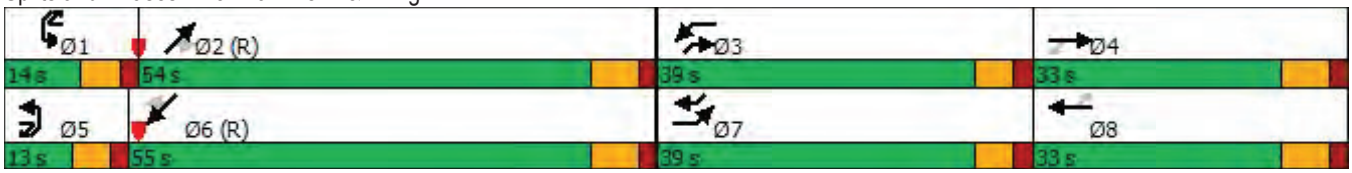
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	650	930	125	55	1470	550	145	1140	420
Future Volume (vph)	705	755	75	650	930	125	55	1470	550	145	1140	420
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	714	1022	164	64	1670	647	188	1267	525
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	714	1022	164	64	1670	647	188	1267	525
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	39.0	33.0	13.0	39.0	33.0	14.0	13.0	54.0	39.0	14.0	55.0	39.0
Total Split (%)	27.9%	23.6%	9.3%	27.9%	23.6%	10.0%	9.3%	38.6%	27.9%	10.0%	39.3%	27.9%
Maximum Green (s)	33.0	26.0	7.0	33.0	26.0	8.0	7.0	47.0	33.0	8.0	48.0	33.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	33.0	26.0	39.8	33.0	26.0	41.0	6.8	47.0	87.0	8.0	48.2	88.2
Actuated g/C Ratio	0.24	0.19	0.28	0.24	0.19	0.29	0.05	0.34	0.62	0.06	0.34	0.63
v/c Ratio	1.08	0.86	0.21	0.97	1.06	0.37	0.45	1.02	0.42	1.02	0.76	0.31
Control Delay	106.3	65.2	39.7	79.1	99.6	42.2	89.5	61.3	7.5	116.4	58.5	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.3	65.2	39.7	79.1	99.6	42.2	89.5	61.3	7.5	116.4	58.5	22.6
LOS	F	E	D	E	F	D	F	E	A	F	E	C
Approach Delay		83.2			87.0			47.4			54.5	
Approach LOS		F			F			D			D	
Queue Length 50th (ft)	~423	265	65	334	~373	119	29	~591	72	~93	446	180
Queue Length 95th (ft)	#522	318	100	#462	#468	154	m52	#646	105	#138	486	207
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	750	947	447	737	965	446	145	1636	1549	185	1678	1698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.86	0.21	0.97	1.06	0.37	0.44	1.02	0.42	1.02	0.76	0.31

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 66.3		Intersection LOS: E	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



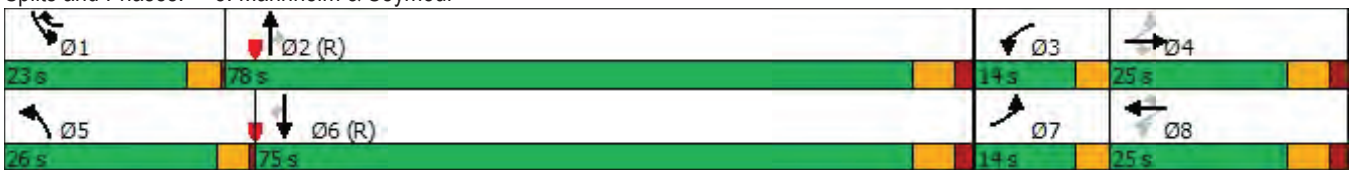
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	65	140	125	50	315	250	1700	100	260	1435	65
Future Volume (vph)	15	65	140	125	50	315	250	1700	100	260	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.722			0.570			0.950			0.950		
Satd. Flow (perm)	1184	1863	1473	1062	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			230			86			86
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			673			1551			1184	
Travel Time (s)		5.9			15.3			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	71	163	136	54	342	309	1868	109	283	1495	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	71	163	136	54	342	309	1868	109	283	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.0	14.5	14.5	10.5	24.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	14.0	25.0	25.0	14.0	25.0	23.0	26.0	78.0	78.0	23.0	75.0	75.0
Total Split (%)	10.0%	17.9%	17.9%	10.0%	17.9%	16.4%	18.6%	55.7%	55.7%	16.4%	53.6%	53.6%
Maximum Green (s)	10.5	18.5	18.5	10.5	18.5	19.0	22.0	71.5	71.5	19.0	68.5	68.5
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.5	0.5	2.0	2.0	0.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	4.0	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	24.9	12.8	12.8	30.6	20.3	43.5	19.4	78.0	78.0	16.7	75.3	75.3
Actuated g/C Ratio	0.18	0.09	0.09	0.22	0.14	0.31	0.14	0.56	0.56	0.12	0.54	0.54
v/c Ratio	0.10	0.42	0.58	0.47	0.20	0.33	0.76	0.67	0.12	0.69	0.59	0.12
Control Delay	42.2	66.7	16.6	50.8	56.2	12.6	70.0	24.5	5.5	72.5	25.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	66.7	16.6	50.8	56.2	12.6	70.0	24.5	5.5	72.5	25.2	6.4
LOS	D	E	B	D	E	B	E	C	A	E	C	A
Approach Delay		32.8			26.8			29.7			31.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	16	62	0	103	45	43	141	441	9	140	243	12
Queue Length 95th (ft)	30	110	58	165	89	84	167	534	41	189	326	18
Internal Link Dist (ft)		178			593			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	250	246	336	293	275	1070	466	2774	920	472	2520	673
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.29	0.49	0.46	0.20	0.32	0.66	0.67	0.12	0.60	0.59	0.12

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 113 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	495	735	1770	465	220	1325
Future Volume (vph)	495	735	1770	465	220	1325
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		456		89		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	563	826	1967	511	229	1395
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	826	1967	511	229	1395
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	40.0		78.0	40.0	22.0	100.0
Total Split (%)	28.6%		55.7%	28.6%	15.7%	71.4%
Maximum Green (s)	33.5		71.0	33.5	17.0	93.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	32.5	140.0	73.8	113.3	15.2	94.0
Actuated g/C Ratio	0.23	1.00	0.53	0.81	0.11	0.67
v/c Ratio	0.80	0.58	0.76	0.41	0.64	0.42
Control Delay	59.8	1.7	20.9	1.5	68.2	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	1.7	20.9	1.5	68.2	11.1
LOS	E	A	C	A	E	B
Approach Delay	25.3		16.9			19.1
Approach LOS	C		B			B
Queue Length 50th (ft)	248	0	380	18	104	202
Queue Length 95th (ft)	308	0	507	32	148	231
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	730	1422	2600	1272	399	3344
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.58	0.76	0.40	0.57	0.42

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 68.3%		ICU Level of Service C	
Analysis Period (min) 15			

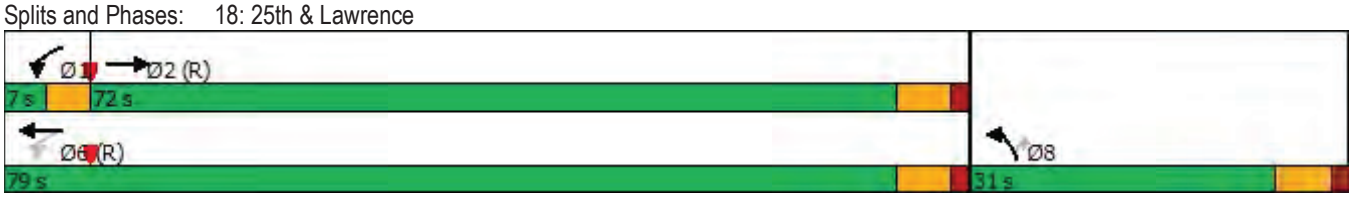
Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	595	70	55	1070	185	115
Future Volume (vph)	595	70	55	1070	185	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.979					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3321	0	0	3362	1703	1495
Flt Permitted				0.825	0.950	
Satd. Flow (perm)	3321	0	0	2782	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	30					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	633	103	79	1126	223	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	736	0	0	1205	223	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	72.0		7.0	79.0	31.0	31.0
Total Split (%)	65.5%		6.4%	71.8%	28.2%	28.2%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	66.0		3.5	73.0	25.0	25.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	77.2			77.2	20.8	20.8
Actuated g/C Ratio	0.70			0.70	0.19	0.19
v/c Ratio	0.31			0.62	0.69	0.57
Control Delay	6.8			7.9	52.7	47.9
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	6.8			7.9	52.7	47.9
LOS	A			A	D	D
Approach Delay	6.8			7.9	50.7	
Approach LOS	A			A	D	
Queue Length 50th (ft)	89			102	147	103
Queue Length 95th (ft)	132			355	202	128
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2339			1951	387	339
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.31			0.62	0.58	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.6		Intersection LOS: B	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 18: 25th & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.971			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3322	0	1518	3334	0	1589	3284	0
Flt Permitted	0.070			0.414			0.151			0.174		
Satd. Flow (perm)	117	3433	1370	760	3322	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127		25			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1078	260	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	67.0		8.0	60.0		36.0	55.0		10.0	29.0	
Total Split (%)	10.7%	47.9%		5.7%	42.9%		25.7%	39.3%		7.1%	20.7%	
Maximum Green (s)	11.5	61.0		4.5	54.0		32.5	49.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	71.5	62.6	98.6	61.0	54.0		61.5	49.0		30.0	23.0	
Actuated g/C Ratio	0.51	0.45	0.70	0.44	0.39		0.44	0.35		0.21	0.16	
v/c Ratio	0.93	0.38	0.47	0.19	1.03		1.00	1.00		0.74	1.07	
Control Delay	86.1	10.4	3.9	19.5	74.9		84.7	71.5		67.6	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	86.1	10.4	3.9	19.5	74.9		84.7	71.5		67.6	112.8	
LOS	F	B	A	B	E		F	E		E	F	
Approach Delay		18.2			72.2			74.9			107.1	
Approach LOS		B			E			E			F	
Queue Length 50th (ft)	85	100	132	31	~678		320	557		45	~305	
Queue Length 95th (ft)	m#198	m99	m33	50	#803		#465	#706		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1534	1002	362	1296		402	1168		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.38	0.47	0.19	1.03		1.00	1.00		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.2		Intersection LOS: E	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Future Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.943	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3072	0
Flt Permitted	0.061			0.127			0.202				0.781	
Satd. Flow (perm)	105	3410	1383	219	3195	0	357	3280	0	0	2411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203		3			28			81	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1490	53	351	533	151	45	229	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1543	0	351	684	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	14.0	70.0		17.0	73.0		25.0	53.0		28.0	28.0	
Total Split (%)	10.0%	50.0%		12.1%	52.1%		17.9%	37.9%		20.0%	20.0%	
Maximum Green (s)	10.5	64.0		13.5	67.0		21.5	47.0		22.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	79.0	66.0	91.0	81.0	67.0		49.5	47.0			22.0	
Actuated g/C Ratio	0.56	0.47	0.65	0.58	0.48		0.35	0.34			0.16	
v/c Ratio	0.88	0.72	0.26	0.68	1.01		1.07	0.61			0.99	
Control Delay	82.9	23.6	1.4	33.6	43.5		105.3	40.0			88.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	82.9	23.6	1.4	33.6	43.5		105.3	40.0			88.6	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		25.8			42.6			62.1			88.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	108	227	6	80	~508		~283	262			180	
Queue Length 95th (ft)	#207	254	10	m81	m443		#456	194			#267	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	173	1607	970	266	1530		329	1119			447	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.88	0.72	0.26	0.62	1.01		1.07	0.61			0.99	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 45.7		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	

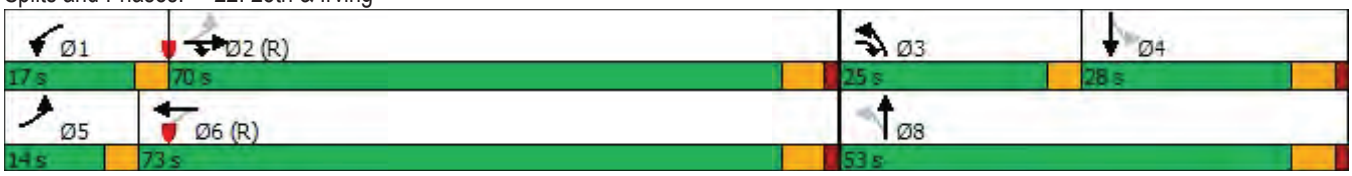
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	55	69	138	1887	1689	112
Future Volume (vph)	55	69	138	1887	1689	112
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	10	10	11	11	11	11
Storage Length (ft)	125	125	250			200
Storage Lanes	1	0	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.91	0.91	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2701	1277	2918	4887	4933	1382
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	2701	1277	2918	4887	4933	1382
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		135				13
Link Speed (mph)	25			50	50	
Link Distance (ft)	663			1987	1650	
Travel Time (s)	18.1			27.1	22.5	
Peak Hour Factor	0.59	0.51	0.50	0.94	0.93	0.76
Heavy Vehicles (%)	21%	18%	16%	8%	7%	13%
Adj. Flow (vph)	93	135	276	2007	1816	147
Shared Lane Traffic (%)						
Lane Group Flow (vph)	93	135	276	2007	1816	147
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	20			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	0.98	0.98	1.04
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Minimum Split (s)	15.0	15.0	8.0	22.0	22.0	15.0
Total Split (s)	17.0	17.0	17.0	123.0	106.0	17.0
Total Split (%)	12.1%	12.1%	12.1%	87.9%	75.7%	12.1%
Maximum Green (s)	10.0	10.0	12.0	116.0	99.0	10.0
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	4.0	7.0	7.0	5.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	9.8	9.8	14.5	116.2	96.7	113.5
Actuated g/C Ratio	0.07	0.07	0.10	0.83	0.69	0.81
v/c Ratio	0.49	0.63	0.91	0.49	0.53	0.13
Control Delay	72.0	23.3	86.3	0.4	15.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.0	23.3	86.3	0.4	15.6	2.4
LOS	E	C	F	A	B	A
Approach Delay	43.2			10.8	14.6	
Approach LOS	D			B	B	
Queue Length 50th (ft)	42	0	~143	5	436	12
Queue Length 95th (ft)	46	0	91	m5	484	20
Internal Link Dist (ft)	583			1907	1570	
Turn Bay Length (ft)	125	125	250			200
Base Capacity (vph)	192	216	302	4056	3488	1125
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.63	0.91	0.49	0.52	0.13

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 41 (29%), Referenced to phase 2:NET and 6:SWT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 14.1 Intersection LOS: B

Intersection Capacity Utilization 57.4% ICU Level of Service B

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

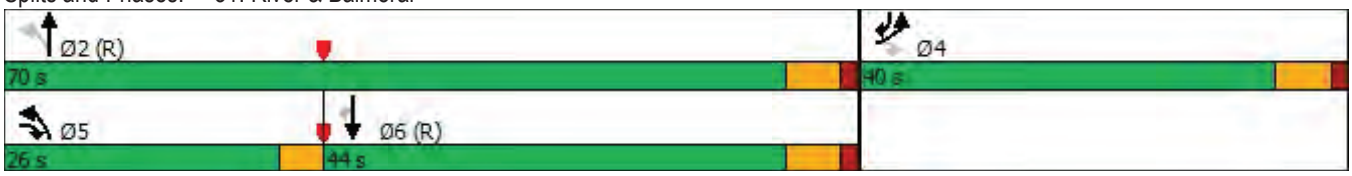
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	431	936	464	185
Future Volume (vph)	295	139	431	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.403			
Satd. Flow (perm)	3224	1468	722	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	459	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	459	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	43.3	83.7	81.2	57.2	80.0
Actuated g/C Ratio	0.15	0.39	0.76	0.74	0.52	0.73
v/c Ratio	0.66	0.26	0.63	0.37	0.29	0.19
Control Delay	50.2	5.1	8.9	6.0	17.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.1	8.9	6.0	17.3	1.3
LOS	D	A	A	A	B	A
Approach Delay	34.3			6.9	12.6	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	13	87	115	103	0
Queue Length 95th (ft)	151	31	161	177	181	21
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	711	766	2724	1836	1384
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.60	0.37	0.29	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1560	35
Future Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1560	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4814	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4814	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		5	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	1938	22	106	1642	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1938	22	106	1700	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.60	0.02	0.65	0.51	
Control Delay	63.9	33.8		57.4	60.4	22.3	83.0	5.8	0.1	60.3	16.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	83.0	5.8	0.1	60.3	16.5	
LOS	E	C		E	E	C	F	A	A	E	B	
Approach Delay		52.9			34.2			8.2			19.1	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	58	9		42	5	0	61	87	0	89	327	
Queue Length 95th (ft)	72	14		70	20	61	84	168	m0	m105	m413	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3319	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.60	0.02	0.57	0.51	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

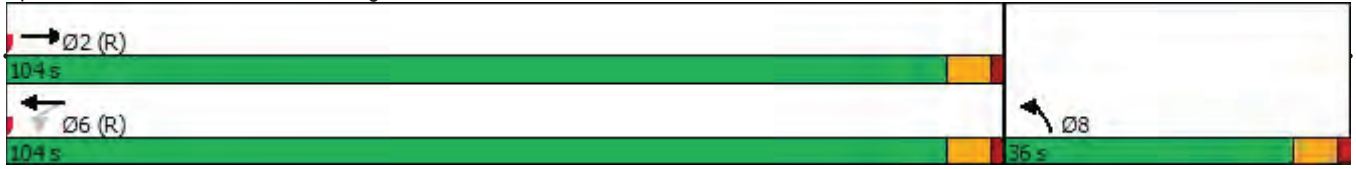
Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2060	181	28
Future Volume (vph)	1513	12	14	2060	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2168	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2184	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	104.0		104.0	104.0	36.0	
Total Split (%)	74.3%		74.3%	74.3%	25.7%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	98.0		98.0	98.0	30.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	101.8			101.8	26.2	
Actuated g/C Ratio	0.73			0.73	0.19	
v/c Ratio	0.62			0.94	0.79	
Control Delay	11.2			20.1	69.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	11.2			20.1	69.0	
LOS	B			C	E	
Approach Delay	11.2			20.1	69.0	
Approach LOS	B			C	E	
Queue Length 50th (ft)	357			491	240	
Queue Length 95th (ft)	451			m481	270	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2617			2314	408	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.94	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 41: Judd & Irving

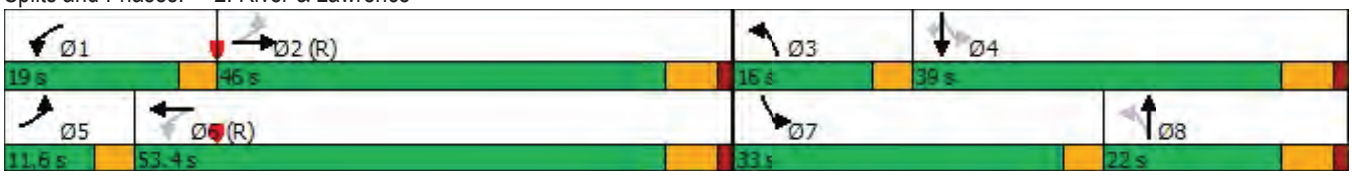


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.965			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3431	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.174			0.091			0.238			0.197		
Satd. Flow (perm)	298	3449	0	171	3431	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			40			96				228
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	751	230	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	981	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	11.6	46.0		19.0	53.4		16.0	22.0		33.0	39.0	39.0
Total Split (%)	9.7%	38.3%		15.8%	44.5%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	8.1	40.0		15.5	47.4		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	50.7	40.3		61.2	47.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.42	0.34		0.51	0.40		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.55	0.91		0.89	0.71		0.85	0.93		0.97	0.91	0.43
Control Delay	22.4	44.8		61.0	32.7		59.1	64.5		66.1	56.4	8.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	22.4	44.8		61.0	32.7		59.1	64.5		66.1	56.4	8.2
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		42.6			38.6			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	28	417		141	319		103	170		307	361	11
Queue Length 95th (ft)	m54	#543		#256	371		#230	#234		#522	#484	63
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	216	1179		296	1379		247	735		496	994	583
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.54	0.91		0.86	0.71		0.84	0.93		0.96	0.91	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.4		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	470	710	110	55	1090	720	185	1825	740
Future Volume (vph)	635	1080	100	470	710	110	55	1090	720	185	1825	740
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	540	845	131	60	1198	867	213	1901	851
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	540	845	131	60	1198	867	213	1901	851
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0
Total Split (s)	36.0	41.0	10.0	29.0	34.0	19.0	10.0	51.0	29.0	19.0	60.0	36.0
Total Split (%)	25.7%	29.3%	7.1%	20.7%	24.3%	13.6%	7.1%	36.4%	20.7%	13.6%	42.9%	25.7%
Maximum Green (s)	30.0	34.0	4.0	23.0	27.0	13.0	4.0	44.0	23.0	13.0	53.0	30.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	30.0	34.0	45.0	23.0	27.0	46.5	4.0	44.5	74.5	12.5	53.0	90.0
Actuated g/C Ratio	0.21	0.24	0.32	0.16	0.19	0.33	0.03	0.32	0.53	0.09	0.38	0.64
v/c Ratio	0.97	1.05	0.24	1.06	0.86	0.27	0.69	0.75	0.61	0.74	0.99	0.49
Control Delay	82.2	89.6	36.6	111.8	64.5	36.0	96.6	45.7	26.0	62.7	51.1	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	89.6	36.6	111.8	64.5	36.0	96.6	45.7	26.0	62.7	51.1	28.9
LOS	F	F	D	F	E	D	F	D	C	E	D	C
Approach Delay		84.3			78.9			39.1			45.6	
Approach LOS		F			E			D			D	
Queue Length 50th (ft)	313	~489	80	~277	275	87	29	301	331	92	671	413
Queue Length 95th (ft)	#440	#471	122	#374	302	132	m#53	295	196	m123	#770	477
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	688	1287	494	509	984	488	87	1591	1412	298	1914	1748
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	1.05	0.24	1.06	0.86	0.27	0.69	0.75	0.61	0.71	0.99	0.49

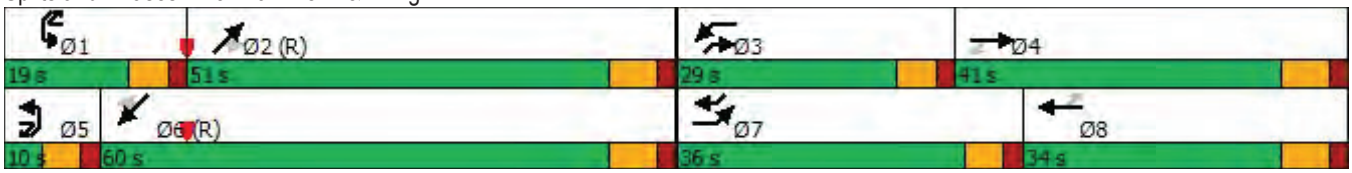
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 59.2		Intersection LOS: E	
Intersection Capacity Utilization 91.7%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	35	300	100	40	350	70	1335	70	325	2145	25
Future Volume (vph)	50	35	300	100	40	350	70	1335	70	325	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.619			0.732			0.056			0.115		
Satd. Flow (perm)	1015	1863	1473	1364	1863	2787	174	4979	1583	416	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			380			152			121
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			668			1551			1184	
Travel Time (s)		5.9			15.2			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	61	38	361	109	43	380	80	1435	76	353	2466	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	38	361	109	43	380	80	1435	76	353	2466	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

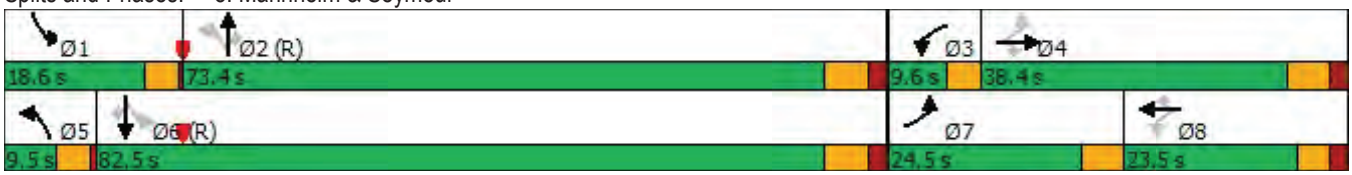
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	9.5	23.5	23.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	38.4	38.4	9.6	23.5	23.5	9.5	73.4	73.4	18.6	82.5	82.5
Total Split (%)	17.5%	27.4%	27.4%	6.9%	16.8%	16.8%	6.8%	52.4%	52.4%	13.3%	58.9%	58.9%
Maximum Green (s)	20.0	31.9	31.9	6.1	18.0	18.0	5.5	66.9	66.9	14.6	76.0	76.0
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.5	2.0	2.0	0.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.5	6.5	3.5	5.5	5.5	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	40.3	29.0	29.0	33.1	26.2	26.2	81.1	72.9	72.9	90.5	78.6	78.6
Actuated g/C Ratio	0.29	0.21	0.21	0.24	0.19	0.19	0.58	0.52	0.52	0.65	0.56	0.56
v/c Ratio	0.18	0.10	0.91	0.32	0.12	0.46	0.37	0.55	0.08	0.68	0.94	0.04
Control Delay	36.8	43.9	63.0	41.2	50.0	6.6	16.1	24.4	0.2	26.6	19.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	43.9	63.0	41.2	50.0	6.6	16.1	24.4	0.2	26.6	19.9	0.1
LOS	D	D	E	D	D	A	B	C	A	C	B	A
Approach Delay		58.0			17.2			22.8			20.5	
Approach LOS		E			B			C			C	
Queue Length 50th (ft)	40	28	223	72	33	0	13	327	0	51	447	0
Queue Length 95th (ft)	69	59	#315	122	71	49	23	393	0	90	502	m0
Internal Link Dist (ft)		178			588			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	371	424	425	340	348	830	214	2591	896	584	2631	715
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.09	0.85	0.32	0.12	0.46	0.37	0.55	0.08	0.60	0.94	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 135 (96%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 79.7%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	325	10	1570	110	15
Future Volume (vph)	1815	325	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		339				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1952	339	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	339	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	55.0	30.0	25.0	80.0	30.0	30.0
Total Split (%)	50.0%	27.3%	22.7%	72.7%	27.3%	27.3%
Maximum Green (s)	48.5	24.0	20.5	73.5	24.0	24.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.4	73.0	6.2	54.6	12.1	12.1
Actuated g/C Ratio	0.64	0.92	0.08	0.69	0.15	0.15
v/c Ratio	0.85	0.25	0.10	0.67	0.27	0.12
Control Delay	18.5	0.7	37.5	9.0	32.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	0.7	37.5	9.0	32.0	13.6
LOS	B	A	D	A	C	B
Approach Delay	15.8			9.4	28.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	274	0	4	198	25	0
Queue Length 95th (ft)	#741	13	9	326	55	10
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2301	1424	661	3311	920	412
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.24	0.03	0.50	0.14	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 79.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	610	450	1235	620	860	2360
Future Volume (vph)	610	450	1235	620	860	2360
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		447		7		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	685	511	1286	674	1024	2713
Shared Lane Traffic (%)						
Lane Group Flow (vph)	685	511	1286	674	1024	2713
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	37.0		59.0	37.0	44.0	103.0
Total Split (%)	26.4%		42.1%	26.4%	31.4%	73.6%
Maximum Green (s)	30.5		52.0	30.5	39.0	96.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	30.5	140.0	52.0	89.5	39.0	96.0
Actuated g/C Ratio	0.22	1.00	0.37	0.64	0.28	0.69
v/c Ratio	1.03	0.36	0.70	0.68	1.12	0.79
Control Delay	95.7	0.7	30.2	8.2	114.0	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.7	0.7	30.2	8.2	114.0	17.5
LOS	F	A	C	A	F	B
Approach Delay	55.1		22.6			43.9
Approach LOS	E		C			D
Queue Length 50th (ft)	~343	0	213	55	~551	576
Queue Length 95th (ft)	#459	0	272	74	#610	588
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	665	1422	1832	985	915	3414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.36	0.70	0.68	1.12	0.79

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 39.8 Intersection LOS: D
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1090	350	115	810	195	105
Future Volume (vph)	1090	350	115	810	195	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.962					0.850
Flt Protected				0.994	0.950	
Satd. Flow (prot)	3267	0	0	3350	1703	1495
Flt Permitted				0.526	0.950	
Satd. Flow (perm)	3267	0	0	1773	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	80					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1172	393	129	900	210	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1565	0	0	1029	210	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	85.0		13.0	98.0	22.0	22.0
Total Split (%)	70.8%		10.8%	81.7%	18.3%	18.3%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	79.0		9.5	92.0	16.0	16.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	88.5			88.5	19.5	19.5
Actuated g/C Ratio	0.74			0.74	0.16	0.16
v/c Ratio	0.64			0.79	0.76	0.63
Control Delay	8.8			10.1	66.6	59.8
Queue Delay	0.2			0.0	0.0	0.0
Total Delay	9.0			10.1	66.6	59.8
LOS	A			B	E	E
Approach Delay	9.0			10.1	63.8	
Approach LOS	A			B	E	
Queue Length 50th (ft)	318			94	148	105
Queue Length 95th (ft)	278			398	#312	140
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2429			1359	277	243
Starvation Cap Reductn	233			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.71			0.76	0.76	0.63

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 92.8%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 18: 25th & Lawrence

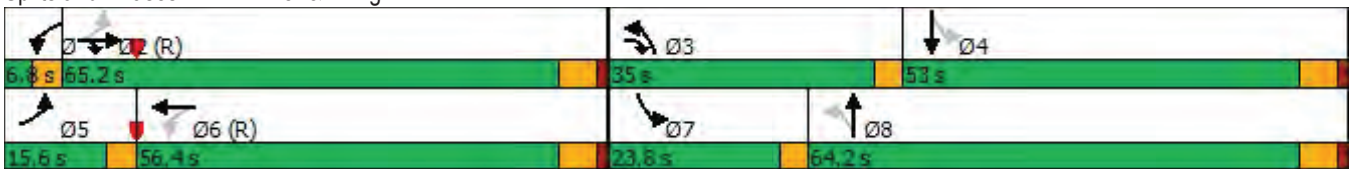
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3373	0	1518	3296	0	1589	3315	0
Flt Permitted	0.153			0.079			0.079			0.300		
Satd. Flow (perm)	256	3433	1370	145	3373	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		7			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	719	76	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	795	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.6	65.2		6.8	56.4		35.0	64.2		23.8	53.0	
Total Split (%)	9.8%	40.8%		4.3%	35.3%		21.9%	40.1%		14.9%	33.1%	
Maximum Green (s)	12.1	59.2		3.3	50.4		31.5	58.2		20.3	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.6	95.6	56.5	50.7		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.73	0.95	0.66	0.63	0.74		1.03	0.61		0.59	1.05	
Control Delay	38.5	35.9	10.5	62.9	53.4		104.1	41.2		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.5	35.9	10.5	62.9	53.4		104.1	41.2		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		28.8			54.0			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	48	555	202	32	390		~343	343		99	~613	
Queue Length 95th (ft)	m58	m591	m226	#75	471		#554	417		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	210	1299	835	83	1073		340	1305		356	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.72	0.95	0.66	0.63	0.74		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.6		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3217	0
Flt Permitted	0.080			0.060			0.198				0.692	
Satd. Flow (perm)	138	3410	1383	103	3181	0	350	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		5			85			12	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	158	217	1112	77	285	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	158	217	1189	0	285	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	20.2	72.0		20.4	72.2		13.6	67.6		54.0	54.0	
Total Split (%)	12.6%	45.0%		12.8%	45.1%		8.5%	42.3%		33.8%	33.8%	
Maximum Green (s)	16.7	66.0		16.9	66.2		10.1	61.6		48.0	48.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.1	66.0	79.6	85.7	66.3		64.1	61.6			48.0	
Actuated g/C Ratio	0.53	0.41	0.50	0.54	0.41		0.40	0.38			0.30	
v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	
Control Delay	77.9	54.1	8.3	117.9	37.5		186.1	30.1			88.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	77.9	54.1	8.3	117.9	37.5		186.1	30.1			88.1	
LOS	E	D	A	F	D		F	C			F	
Approach Delay		52.9			49.9			86.8			88.1	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	174	673	18	168	578		~291	164			373	
Queue Length 95th (ft)	154	m#890	m43	m#270	m631		#504	178			#466	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	229	1406	738	217	1321		224	1279			685	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 63.0		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

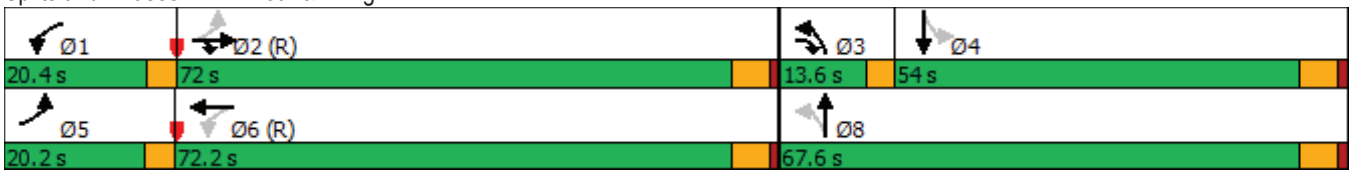
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	101	95	80	1599	2684	75
Future Volume (vph)	101	95	80	1599	2684	75
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	10	10	11	11	11	11
Storage Length (ft)	125	125	250			200
Storage Lanes	1	0	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	0.97	0.91	0.91	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2724	1225	2367	4979	4933	1259
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	2724	1225	2367	4979	4933	1259
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		107				109
Link Speed (mph)	25			50	50	
Link Distance (ft)	663			1987	1650	
Travel Time (s)	18.1			27.1	22.5	
Peak Hour Factor	0.64	0.80	0.92	0.96	0.98	0.69
Heavy Vehicles (%)	20%	23%	43%	6%	7%	24%
Adj. Flow (vph)	158	119	87	1666	2739	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	119	87	1666	2739	109
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	20			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	0.98	0.98	1.04
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Minimum Split (s)	15.0	15.0	8.0	22.0	22.0	15.0
Total Split (s)	22.0	22.0	15.0	118.0	103.0	22.0
Total Split (%)	15.7%	15.7%	10.7%	84.3%	73.6%	15.7%
Maximum Green (s)	15.0	15.0	10.0	111.0	96.0	15.0
Yellow Time (s)	5.0	5.0	4.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	7.0	7.0	7.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	4.0	7.0	7.0	5.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	14.0	14.0	9.6	112.0	97.5	118.4
Actuated g/C Ratio	0.10	0.10	0.07	0.80	0.70	0.85
v/c Ratio	0.58	0.55	0.54	0.42	0.80	0.10
Control Delay	69.1	23.0	70.6	6.0	21.9	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.1	23.0	70.6	6.0	21.9	1.0
LOS	E	C	E	A	C	A
Approach Delay	49.3			9.2	21.1	
Approach LOS	D			A	C	
Queue Length 50th (ft)	71	10	34	351	754	6
Queue Length 95th (ft)	76	53	m45	m280	m794	m7
Internal Link Dist (ft)	583			1907	1570	
Turn Bay Length (ft)	125	125	250			200
Base Capacity (vph)	291	226	169	3984	3433	1090
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.53	0.51	0.42	0.80	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 24 (17%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

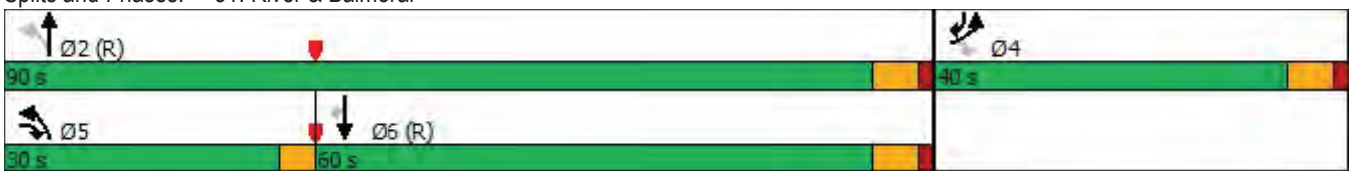
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		28				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	30.0	30.0	90.0	60.0	40.0
Total Split (%)	30.8%	23.1%	23.1%	69.2%	46.2%	30.8%
Maximum Green (s)	34.0	26.5	26.5	84.0	54.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.3	40.3	96.2	93.7	80.2	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.39	0.13	0.26	0.50	0.40
Control Delay	55.3	31.5	6.2	7.0	15.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	31.5	6.2	7.0	15.3	1.0
LOS	E	C	A	A	B	A
Approach Delay	47.9			6.9	10.4	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	111	10	93	256	0
Queue Length 95th (ft)	189	167	25	133	352	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	868	694	555	2633	2243	1522
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.28	0.09	0.26	0.50	0.39

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1692	10	55	2133	20
Future Volume (vph)	110	5	70	45	5	90	20	1692	10	55	2133	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4847	0
Flt Permitted	0.528			0.698			0.950			0.950		
Satd. Flow (perm)	816	1479	0	1145	1933	1455	1203	4933	1459	1530	4847	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				121			121		3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	1967	11	65	2269	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1967	11	65	2309	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	20.0	15.0		20.0	15.0	15.0	15.0	85.0	85.0	20.0	90.0	
Total Split (%)	14.3%	10.7%		14.3%	10.7%	10.7%	10.7%	60.7%	60.7%	14.3%	64.3%	
Maximum Green (s)	16.5	9.0		16.5	9.0	9.0	10.5	79.0	79.0	15.5	84.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	27.5	13.2		20.6	7.4	7.4	8.8	89.2	89.2	11.2	93.8	
Actuated g/C Ratio	0.20	0.09		0.15	0.05	0.05	0.06	0.64	0.64	0.08	0.67	
v/c Ratio	0.53	0.43		0.35	0.07	0.58	0.45	0.63	0.01	0.53	0.71	
Control Delay	57.1	23.0		51.2	63.6	20.6	68.5	19.9	0.0	65.8	9.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.1	23.0		51.2	63.6	20.6	68.5	19.9	0.0	65.8	9.9	
LOS	E	C		D	E	C	E	B	A	E	A	
Approach Delay		42.4			33.7			20.6			11.5	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	96	10		54	6	0	30	307	0	62	207	
Queue Length 95th (ft)	155	0		68	19	37	45	400	m0	m64	m207	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	236	211		259	124	206	91	3142	973	169	3247	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.51	0.43		0.27	0.06	0.53	0.37	0.63	0.01	0.38	0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 100 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

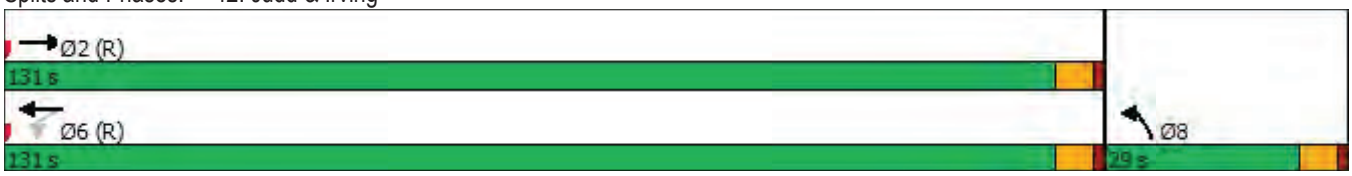
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1383	52	162
Future Volume (vph)	2122	26	54	1383	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3470	1800	0
Flt Permitted				0.572	0.987	
Satd. Flow (perm)	3466	0	0	1989	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				22	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1426	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1486	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	131.0		131.0	131.0	29.0	
Total Split (%)	81.9%		81.9%	81.9%	18.1%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	125.0		125.0	125.0	23.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	124.8			124.8	23.2	
Actuated g/C Ratio	0.78			0.78	0.14	
v/c Ratio	0.84			1.07dl	0.94	
Control Delay	15.0			36.7	101.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	15.0			36.7	101.4	
LOS	B			D	F	
Approach Delay	15.0			36.7	101.4	
Approach LOS	B			D	F	
Queue Length 50th (ft)	697			402	256	
Queue Length 95th (ft)	803			m#415	#329	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2708			1553	280	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.84			0.96	0.94	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 42: Judd & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.959			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3394	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.192			0.440			0.132		
Satd. Flow (perm)	192	3353	0	358	3394	0	785	4663	0	235	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			52			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	804	299	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1103	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.0		46.5	31.6		44.3	30.4	30.4
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.28	0.28
v/c Ratio	0.92	0.71		0.68	0.96		0.80	0.86		0.61	0.40	0.22
Control Delay	70.9	34.3		28.6	54.1		39.1	43.2		30.9	33.6	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	70.9	34.3		28.6	54.1		39.1	43.2		30.9	33.6	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		42.4			50.1			42.2			28.9	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	124	232		80	385		166	280		62	114	0
Queue Length 95th (ft)	#275	304		108	#520		#235	#341		112	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	252	1155		310	1146		434	1372		263	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.65	0.96		0.80	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 42.7		Intersection LOS: D	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

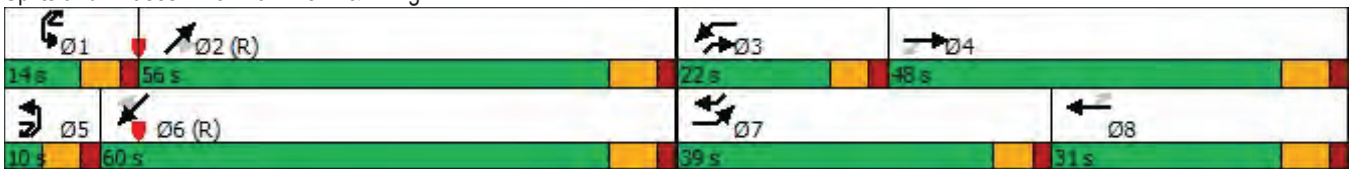
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	130	850	235	55	1470	550	145	1450	500
Future Volume (vph)	705	755	75	130	850	235	55	1470	550	145	1450	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	143	934	309	64	1670	647	188	1611	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	143	934	309	64	1670	647	188	1611	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	39.0	48.0	10.0	22.0	31.0	14.0	10.0	56.0	22.0	14.0	60.0	39.0
Total Split (%)	27.9%	34.3%	7.1%	15.7%	22.1%	10.0%	7.1%	40.0%	15.7%	10.0%	42.9%	27.9%
Maximum Green (s)	33.0	41.0	4.0	16.0	24.0	8.0	4.0	49.0	16.0	8.0	53.0	33.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	33.0	44.5	55.5	12.5	24.0	39.0	4.0	49.0	68.5	8.0	53.0	93.0
Actuated g/C Ratio	0.24	0.32	0.40	0.09	0.17	0.28	0.03	0.35	0.49	0.06	0.38	0.66
v/c Ratio	1.08	0.50	0.15	0.51	1.05	0.73	0.77	0.98	0.53	1.02	0.87	0.35
Control Delay	106.3	40.4	28.9	67.0	98.7	57.1	126.9	49.8	14.6	116.6	53.6	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.3	40.4	28.9	67.0	98.7	57.1	126.9	49.8	14.6	116.6	53.6	16.8
LOS	F	D	C	E	F	E	F	D	B	F	D	B
Approach Delay		70.9			86.1			42.3			49.0	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~423	220	55	64	~338	256	28	554	239	~93	561	159
Queue Length 95th (ft)	#522	274	88	99	#432	297	m#65	#621	138	#137	613	198
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	750	1622	620	357	891	424	83	1706	1282	185	1845	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.50	0.15	0.40	1.05	0.73	0.77	0.98	0.50	1.02	0.87	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 58.2		Intersection LOS: E	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



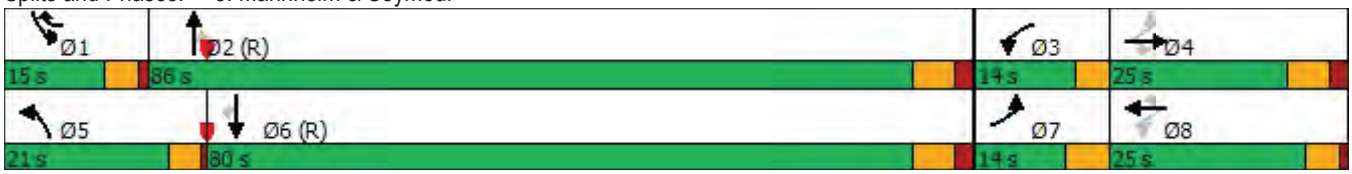
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	40	140	125	50	315	250	1700	100	100	1435	65
Future Volume (vph)	15	40	140	125	50	315	250	1700	100	100	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.722			0.591			0.950			0.950		
Satd. Flow (perm)	1184	1863	1473	1101	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			201			97			129
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			673			1551			1184	
Travel Time (s)		5.9			15.3			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	43	163	136	54	342	309	1868	109	109	1495	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	43	163	136	54	342	309	1868	109	109	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	14.0	25.0	25.0	14.0	25.0	15.0	21.0	86.0	86.0	15.0	80.0	80.0
Total Split (%)	10.0%	17.9%	17.9%	10.0%	17.9%	10.7%	15.0%	61.4%	61.4%	10.7%	57.1%	57.1%
Maximum Green (s)	9.5	18.5	18.5	10.5	20.5	10.5	17.0	79.5	79.5	10.5	73.5	73.5
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	0.0	2.0	2.0	0.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.5	6.5	3.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	22.4	11.1	11.1	29.1	20.1	34.3	19.5	85.9	85.9	9.8	76.8	76.8
Actuated g/C Ratio	0.16	0.08	0.08	0.21	0.14	0.24	0.14	0.61	0.61	0.07	0.55	0.55
v/c Ratio	0.11	0.29	0.61	0.48	0.20	0.41	0.76	0.61	0.11	0.46	0.58	0.11
Control Delay	43.5	64.6	18.5	51.7	55.9	19.1	70.2	18.8	3.5	65.7	27.2	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	64.6	18.5	51.7	55.9	19.1	70.2	18.8	3.5	65.7	27.2	3.6
LOS	D	E	B	D	E	B	E	B	A	E	C	A
Approach Delay		29.7			31.2			25.0			28.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	38	0	105	45	60	139	378	4	51	292	9
Queue Length 95th (ft)	30	76	58	165	89	108	173	474	32	86	388	12
Internal Link Dist (ft)		178			593			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	220	246	336	291	290	857	415	3063	1011	269	2612	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.17	0.49	0.47	0.19	0.40	0.74	0.61	0.11	0.41	0.57	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 114 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	735	735	1780	630	55	1290
Future Volume (vph)	735	735	1780	630	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		544		75		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	835	826	1978	692	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	835	826	1978	692	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	63.0		68.0	63.0	9.0	77.0
Total Split (%)	45.0%		48.6%	45.0%	6.4%	55.0%
Maximum Green (s)	56.5		61.0	56.5	4.0	70.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	52.6	140.0	65.8	126.7	5.5	73.9
Actuated g/C Ratio	0.38	1.00	0.47	0.90	0.04	0.53
v/c Ratio	0.73	0.58	0.85	0.49	0.45	0.52
Control Delay	41.3	1.7	30.2	1.2	77.3	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	1.7	30.2	1.2	77.3	23.0
LOS	D	A	C	A	E	C
Approach Delay	21.6		22.7			25.1
Approach LOS	C		C			C
Queue Length 50th (ft)	320	0	274	10	26	302
Queue Length 95th (ft)	380	0	463	12	#59	349
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	1232	1422	2317	1412	128	2626
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.58	0.85	0.49	0.45	0.52

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 23.0 Intersection LOS: C
Intersection Capacity Utilization 64.9% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	695	130	55	1255	240	115
Future Volume (vph)	695	130	55	1255	240	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.969					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3290	0	0	3362	1703	1495
Flt Permitted				0.804	0.950	
Satd. Flow (perm)	3290	0	0	2711	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	51					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	739	191	79	1321	289	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	930	0	0	1400	289	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	71.0		7.0	78.0	32.0	32.0
Total Split (%)	64.5%		6.4%	70.9%	29.1%	29.1%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	65.0		3.5	72.0	26.0	26.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	74.3			74.3	23.7	23.7
Actuated g/C Ratio	0.68			0.68	0.22	0.22
v/c Ratio	0.42			0.76	0.79	0.50
Control Delay	8.5			12.0	56.7	43.1
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	8.5			12.0	56.7	43.1
LOS	A			B	E	D
Approach Delay	8.5			12.0	51.9	
Approach LOS	A			B	D	
Queue Length 50th (ft)	142			437	189	97
Queue Length 95th (ft)	181			m504	259	126
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2240			1832	402	353
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.42			0.76	0.72	0.45

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.3		Intersection LOS: B	
Intersection Capacity Utilization 87.9%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 18: 25th & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	979	209	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	979	209	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.973			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3329	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3329	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		22			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1100	238	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	87.8	9.8	3.5	18.9	69.3		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	87.8	9.8	3.5	18.9	69.3		92.2	77.0		68.1	112.8	
LOS	F	A	A	B	E		F	E		E	F	
Approach Delay		18.0			66.8			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	86	84	37	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#200	m100	m32	49	#792		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1321		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.6		Intersection LOS: E	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1495	30	295	320	125	35	195	75
Future Volume (vph)	130	1070	180	130	1495	30	295	320	125	35	195	75
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.951	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3110	0
Flt Permitted	0.060			0.126			0.228				0.773	
Satd. Flow (perm)	103	3410	1383	217	3195	0	403	3280	0	0	2416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177		3			28			50	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1557	53	339	533	151	45	229	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1610	0	339	684	0	0	408	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	11.0	72.0		15.0	76.0		26.0	53.0		27.0	27.0	
Total Split (%)	7.9%	51.4%		10.7%	54.3%		18.6%	37.9%		19.3%	19.3%	
Maximum Green (s)	7.5	66.0		11.5	70.0		22.5	47.0		21.0	21.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	76.8	66.8	92.8	82.9	70.0		49.5	47.0			21.0	
Actuated g/C Ratio	0.55	0.48	0.66	0.59	0.50		0.35	0.34			0.15	
v/c Ratio	1.11	0.71	0.26	0.70	1.01		0.98	0.61			1.01	
Control Delay	140.9	22.9	1.7	34.8	41.5		81.3	40.0			98.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	140.9	22.9	1.7	34.8	41.5		81.3	40.0			98.4	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		31.1			40.9			53.6			98.4	
Approach LOS		C			D			D			F	
Queue Length 50th (ft)	~113	223	9	77	~493		249	262			~178	
Queue Length 95th (ft)	m#240	250	13	m81	m#463		#409	194			#265	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	138	1626	976	245	1599		347	1119			404	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	1.11	0.71	0.26	0.67	1.01		0.98	0.61			1.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 45.4		Intersection LOS: D	
Intersection Capacity Utilization 93.0%		ICU Level of Service F	

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

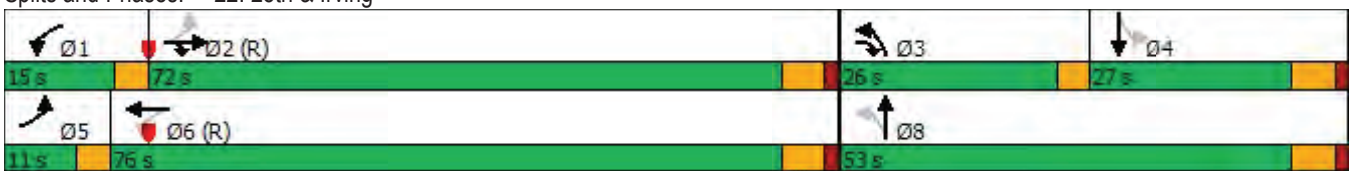
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	45	30	49	460	35	165	138	1887	110	290	1639	77
Future Volume (vph)	45	30	49	460	35	165	138	1887	110	290	1639	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2701	1863	1277	3433	1863	1583	2918	4887	1583	3433	4933	1382
Flt Permitted	0.732			0.506			0.073			0.054		
Satd. Flow (perm)	2081	1863	1277	1829	1863	1583	224	4887	1583	195	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			179			140			140
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	76	33	96	500	38	179	276	2007	120	315	1762	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	33	96	500	38	179	276	2007	120	315	1762	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

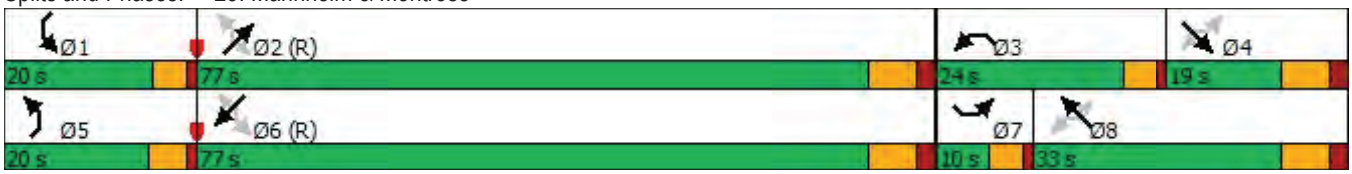
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	5.0	5.0	3.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	9.5	15.0	15.0	9.5	25.0	25.0	8.0	22.0	22.0	9.5	22.0	22.0
Total Split (s)	10.0	19.0	19.0	24.0	33.0	33.0	20.0	77.0	77.0	20.0	77.0	77.0
Total Split (%)	7.1%	13.6%	13.6%	17.1%	23.6%	23.6%	14.3%	55.0%	55.0%	14.3%	55.0%	55.0%
Maximum Green (s)	5.5	12.0	12.0	19.5	26.0	26.0	15.0	70.0	70.0	15.5	70.0	70.0
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	5.0	5.0	3.5	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	5.0	7.0	7.0	4.5	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0	3.0	4.0	7.0	7.0	3.0	7.0	7.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	17.9	9.9	9.9	36.1	23.6	23.6	90.0	74.8	74.8	89.9	74.2	74.2
Actuated g/C Ratio	0.13	0.07	0.07	0.26	0.17	0.17	0.64	0.53	0.53	0.64	0.53	0.53
v/c Ratio	0.26	0.25	0.44	0.72	0.12	0.43	0.70	0.77	0.13	0.74	0.67	0.13
Control Delay	42.7	65.7	8.7	51.7	49.6	10.0	39.8	15.2	0.8	45.6	22.1	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	65.7	8.7	51.7	49.6	10.0	39.8	15.2	0.8	45.6	22.1	1.4
LOS	D	E	A	D	D	B	D	B	A	D	C	A
Approach Delay		30.5			41.2			17.3			24.6	
Approach LOS		C			D			B			C	
Queue Length 50th (ft)	27	29	0	204	30	0	60	513	4	104	304	0
Queue Length 95th (ft)	30	64	0	257	63	66	29	m513	m6	150	481	5
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250		250	200		200
Base Capacity (vph)	290	159	237	694	345	439	439	2611	910	486	2616	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.21	0.41	0.72	0.11	0.41	0.63	0.77	0.13	0.65	0.67	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 23.8		Intersection LOS: C	
Intersection Capacity Utilization 78.1%		ICU Level of Service D	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

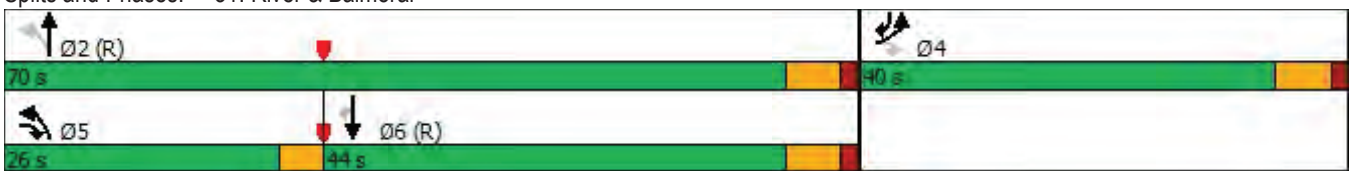


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	381	936	464	185
Future Volume (vph)	295	139	381	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.408			
Satd. Flow (perm)	3224	1468	731	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	405	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	405	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	41.0	83.7	81.2	59.5	82.3
Actuated g/C Ratio	0.15	0.37	0.76	0.74	0.54	0.75
v/c Ratio	0.66	0.28	0.56	0.37	0.28	0.18
Control Delay	50.2	5.6	7.9	6.0	15.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.6	7.9	6.0	15.7	1.2
LOS	D	A	A	A	B	A
Approach Delay	34.5			6.5	11.4	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	14	74	115	98	0
Queue Length 95th (ft)	151	34	137	177	169	18
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	699	762	2724	1911	1409
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.53	0.37	0.28	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1400	35
Future Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1400	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4804	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4804	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		5	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	1938	22	106	1474	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1938	22	106	1532	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.60	0.02	0.65	0.46	
Control Delay	63.9	33.8		57.4	60.4	22.3	90.2	5.9	0.1	52.4	18.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	90.2	5.9	0.1	52.4	18.7	
LOS	E	C		E	E	C	F	A	A	D	B	
Approach Delay		52.9			34.2			8.4			20.9	
Approach LOS		D			C			A			C	
Queue Length 50th (ft)	58	9		42	5	0	61	71	0	95	252	
Queue Length 95th (ft)	72	14		70	20	61	85	194	m0	m122	318	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3312	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.60	0.02	0.57	0.46	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 62.0% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2080	181	28
Future Volume (vph)	1513	12	14	2080	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2189	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2205	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	105.0		105.0	105.0	35.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	99.0		99.0	99.0	29.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	102.2			102.2	25.8	
Actuated g/C Ratio	0.73			0.73	0.18	
v/c Ratio	0.62			0.95	0.80	
Control Delay	10.9			20.0	70.6	
Queue Delay	0.0			0.0	0.0	
Total Delay	10.9			20.0	70.6	
LOS	B			B	E	
Approach Delay	10.9			20.0	70.6	
Approach LOS	B			B	E	
Queue Length 50th (ft)	357			480	240	
Queue Length 95th (ft)	438			m485	272	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2628			2323	395	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.95	0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 89.0%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

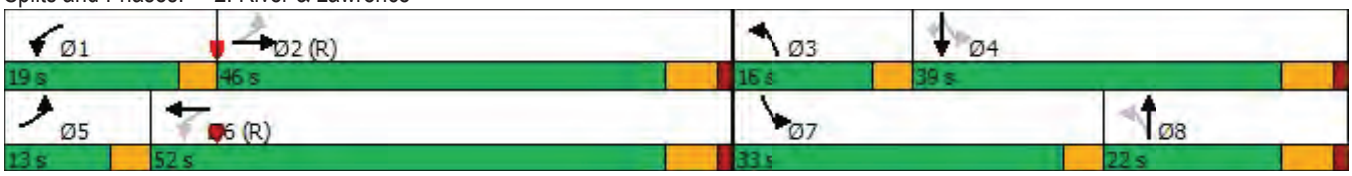
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.984			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3490	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.169			0.091			0.238			0.197		
Satd. Flow (perm)	289	3449	0	171	3490	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			13			96				227
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	867	106	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	973	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	13.0	46.0		19.0	52.0		16.0	22.0		33.0	39.0	39.0
Total Split (%)	10.8%	38.3%		15.8%	43.3%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	9.5	40.0		15.5	46.0		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.7	40.3		61.2	46.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.43	0.34		0.51	0.39		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.52	0.91		0.89	0.72		0.85	0.93		0.97	0.91	0.43
Control Delay	21.5	45.2		61.0	34.5		59.1	64.5		66.1	56.4	8.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.5	45.2		61.0	34.5		59.1	64.5		66.1	56.4	8.3
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		42.9			40.0			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	29	417		141	330		103	170		307	361	12
Queue Length 95th (ft)	m54	#543		#256	382		#230	#234		#522	#484	64
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	232	1179		296	1357		247	735		496	994	582
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.50	0.91		0.86	0.72		0.84	0.93		0.96	0.91	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.8		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



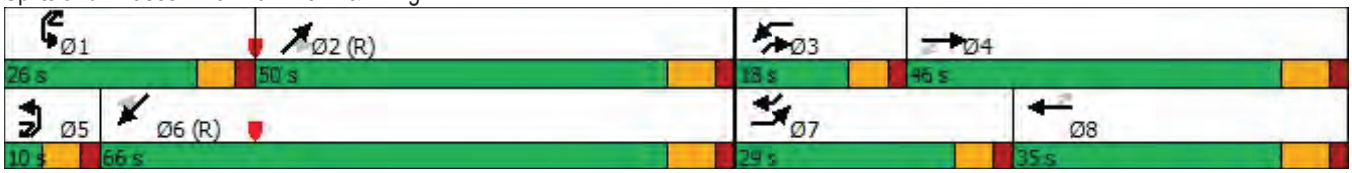
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	125	680	250	55	1090	720	185	2060	770
Future Volume (vph)	635	1080	100	125	680	250	55	1090	720	185	2060	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	144	810	298	60	1198	867	213	2146	885
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	144	810	298	60	1198	867	213	2146	885
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0
Total Split (s)	29.0	46.0	10.0	18.0	35.0	26.0	10.0	50.0	18.0	26.0	66.0	29.0
Total Split (%)	20.7%	32.9%	7.1%	12.9%	25.0%	18.6%	7.1%	35.7%	12.9%	18.6%	47.1%	20.7%
Maximum Green (s)	23.0	39.0	4.0	12.0	28.0	20.0	4.0	43.0	12.0	20.0	59.0	23.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	23.0	39.0	50.4	11.3	27.3	49.1	4.4	48.9	67.3	14.7	59.2	89.2
Actuated g/C Ratio	0.16	0.28	0.36	0.08	0.20	0.35	0.03	0.35	0.48	0.10	0.42	0.64
v/c Ratio	1.27	0.91	0.22	0.58	0.81	0.58	0.62	0.68	0.68	0.63	1.00	0.51
Control Delay	181.2	59.3	32.6	71.4	61.2	41.8	83.7	42.7	32.9	55.0	50.9	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	181.2	59.3	32.6	71.4	61.2	41.8	83.7	42.7	32.9	55.0	50.9	26.1
LOS	F	E	C	E	E	D	F	D	C	E	D	C
Approach Delay		95.9			57.8			39.9			44.4	
Approach LOS		F			E			D			D	
Queue Length 50th (ft)	~393	438	76	65	259	220	29	256	431	91	~739	396
Queue Length 95th (ft)	#518	426	115	99	286	275	m#53	302	224	m102	#852	m447
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	527	1481	554	265	1020	564	96	1750	1288	459	2138	1733
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	0.91	0.22	0.54	0.79	0.53	0.63	0.68	0.67	0.46	1.00	0.51

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 57.8		Intersection LOS: E	
Intersection Capacity Utilization 93.4%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	25	300	100	40	350	70	1335	75	140	2145	25
Future Volume (vph)	40	25	300	100	40	350	70	1335	75	140	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.540			0.740			0.950			0.950		
Satd. Flow (perm)	886	1863	1473	1378	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			326			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			668			1551			1184	
Travel Time (s)		5.9			15.2			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	49	27	361	109	43	380	80	1435	82	152	2466	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	27	361	109	43	380	80	1435	82	152	2466	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

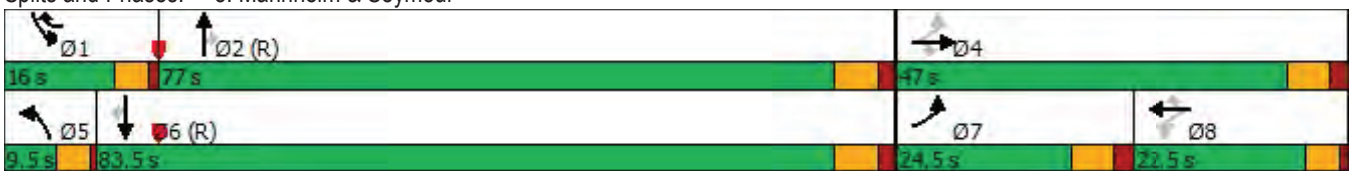
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	9.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	16.0	9.5	77.0	77.0	16.0	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	11.4%	6.8%	55.0%	55.0%	11.4%	59.6%	59.6%
Maximum Green (s)	18.0	40.5	40.5	18.0	18.0	11.5	5.5	70.5	70.5	11.5	77.0	77.0
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)				7.0	7.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
Act Effct Green (s)	33.1	33.1	33.1	20.6	20.6	35.9	7.3	78.6	78.6	10.8	82.6	82.6
Actuated g/C Ratio	0.24	0.24	0.24	0.15	0.15	0.26	0.05	0.56	0.56	0.08	0.59	0.59
v/c Ratio	0.19	0.06	0.86	0.54	0.16	0.40	0.53	0.51	0.09	0.58	0.89	0.04
Control Delay	40.9	38.3	57.0	65.9	53.6	8.3	77.1	20.9	0.2	84.8	14.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	38.3	57.0	65.9	53.6	8.3	77.1	20.9	0.2	84.8	14.9	0.1
LOS	D	D	E	E	D	A	E	C	A	F	B	A
Approach Delay		54.0			23.8			22.6			18.8	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	35	19	239	94	35	21	36	296	0	70	183	0
Queue Length 95th (ft)	61	42	304	157	72	65	#75	372	0	113	553	m0
Internal Link Dist (ft)		178			588			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	295	538	492	209	282	972	152	2796	952	286	2766	740
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.05	0.73	0.52	0.15	0.39	0.53	0.51	0.09	0.53	0.89	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 135 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1952	333	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	55.0	30.0	25.0	80.0	30.0	30.0
Total Split (%)	50.0%	27.3%	22.7%	72.7%	27.3%	27.3%
Maximum Green (s)	48.5	24.0	20.5	73.5	24.0	24.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.4	73.0	6.2	54.6	12.1	12.1
Actuated g/C Ratio	0.64	0.92	0.08	0.69	0.15	0.15
v/c Ratio	0.85	0.24	0.10	0.67	0.27	0.12
Control Delay	18.5	0.7	37.5	9.0	32.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	0.7	37.5	9.0	32.0	13.6
LOS	B	A	D	A	C	B
Approach Delay	15.9			9.4	28.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	274	0	4	198	25	0
Queue Length 95th (ft)	#741	13	9	326	55	10
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2301	1424	661	3311	920	412
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.23	0.03	0.50	0.14	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 79.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	715	450	1230	630	850	2335
Future Volume (vph)	715	450	1230	630	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		381		7		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	803	511	1281	685	1012	2684
Shared Lane Traffic (%)						
Lane Group Flow (vph)	803	511	1281	685	1012	2684
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	37.0		59.0	37.0	44.0	103.0
Total Split (%)	26.4%		42.1%	26.4%	31.4%	73.6%
Maximum Green (s)	30.5		52.0	30.5	39.0	96.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	30.5	140.0	52.0	89.5	39.0	96.0
Actuated g/C Ratio	0.22	1.00	0.37	0.64	0.28	0.69
v/c Ratio	1.21	0.36	0.70	0.70	1.11	0.79
Control Delay	153.1	0.7	52.2	15.5	109.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	153.1	0.7	52.2	15.5	109.5	17.2
LOS	F	A	D	B	F	B
Approach Delay	93.8		39.4			42.5
Approach LOS	F		D			D
Queue Length 50th (ft)	~458	0	321	128	~539	563
Queue Length 95th (ft)	#576	0	391	233	#599	575
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	665	1422	1832	985	915	3414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.36	0.70	0.70	1.11	0.79

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 51.3 Intersection LOS: D
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15

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

Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1095	355	115	940	170	105
Future Volume (vph)	1095	355	115	940	170	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.962					0.850
Flt Protected				0.995	0.950	
Satd. Flow (prot)	3267	0	0	3354	1703	1495
Flt Permitted				0.536	0.950	
Satd. Flow (perm)	3267	0	0	1807	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	81					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1177	399	129	1044	183	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1576	0	0	1173	183	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	85.0		13.0	98.0	22.0	22.0
Total Split (%)	70.8%		10.8%	81.7%	18.3%	18.3%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	79.0		9.5	92.0	16.0	16.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	90.8			90.8	17.2	17.2
Actuated g/C Ratio	0.76			0.76	0.14	0.14
v/c Ratio	0.63			0.86	0.75	0.71
Control Delay	7.8			15.3	69.2	68.1
Queue Delay	0.2			0.0	0.0	0.0
Total Delay	8.0			15.3	69.2	68.1
LOS	A			B	E	E
Approach Delay	8.0			15.3	68.7	
Approach LOS	A			B	E	
Queue Length 50th (ft)	283			185	132	109
Queue Length 95th (ft)	282			238	#260	140
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2492			1389	248	217
Starvation Cap Reductn	267			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.71			0.84	0.74	0.70

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 17.4		Intersection LOS: B	
Intersection Capacity Utilization 95.4%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 18: 25th & Lawrence

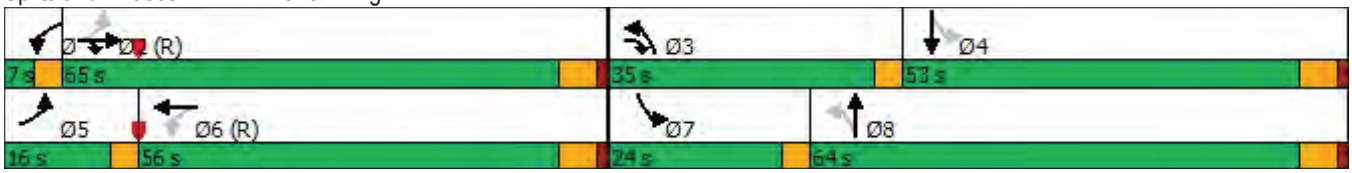
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	708	37	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	708	37	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.991			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3390	0	1518	3296	0	1589	3315	0
Flt Permitted	0.154			0.079			0.079			0.300		
Satd. Flow (perm)	258	3433	1370	145	3390	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		4			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	745	45	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	790	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Maximum Green (s)	12.5	59.0		3.5	50.0		31.5	58.0		20.5	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.72	0.95	0.66	0.61	0.74		1.03	0.61		0.59	1.05	
Control Delay	37.4	36.3	10.8	60.3	53.7		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	36.3	10.8	60.3	53.7		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.1			54.1			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	47	561	215	32	389		~343	343		99	~613	
Queue Length 95th (ft)	m57	m595	m239	#73	468		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	214	1295	835	85	1070		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.71	0.95	0.66	0.61	0.74		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.7		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	160	180	1135	65	275	250	140	155	340	60
Future Volume (vph)	130	1340	160	180	1135	65	275	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.991			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3184	0	1678	3187	0	0	3217	0
Flt Permitted	0.061			0.061			0.192				0.692	
Satd. Flow (perm)	105	3410	1383	105	3184	0	339	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112		5			85			11	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	174	217	1207	77	296	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	174	217	1284	0	296	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	21.0	72.0		20.4	71.4		14.6	67.6		53.0	53.0	
Total Split (%)	13.1%	45.0%		12.8%	44.6%		9.1%	42.3%		33.1%	33.1%	
Maximum Green (s)	17.5	66.0		16.9	65.4		11.1	61.6		47.0	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	86.0	66.0	80.6	84.8	65.4		64.1	61.6			47.0	
Actuated g/C Ratio	0.54	0.41	0.50	0.53	0.41		0.40	0.38			0.29	
v/c Ratio	0.97	0.97	0.23	1.00	0.98		1.30	0.39			1.02	
Control Delay	88.5	53.6	7.5	119.0	51.2		195.2	30.1			93.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	88.5	53.6	7.5	119.0	51.2		195.2	30.1			93.5	
LOS	F	D	A	F	D		F	C			F	
Approach Delay		53.3			61.0			91.5			93.5	
Approach LOS		D			E			F			F	
Queue Length 50th (ft)	186	673	20	170	661		~310	164			~393	
Queue Length 95th (ft)	166	m#874	m46	m#272	m#810		#528	178			#475	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	223	1406	752	217	1304		228	1279			671	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.97	0.97	0.23	1.00	0.98		1.30	0.39			1.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 68.0		Intersection LOS: E	
Intersection Capacity Utilization 94.5%		ICU Level of Service F	

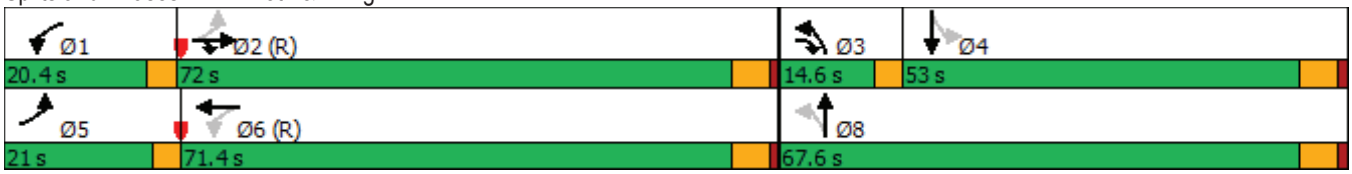
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	86	30	80	435	25	10	80	1599	140	260	2529	50
Future Volume (vph)	86	30	80	435	25	10	80	1599	140	260	2529	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2724	1863	1225	3433	1863	1583	2367	4979	1583	3433	4933	1259
Flt Permitted	0.555			0.736			0.053			0.082		
Satd. Flow (perm)	1591	1863	1225	2660	1863	1583	132	4979	1583	296	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125			152			125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Adj. Flow (vph)	134	33	100	473	27	11	87	1666	152	283	2581	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	33	100	473	27	11	87	1666	152	283	2581	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

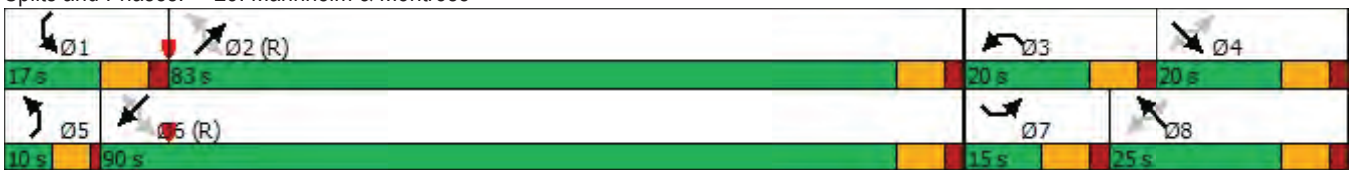
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	15.0	15.0	15.0	12.0	25.0	25.0	8.0	22.0	22.0	15.0	22.0	22.0
Total Split (s)	15.0	20.0	20.0	20.0	25.0	25.0	10.0	83.0	83.0	17.0	90.0	90.0
Total Split (%)	10.7%	14.3%	14.3%	14.3%	17.9%	17.9%	7.1%	59.3%	59.3%	12.1%	64.3%	64.3%
Maximum Green (s)	8.0	13.0	13.0	13.0	18.0	18.0	5.0	76.0	76.0	10.0	83.0	83.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	4.0	7.0	7.0	5.0	7.0	7.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	22.8	10.0	10.0	22.6	12.0	12.0	87.1	78.1	78.1	94.9	84.0	84.0
Actuated g/C Ratio	0.16	0.07	0.07	0.16	0.09	0.09	0.62	0.56	0.56	0.68	0.60	0.60
v/c Ratio	0.34	0.25	0.49	0.94	0.17	0.04	0.45	0.60	0.16	0.64	0.87	0.09
Control Delay	48.5	65.4	13.3	83.5	59.0	0.3	20.6	18.5	4.8	16.8	31.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	65.4	13.3	83.5	59.0	0.3	20.6	18.5	4.8	16.8	31.1	0.5
LOS	D	E	B	F	E	A	C	B	A	B	C	A
Approach Delay		37.4			80.4			17.5			28.9	
Approach LOS		D			F			B			C	
Queue Length 50th (ft)	52	29	0	204	23	0	6	342	38	42	810	0
Queue Length 95th (ft)	56	64	18	258	53	0	m11	m357	m40	m60	m808	m0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250		250	200		200
Base Capacity (vph)	389	172	227	501	239	312	193	2778	950	445	2959	805
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.19	0.44	0.94	0.11	0.04	0.45	0.60	0.16	0.64	0.87	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 24 (17%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 30.2		Intersection LOS: C	
Intersection Capacity Utilization 84.7%		ICU Level of Service E	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

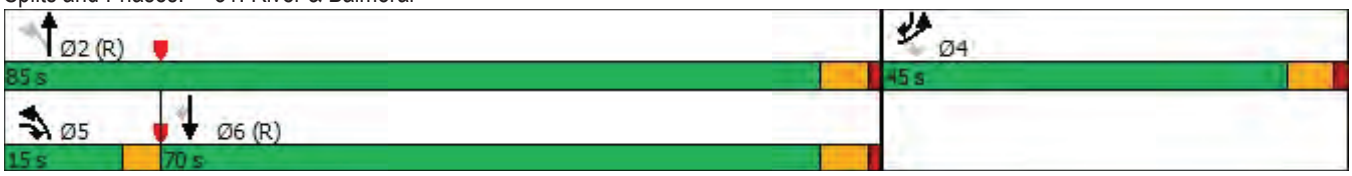


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Maximum Green (s)	39.0	11.5	11.5	79.0	64.0	39.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1948	20
Future Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1948	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4845	0
Flt Permitted	0.528			0.698			0.950			0.950		
Satd. Flow (perm)	816	1479	0	1145	1933	1455	1203	4933	1459	1530	4845	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				121			121		4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	1967	11	65	2072	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1967	11	65	2112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	20.0	15.0		20.0	15.0	15.0	15.0	85.0	85.0	20.0	90.0	
Total Split (%)	14.3%	10.7%		14.3%	10.7%	10.7%	10.7%	60.7%	60.7%	14.3%	64.3%	
Maximum Green (s)	16.5	9.0		16.5	9.0	9.0	10.5	79.0	79.0	15.5	84.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	27.5	13.2		20.6	7.4	7.4	8.8	89.2	89.2	11.2	93.8	
Actuated g/C Ratio	0.20	0.09		0.15	0.05	0.05	0.06	0.64	0.64	0.08	0.67	
v/c Ratio	0.53	0.43		0.35	0.07	0.58	0.45	0.63	0.01	0.53	0.65	
Control Delay	57.1	23.0		51.2	63.6	20.6	69.5	18.8	0.0	77.7	4.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.1	23.0		51.2	63.6	20.6	69.5	18.8	0.0	77.7	4.2	
LOS	E	C		D	E	C	E	B	A	E	A	
Approach Delay		42.4			33.7			19.5			6.4	
Approach LOS		D			C			B			A	
Queue Length 50th (ft)	96	10		54	6	0	31	263	0	63	76	
Queue Length 95th (ft)	155	0		68	19	37	46	395	m0	m69	m78	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	236	211		259	124	206	91	3142	973	169	3246	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.51	0.43		0.27	0.06	0.53	0.37	0.63	0.01	0.38	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 100 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

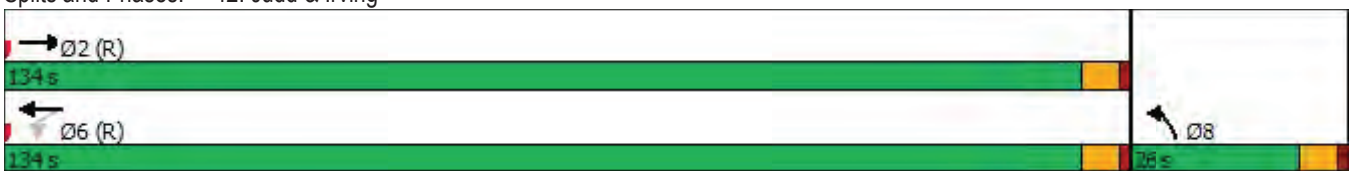
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1508	52	162
Future Volume (vph)	2122	26	54	1508	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3469	1800	0
Flt Permitted				0.586	0.987	
Satd. Flow (perm)	3466	0	0	2037	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				25	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1555	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1615	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	134.0		134.0	134.0	26.0	
Total Split (%)	83.8%		83.8%	83.8%	16.3%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	128.0		128.0	128.0	20.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	128.0			128.0	20.0	
Actuated g/C Ratio	0.80			0.80	0.12	
v/c Ratio	0.82			0.99	1.07	
Control Delay	12.5			39.7	134.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	12.5			39.7	134.3	
LOS	B			D	F	
Approach Delay	12.5			39.7	134.3	
Approach LOS	B			D	F	
Queue Length 50th (ft)	625			412	~279	
Queue Length 95th (ft)	720			m#434	#360	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2773			1629	246	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.82			0.99	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 30.8		Intersection LOS: C	
Intersection Capacity Utilization 103.8%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 42: Judd & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.945			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3345	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.191			0.429			0.134		
Satd. Flow (perm)	192	3353	0	356	3345	0	765	4663	0	239	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			114			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	642	376	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1018	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.1		46.4	31.6		43.7	29.9	29.9
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.27	0.27
v/c Ratio	0.92	0.71		0.68	0.87		0.81	0.86		0.61	0.41	0.22
Control Delay	69.6	32.4		28.7	40.0		39.4	43.2		30.9	34.0	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	69.6	32.4		28.7	40.0		39.4	43.2		30.9	34.0	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		40.6			38.1			42.3			29.1	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	123	271		80	319		166	280		62	114	0
Queue Length 95th (ft)	#277	303		108	#402		#240	#341		111	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	253	1155		309	1173		433	1372		262	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.66	0.87		0.81	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 38.9		Intersection LOS: D	
Intersection Capacity Utilization 84.6%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

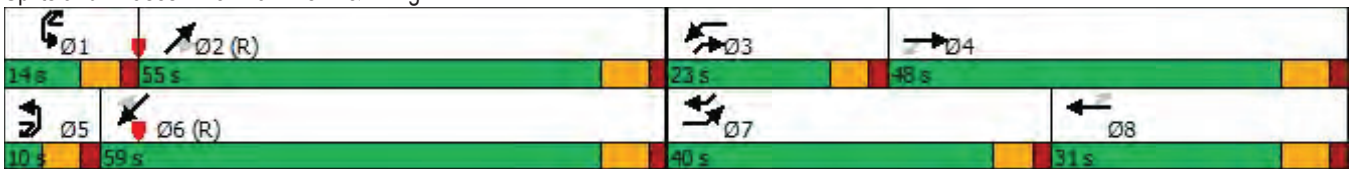
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	220	850	125	55	1470	550	145	1520	500
Future Volume (vph)	705	755	75	220	850	125	55	1470	550	145	1520	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	242	934	164	64	1670	647	188	1689	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	242	934	164	64	1670	647	188	1689	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	40.0	48.0	10.0	23.0	31.0	14.0	10.0	55.0	23.0	14.0	59.0	40.0
Total Split (%)	28.6%	34.3%	7.1%	16.4%	22.1%	10.0%	7.1%	39.3%	16.4%	10.0%	42.1%	28.6%
Maximum Green (s)	34.0	41.0	4.0	17.0	24.0	8.0	4.0	48.0	17.0	8.0	52.0	34.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	34.0	42.4	53.4	15.6	24.0	39.0	4.0	48.0	70.6	8.0	52.0	93.0
Actuated g/C Ratio	0.24	0.30	0.38	0.11	0.17	0.28	0.03	0.34	0.50	0.06	0.37	0.66
v/c Ratio	1.05	0.52	0.16	0.70	1.05	0.39	0.77	1.00	0.52	1.02	0.93	0.35
Control Delay	96.2	42.2	30.0	70.9	98.7	44.1	126.7	53.9	12.3	119.5	60.2	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.2	42.2	30.0	70.9	98.7	44.1	126.7	53.9	12.3	119.5	60.2	14.3
LOS	F	D	C	E	F	D	F	D	B	F	E	B
Approach Delay		67.0			87.0			44.5			53.2	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~412	228	57	109	~338	121	30	560	144	~93	598	130
Queue Length 95th (ft)	#510	274	88	157	#432	157	m#65	#634	115	#139	#654	200
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	773	1547	597	379	891	424	83	1671	1282	185	1810	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.52	0.16	0.64	1.05	0.39	0.77	1.00	0.50	1.02	0.93	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 59.3		Intersection LOS: E	
Intersection Capacity Utilization 88.6%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



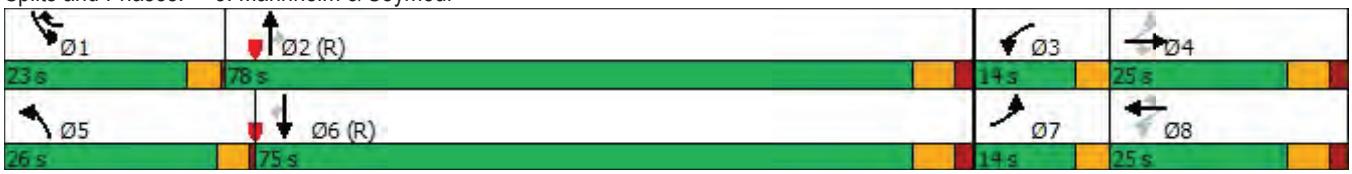
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	65	140	125	50	315	250	1700	100	260	1435	65
Future Volume (vph)	15	65	140	125	50	315	250	1700	100	260	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.722			0.570			0.950			0.950		
Satd. Flow (perm)	1184	1863	1473	1062	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			230			86			86
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			673			1551			1184	
Travel Time (s)		5.9			15.3			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	71	163	136	54	342	309	1868	109	283	1495	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	71	163	136	54	342	309	1868	109	283	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	19.5	19.5
Minimum Split (s)	11.5	14.5	14.5	9.5	24.5	9.5	7.0	26.5	26.5	9.5	26.0	26.0
Total Split (s)	14.0	25.0	25.0	14.0	25.0	23.0	26.0	78.0	78.0	23.0	75.0	75.0
Total Split (%)	10.0%	17.9%	17.9%	10.0%	17.9%	16.4%	18.6%	55.7%	55.7%	16.4%	53.6%	53.6%
Maximum Green (s)	10.5	18.5	18.5	10.5	18.5	19.0	22.0	71.5	71.5	19.0	68.5	68.5
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.5	0.5	2.0	2.0	0.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.5	6.5	3.5	6.5	4.0	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	24.9	12.8	12.8	30.6	20.3	43.5	19.4	78.0	78.0	16.7	75.3	75.3
Actuated g/C Ratio	0.18	0.09	0.09	0.22	0.14	0.31	0.14	0.56	0.56	0.12	0.54	0.54
v/c Ratio	0.10	0.42	0.58	0.47	0.20	0.33	0.76	0.67	0.12	0.69	0.59	0.12
Control Delay	42.2	66.7	16.6	50.8	56.2	12.6	70.0	24.5	5.5	67.6	27.1	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	66.7	16.6	50.8	56.2	12.6	70.0	24.5	5.5	67.6	27.1	9.5
LOS	D	E	B	D	E	B	E	C	A	E	C	A
Approach Delay		32.8			26.8			29.7			32.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	16	62	0	103	45	43	141	441	9	138	269	14
Queue Length 95th (ft)	30	110	58	165	89	84	167	534	41	189	397	30
Internal Link Dist (ft)		178			593			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	250	246	336	293	275	1070	466	2774	920	472	2520	673
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.29	0.49	0.46	0.20	0.32	0.66	0.67	0.12	0.60	0.59	0.12

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 107 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 30.6	Intersection LOS: C
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	495	735	1770	630	55	1290
Future Volume (vph)	495	735	1770	630	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		413		132		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	563	826	1967	692	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	826	1967	692	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	47.0		83.0	47.0	10.0	93.0
Total Split (%)	33.6%		59.3%	33.6%	7.1%	66.4%
Maximum Green (s)	40.5		76.0	40.5	5.0	86.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	37.3	140.0	80.5	126.0	6.1	89.2
Actuated g/C Ratio	0.27	1.00	0.58	0.90	0.04	0.64
v/c Ratio	0.69	0.58	0.69	0.49	0.40	0.43
Control Delay	50.8	1.7	16.8	1.3	74.1	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	1.7	16.8	1.3	74.1	13.5
LOS	D	A	B	A	E	B
Approach Delay	21.6		12.8			16.0
Approach LOS	C		B			B
Queue Length 50th (ft)	232	0	369	0	26	224
Queue Length 95th (ft)	287	0	458	7	51	261
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	883	1422	2834	1409	143	3172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.58	0.69	0.49	0.40	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 15.9		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

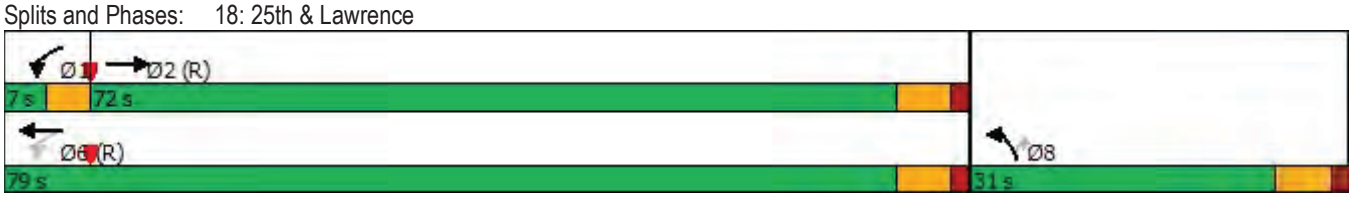
Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	695	130	55	1070	185	115
Future Volume (vph)	695	130	55	1070	185	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.969					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3290	0	0	3362	1703	1495
Flt Permitted				0.789	0.950	
Satd. Flow (perm)	3290	0	0	2660	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	52					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	739	191	79	1126	223	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	930	0	0	1205	223	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	72.0		7.0	79.0	31.0	31.0
Total Split (%)	65.5%		6.4%	71.8%	28.2%	28.2%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	66.0		3.5	73.0	25.0	25.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	77.2			77.2	20.8	20.8
Actuated g/C Ratio	0.70			0.70	0.19	0.19
v/c Ratio	0.40			0.65	0.69	0.57
Control Delay	7.4			8.3	52.7	47.9
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	7.4			8.3	52.7	47.9
LOS	A			A	D	D
Approach Delay	7.4			8.3	50.7	
Approach LOS	A			A	D	
Queue Length 50th (ft)	120			94	147	103
Queue Length 95th (ft)	175			357	202	128
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2323			1866	387	339
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.40			0.65	0.58	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 79.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 18: 25th & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.971			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3322	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3322	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		25			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1078	260	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	86.5	10.4	3.9	18.9	69.4		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	86.5	10.4	3.9	18.9	69.4		92.2	77.0		68.1	112.8	
LOS	F	B	A	B	E		F	E		E	F	
Approach Delay		18.3			66.9			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	85	100	130	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#199	m99	m33	49	#791		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1320		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.7		Intersection LOS: E	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Future Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.943	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3072	0
Flt Permitted	0.061			0.127			0.202				0.781	
Satd. Flow (perm)	105	3410	1383	219	3195	0	357	3280	0	0	2411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203		3			28			81	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1490	53	351	533	151	45	229	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1543	0	351	684	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	14.0	70.0		17.0	73.0		25.0	53.0		28.0	28.0	
Total Split (%)	10.0%	50.0%		12.1%	52.1%		17.9%	37.9%		20.0%	20.0%	
Maximum Green (s)	10.5	64.0		13.5	67.0		21.5	47.0		22.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	79.0	66.0	91.0	81.0	67.0		49.5	47.0			22.0	
Actuated g/C Ratio	0.56	0.47	0.65	0.58	0.48		0.35	0.34			0.16	
v/c Ratio	0.88	0.72	0.26	0.68	1.01		1.07	0.61			0.99	
Control Delay	82.9	23.6	1.4	33.4	44.1		105.3	40.0			88.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	82.9	23.6	1.4	33.4	44.1		105.3	40.0			88.6	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		25.8			43.1			62.1			88.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	108	227	6	80	~534		~283	262			180	
Queue Length 95th (ft)	#207	254	10	m82	m#491		#456	194			#267	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	173	1607	970	266	1530		329	1119			447	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.88	0.72	0.26	0.62	1.01		1.07	0.61			0.99	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 45.8		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	

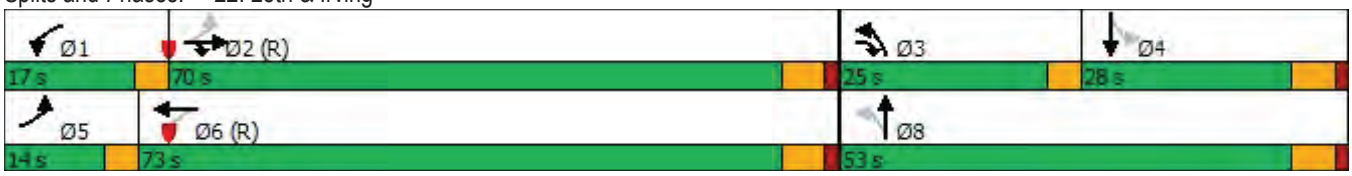
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	0	69	460	35	165	138	1887	0	0	1689	77
Future Volume (vph)	55	0	69	460	35	165	138	1887	0	0	1689	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2701	0	1277	3433	1863	1583	2918	4887	0	0	4933	1382
Flt Permitted	0.732			0.950			0.068					
Satd. Flow (perm)	2081	0	1277	3433	1863	1583	209	4887	0	0	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			105						140
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	93	0	135	500	38	179	276	2007	0	0	1816	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	0	135	500	38	179	276	2007	0	0	1816	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm

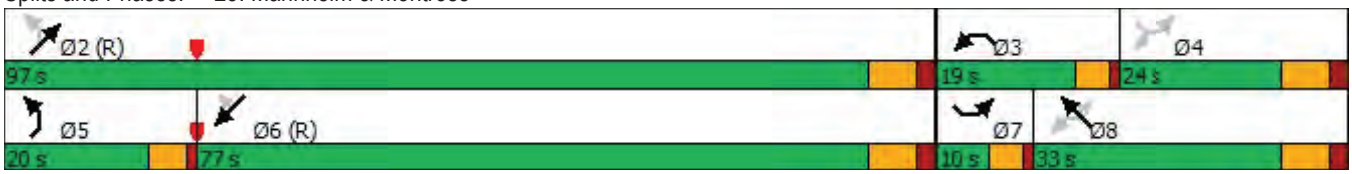
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	5.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	9.5		15.0	9.5	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	10.0		24.0	19.0	33.0	33.0	20.0	97.0			77.0	77.0
Total Split (%)	7.1%		17.1%	13.6%	23.6%	23.6%	14.3%	69.3%			55.0%	55.0%
Maximum Green (s)	5.5		17.0	14.5	26.0	26.0	15.0	90.0			70.0	70.0
Yellow Time (s)	3.5		5.0	3.5	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	1.0		2.0	1.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5		7.0	4.5	7.0	7.0	5.0	7.0			7.0	7.0
Lead/Lag	Lead		Lag	Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		5.0	3.0	3.0	3.0	4.0	7.0			7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	18.1		10.1	31.6	19.1	19.1	98.9	96.9			78.4	78.4
Actuated g/C Ratio	0.13		0.07	0.23	0.14	0.14	0.71	0.69			0.56	0.56
v/c Ratio	0.32		0.61	0.65	0.15	0.58	0.68	0.59			0.66	0.12
Control Delay	46.8		20.5	53.1	53.5	31.4	44.0	2.3			19.2	1.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	46.8		20.5	53.1	53.5	31.4	44.0	2.3			19.2	1.2
LOS	D		C	D	D	C	D	A			B	A
Approach Delay		31.2			47.7			7.3			18.3	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)	36		0	219	32	63	67	48			279	3
Queue Length 95th (ft)	36		0	260	63	137	28	m50			596	6
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	293		278	774	345	379	448	3383			2763	835
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.32		0.49	0.65	0.11	0.47	0.62	0.59			0.66	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

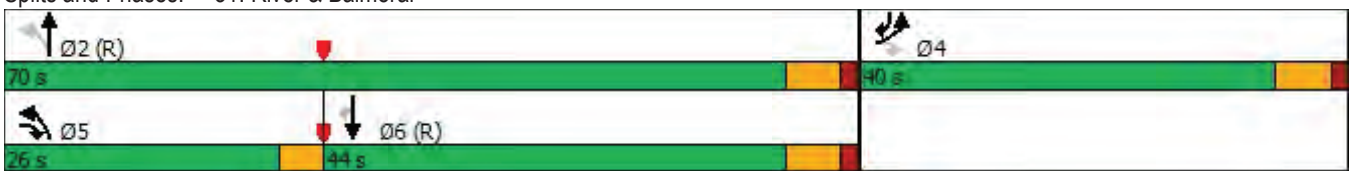


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	431	936	464	185
Future Volume (vph)	295	139	431	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.403			
Satd. Flow (perm)	3224	1468	722	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	459	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	459	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	43.3	83.7	81.2	57.2	80.0
Actuated g/C Ratio	0.15	0.39	0.76	0.74	0.52	0.73
v/c Ratio	0.66	0.26	0.63	0.37	0.29	0.19
Control Delay	50.2	5.1	8.9	6.0	17.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.1	8.9	6.0	17.3	1.3
LOS	D	A	A	A	B	A
Approach Delay	34.3			6.9	12.6	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	13	87	115	103	0
Queue Length 95th (ft)	151	31	161	177	181	21
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	711	766	2724	1836	1384
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.60	0.37	0.29	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1560	35
Future Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1560	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4814	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4814	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		5	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	1938	22	106	1642	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1938	22	106	1700	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	19.6	69.0	69.0	20.0	69.4	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.0%	49.3%	49.3%	14.3%	49.6%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.1	63.0	63.0	15.5	63.4	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.60	0.02	0.65	0.51	
Control Delay	63.9	33.8		57.4	60.4	22.3	88.0	4.6	0.1	48.6	20.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	88.0	4.6	0.1	48.6	20.1	
LOS	E	C		E	E	C	F	A	A	D	C	
Approach Delay		52.9			34.2			7.2			21.7	
Approach LOS		D			C			A			C	
Queue Length 50th (ft)	58	9		42	5	0	61	63	0	92	286	
Queue Length 95th (ft)	72	14		70	20	61	87	142	m0	m112	m356	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	135	3237	987	185	3319	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.47	0.60	0.02	0.57	0.51	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 15.9		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

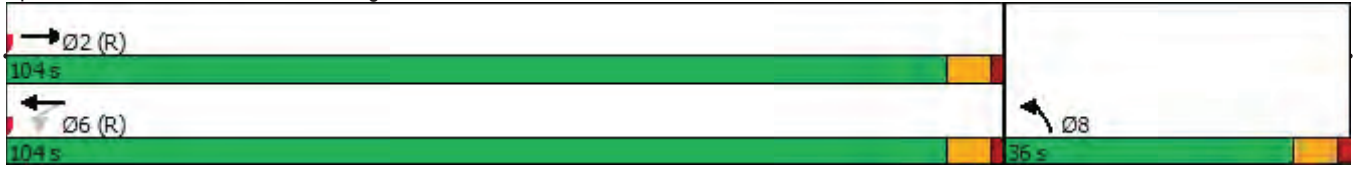
Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2060	181	28
Future Volume (vph)	1513	12	14	2060	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2168	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2184	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	104.0		104.0	104.0	36.0	
Total Split (%)	74.3%		74.3%	74.3%	25.7%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	98.0		98.0	98.0	30.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	101.8			101.8	26.2	
Actuated g/C Ratio	0.73			0.73	0.19	
v/c Ratio	0.62			0.94	0.79	
Control Delay	11.2			20.1	69.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	11.2			20.1	69.0	
LOS	B			C	E	
Approach Delay	11.2			20.1	69.0	
Approach LOS	B			C	E	
Queue Length 50th (ft)	357			491	240	
Queue Length 95th (ft)	451			m481	270	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2617			2314	408	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.94	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 41: Judd & Irving



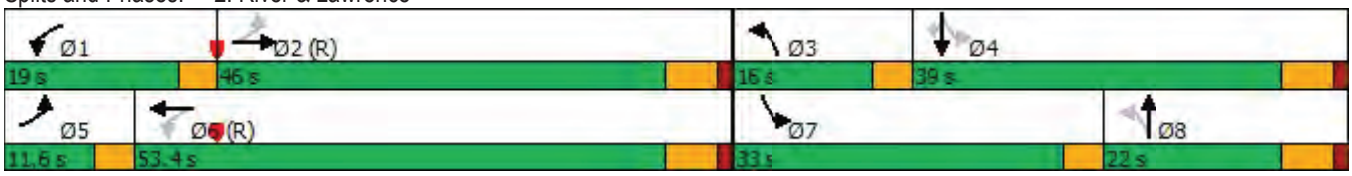
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1626	3449	0	1787	3431	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.174			0.091			0.238			0.197		
Satd. Flow (perm)	298	3449	0	171	3431	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			40			96				228
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	981	0	207	685	0	475	908	248
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	11.6	46.0		19.0	53.4		16.0	22.0		33.0	39.0	39.0
Total Split (%)	9.7%	38.3%		15.8%	44.5%		13.3%	18.3%		27.5%	32.5%	32.5%
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	50.7	40.3		61.2	47.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.42	0.34		0.51	0.40		0.26	0.14		0.43	0.28	0.28

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.55	0.91		0.89	0.71		0.85	0.93		0.97	0.91	0.43
Control Delay	24.2	44.1		61.0	32.7		59.1	64.5		66.1	56.4	8.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.2	44.1		61.0	32.7		59.1	64.5		66.1	56.4	8.2
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		42.1			38.6			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	30	417		141	319		103	170		307	361	11
Queue Length 95th (ft)	m52	#543		#256	371		#230	#234		#522	#484	63
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	216	1179		296	1379		247	735		496	994	583
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.54	0.91		0.86	0.71		0.84	0.93		0.96	0.91	0.43

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 48.3 Intersection LOS: D
Intersection Capacity Utilization 93.5% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: River & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	140	680	110	55	1090	720	185	2230	770
Future Volume (vph)	635	1080	100	140	680	110	55	1090	720	185	2230	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	161	810	131	60	1198	867	213	2323	885
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0
Minimum Split (s)	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0
Total Split (s)	33.0	45.0	10.0	17.0	29.0	21.0	10.0	57.0	17.0	21.0	68.0	33.0
Total Split (%)	23.6%	32.1%	7.1%	12.1%	20.7%	15.0%	7.1%	40.7%	12.1%	15.0%	48.6%	23.6%
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	27.0	38.2	49.2	10.8	22.0	42.6	4.0	51.4	69.2	13.6	61.0	95.0
Actuated g/C Ratio	0.19	0.27	0.35	0.08	0.16	0.30	0.03	0.37	0.49	0.10	0.44	0.68

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio	1.08	0.93	0.22	0.68	1.01	0.30	0.69	0.65	0.66	0.68	1.05	0.48
Control Delay	111.7	62.0	33.4	77.6	92.5	39.0	94.1	40.6	33.1	57.7	67.6	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.7	62.0	33.4	77.6	92.5	39.0	94.1	40.6	33.1	57.7	67.6	20.1
LOS	F	E	C	E	F	D	F	D	C	E	E	C
Approach Delay		75.9			83.9			39.1			54.7	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~348	442	77	74	~277	91	29	372	414	92	~857	340
Queue Length 95th (ft)	#473	431	116	110	#330	137	m#55	246	232	m104	#938	m398
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	619	1446	540	243	801	457	87	1839	1317	344	2202	1845
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.93	0.22	0.66	1.01	0.29	0.69	0.65	0.66	0.62	1.05	0.48

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 59.8 Intersection LOS: E

Intersection Capacity Utilization 96.5% ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	25	300	100	40	350	70	1335	70	325	2145	25
Future Volume (vph)	50	25	300	100	40	350	70	1335	70	325	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.534			0.740			0.950			0.950		
Satd. Flow (perm)	876	1863	1473	1378	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			380			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			668			1551			1184	
Travel Time (s)		5.9			15.2			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	27	361	109	43	380	80	1435	76	353	2466	28
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	22.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	22.5	9.5	66.9	66.9	26.1	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	16.1%	6.8%	47.8%	47.8%	18.6%	59.6%	59.6%
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	33.0	33.0	33.0	19.8	19.8	19.8	7.3	70.5	70.5	19.0	82.7	82.7
Actuated g/C Ratio	0.24	0.24	0.24	0.14	0.14	0.14	0.05	0.50	0.50	0.14	0.59	0.59
v/c Ratio	0.23	0.06	0.86	0.56	0.16	0.53	0.53	0.57	0.09	0.76	0.89	0.04
Control Delay	42.1	38.3	57.1	68.2	54.7	7.7	77.1	26.9	0.2	74.1	15.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	38.3	57.1	68.2	54.7	7.7	77.1	26.9	0.2	74.1	15.8	0.1
LOS	D	D	E	E	D	A	E	C	A	E	B	A
Approach Delay		54.0			23.9			28.1			22.9	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	44	19	239	95	35	0	36	337	0	156	256	0
Queue Length 95th (ft)	72	42	304	159	73	50	#75	431	0	199	328	m0
Internal Link Dist (ft)		178			588			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	294	538	492	202	274	734	152	2506	868	529	2767	741
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.05	0.73	0.54	0.16	0.52	0.53	0.57	0.09	0.67	0.89	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 135 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	55.0	30.0	25.0	80.0	30.0	30.0
Total Split (%)	50.0%	27.3%	22.7%	72.7%	27.3%	27.3%
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.4	73.0	6.2	54.6	12.1	12.1
Actuated g/C Ratio	0.64	0.92	0.08	0.69	0.15	0.15

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.85	0.24	0.10	0.67	0.27	0.12
Control Delay	18.5	0.7	37.5	9.0	32.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	0.7	37.5	9.0	32.0	13.6
LOS	B	A	D	A	C	B
Approach Delay	15.9			9.4	28.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	274	0	4	198	25	0
Queue Length 95th (ft)	#741	13	9	326	55	10
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2301	1424	661	3311	920	412
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.23	0.03	0.50	0.14	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 79.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 12: Seymour & Irving

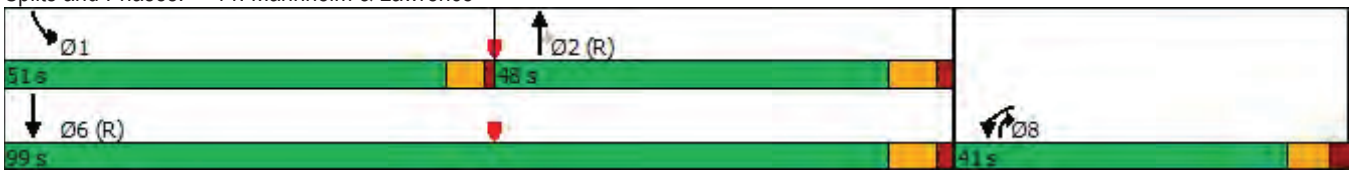
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	610	450	1235	630	850	2335
Future Volume (vph)	610	450	1235	630	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		447		16		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	685	511	1286	685	1012	2684
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	41.0		48.0	41.0	51.0	99.0
Total Split (%)	29.3%		34.3%	29.3%	36.4%	70.7%
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	34.5	140.0	41.4	82.9	45.6	92.0
Actuated g/C Ratio	0.25	1.00	0.30	0.59	0.33	0.66

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.91	0.36	0.88	0.75	0.95	0.82
Control Delay	68.5	0.7	47.9	18.0	63.4	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	0.7	47.9	18.0	63.4	20.6
LOS	E	A	D	B	E	C
Approach Delay	39.5		37.5			32.3
Approach LOS	D		D			C
Queue Length 50th (ft)	314	0	249	185	460	623
Queue Length 95th (ft)	#416	0	356	221	502	636
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	752	1422	1460	917	1079	3271
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.36	0.88	0.75	0.94	0.82

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 35.1 Intersection LOS: D
Intersection Capacity Utilization 79.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1095	355	115	810	195	105
Future Volume (vph)	1095	355	115	810	195	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Satd. Flow (prot)	3267	0	0	3350	1703	1495
Flt Permitted				0.524	0.950	
Satd. Flow (perm)	3267	0	0	1766	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	84					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1576	0	0	1029	210	152
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	86.0		7.0	93.0	27.0	27.0
Total Split (%)	71.7%		5.8%	77.5%	22.5%	22.5%
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	88.4			88.4	19.6	19.6
Actuated g/C Ratio	0.74			0.74	0.16	0.16
v/c Ratio	0.65			0.79	0.76	0.63
Control Delay	9.2			12.5	65.4	58.4
Queue Delay	0.2			0.0	0.0	0.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	9.4			12.5	65.4	58.4
LOS	A			B	E	E
Approach Delay	9.4			12.5	62.4	
Approach LOS	A			B	E	
Queue Length 50th (ft)	290			95	153	108
Queue Length 95th (ft)	347			474	#255	133
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2428			1303	300	263
Starvation Cap Reductn	240			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.72			0.79	0.70	0.58

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 93.1%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 18: 25th & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1589	3433	1370	1745	3373	0	1518	3296	0	1589	3315	0
Flt Permitted	0.151			0.079			0.079			0.300		
Satd. Flow (perm)	253	3433	1370	145	3373	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		7			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	795	0	350	792	0	181	1025	0
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	

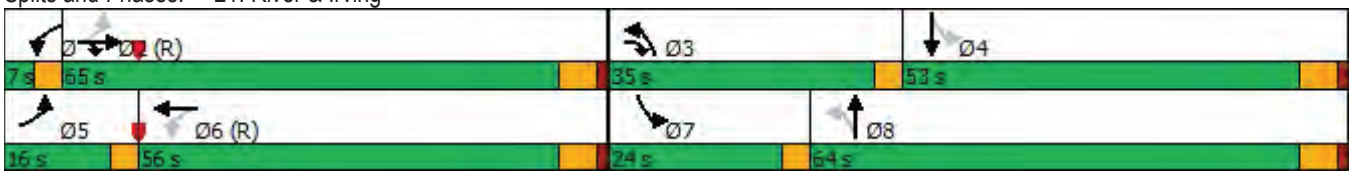
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.73	0.95	0.66	0.61	0.75		1.03	0.61		0.59	1.05	
Control Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.3			54.2			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	50	555	200	32	392		~343	343		99	~613	
Queue Length 95th (ft)	m60	m#599	m223	#73	472		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	212	1295	835	85	1066		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.72	0.95	0.66	0.61	0.75		1.03	0.61		0.51	1.05	

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 53.8 Intersection LOS: D
Intersection Capacity Utilization 90.9% ICU Level of Service E
Analysis Period (min) 15

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

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3217	0
Flt Permitted	0.080			0.060			0.198				0.692	
Satd. Flow (perm)	138	3410	1383	103	3181	0	350	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		5			85			12	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	158	217	1112	77	285	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	158	217	1189	0	285	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	20.2	72.0		20.4	72.2		13.6	67.6		54.0	54.0	
Total Split (%)	12.6%	45.0%		12.8%	45.1%		8.5%	42.3%		33.8%	33.8%	
Maximum Green (s)	16.7	66.0		16.9	66.2		10.1	61.6		48.0	48.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.1	66.0	79.6	85.7	66.3		64.1	61.6			48.0	
Actuated g/C Ratio	0.53	0.41	0.50	0.54	0.41		0.40	0.38			0.30	
v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	
Control Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
LOS	E	D	A	F	D		F	C			F	
Approach Delay		52.9			49.7			86.8			88.1	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	174	673	18	168	576		~291	164			373	
Queue Length 95th (ft)	154	m#890	m43	m#269	m630		#504	178			#466	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	229	1406	738	217	1321		224	1279			685	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 62.9		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

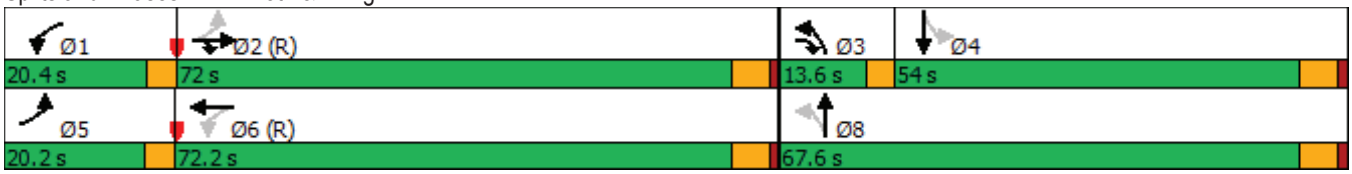
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving

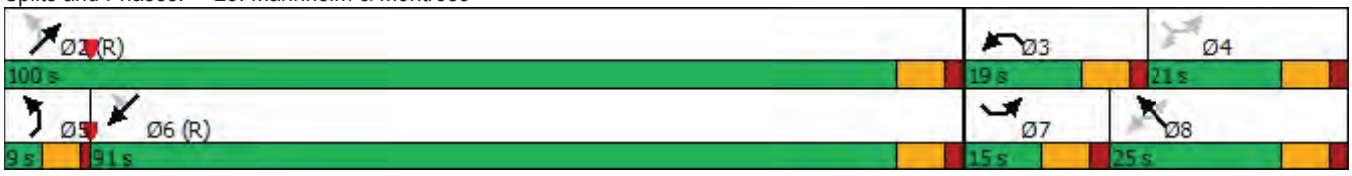


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	101	0	95	435	25	10	80	1599	0	0	2684	50
Future Volume (vph)	101	0	95	435	25	10	80	1599	0	0	2684	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	2724	0	1225	3433	1863	1583	2367	4979	0	0	4933	1259
Flt Permitted	0.527			0.950			0.046					
Satd. Flow (perm)	1511	0	1225	3433	1863	1583	115	4979	0	0	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125						125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	0	119	473	27	11	87	1666	0	0	2739	72
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	8.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	15.0		15.0	12.0	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	15.0		21.0	19.0	25.0	25.0	9.0	100.0			91.0	91.0
Total Split (%)	10.7%		15.0%	13.6%	17.9%	17.9%	6.4%	71.4%			65.0%	65.0%
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.0		7.0	7.0	7.0	7.0	5.0	7.0			7.0	7.0

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag	Lead		Lag	Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Act Effct Green (s)	22.1		9.7	20.9	11.2	11.2	99.3	97.3			85.5	85.5
Actuated g/C Ratio	0.16		0.07	0.15	0.08	0.08	0.71	0.70			0.61	0.61
v/c Ratio	0.42		0.59	0.93	0.18	0.05	0.45	0.48			0.91	0.09
Control Delay	51.5		21.3	81.0	60.1	0.4	19.4	4.3			31.0	0.9
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	51.5		21.3	81.0	60.1	0.4	19.4	4.3			31.0	0.9
LOS	D		C	F	E	A	B	A			C	A
Approach Delay		38.5			78.1			5.1			30.2	
Approach LOS		D			E			A			C	
Queue Length 50th (ft)	64		0	210	23	0	4	80			833	0
Queue Length 95th (ft)	64		37	257	53	0	m13	m236			916	m0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	373		235	511	239	312	192	3461			3011	817
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.42		0.51	0.93	0.11	0.04	0.45	0.48			0.91	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 17 (12%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 27.0		Intersection LOS: C	
Intersection Capacity Utilization 85.8%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 25: Mannheim & Montrose



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1692	10	55	2133	20
Future Volume (vph)	110	5	70	45	5	90	20	1692	10	55	2133	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4847	0
Flt Permitted	0.541			0.698			0.950			0.950		
Satd. Flow (perm)	836	1479	0	1145	1933	1455	1203	4933	1459	1530	4847	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				113			113		3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1967	11	65	2309	0
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	17.4	24.4		11.0	18.0	18.0	14.3	86.6	86.6	18.0	90.3	
Total Split (%)	12.4%	17.4%		7.9%	12.9%	12.9%	10.2%	61.9%	61.9%	12.9%	64.5%	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	27.2	15.9		18.0	8.2	8.2	8.6	90.2	90.2	10.8	94.6	
Actuated g/C Ratio	0.19	0.11		0.13	0.06	0.06	0.06	0.64	0.64	0.08	0.68	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.54	0.38		0.41	0.06	0.58	0.46	0.62	0.01	0.55	0.71	
Control Delay	58.4	19.8		55.1	61.8	22.1	69.3	18.0	0.0	71.5	6.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.4	19.8		55.1	61.8	22.1	69.3	18.0	0.0	71.5	6.9	
LOS	E	B		E	E	C	E	B	A	E	A	
Approach Delay		41.8			36.0			18.8			8.6	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	97	10		55	6	0	31	227	0	63	103	
Queue Length 95th (ft)	155	0		68	19	43	45	381	m0	m64	m100	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	225	266		171	165	228	86	3178	980	147	3274	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.53	0.34		0.41	0.04	0.48	0.40	0.62	0.01	0.44	0.71	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 100 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 15.4 Intersection LOS: B

Intersection Capacity Utilization 68.5% ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1383	52	162
Future Volume (vph)	2122	26	54	1383	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Satd. Flow (prot)	3466	0	0	3470	1800	0
Flt Permitted				0.572	0.987	
Satd. Flow (perm)	3466	0	0	1989	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				22	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1486	263	0
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	131.0		131.0	131.0	29.0	
Total Split (%)	81.9%		81.9%	81.9%	18.1%	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	124.8			124.8	23.2	
Actuated g/C Ratio	0.78			0.78	0.14	
v/c Ratio	0.84			1.07dl	0.94	
Control Delay	15.0			36.7	101.4	
Queue Delay	0.0			0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	15.0			36.7	101.4	
LOS	B			D	F	
Approach Delay	15.0			36.7	101.4	
Approach LOS	B			D	F	
Queue Length 50th (ft)	697			402	256	
Queue Length 95th (ft)	803			m#415	#329	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2708			1553	280	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.84			0.96	0.94	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			

Splits and Phases: 42: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.945			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3345	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.191			0.429			0.134		
Satd. Flow (perm)	192	3353	0	356	3345	0	765	4663	0	239	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			114			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	642	376	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1018	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.1		46.4	31.6		43.7	29.9	29.9
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.27	0.27
v/c Ratio	0.92	0.71		0.68	0.87		0.81	0.86		0.61	0.41	0.22
Control Delay	69.6	32.4		28.7	40.0		39.4	43.2		30.9	34.0	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	69.6	32.4		28.7	40.0		39.4	43.2		30.9	34.0	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		40.6			38.1			42.3			29.1	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	123	271		80	319		166	280		62	114	0
Queue Length 95th (ft)	#277	303		108	#402		#240	#341		111	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	253	1155		309	1173		433	1372		262	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.66	0.87		0.81	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 38.9		Intersection LOS: D	
Intersection Capacity Utilization 84.6%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

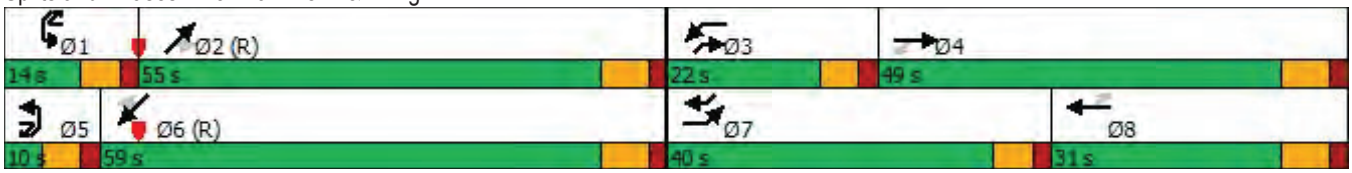
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	30	850	125	55	1470	550	145	1520	500
Future Volume (vph)	705	755	75	30	850	125	55	1470	550	145	1520	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	33	934	164	64	1670	647	188	1689	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	33	934	164	64	1670	647	188	1689	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	40.0	49.0	10.0	22.0	31.0	14.0	10.0	55.0	22.0	14.0	59.0	40.0
Total Split (%)	28.6%	35.0%	7.1%	15.7%	22.1%	10.0%	7.1%	39.3%	15.7%	10.0%	42.1%	28.6%
Maximum Green (s)	34.0	42.0	4.0	16.0	24.0	8.0	4.0	48.0	16.0	8.0	52.0	34.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	34.0	50.0	61.0	8.0	24.0	39.0	4.0	48.0	63.0	8.0	52.0	93.0
Actuated g/C Ratio	0.24	0.36	0.44	0.06	0.17	0.28	0.03	0.34	0.45	0.06	0.37	0.66
v/c Ratio	1.05	0.45	0.14	0.18	1.05	0.39	0.77	1.00	0.58	1.02	0.93	0.35
Control Delay	96.2	35.5	24.8	64.8	98.7	44.1	127.5	54.2	18.3	119.5	60.2	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.2	35.5	24.8	64.8	98.7	44.1	127.5	54.2	18.3	119.5	60.2	14.3
LOS	F	D	C	E	F	D	F	D	B	F	E	B
Approach Delay		63.6			89.8			46.4			53.2	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~412	205	50	14	~338	121	28	561	260	~93	598	130
Queue Length 95th (ft)	#510	252	80	33	#432	157	m#65	#634	150	#139	#654	200
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	773	1821	681	357	891	424	83	1671	1264	185	1810	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.45	0.14	0.09	1.05	0.39	0.77	1.00	0.51	1.02	0.93	0.35

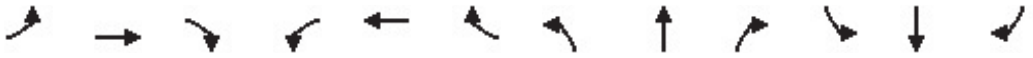
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 58.8		Intersection LOS: E	
Intersection Capacity Utilization 88.6%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	65	140	125	50	315	250	1700	100	70	1435	65
Future Volume (vph)	15	65	140	125	50	315	250	1700	100	70	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.722			0.567			0.950			0.950		
Satd. Flow (perm)	1184	1863	1473	1056	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			183			113			144
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			673			1551			1184	
Travel Time (s)		5.9			15.3			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	71	163	136	54	342	309	1868	109	76	1495	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	71	163	136	54	342	309	1868	109	76	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

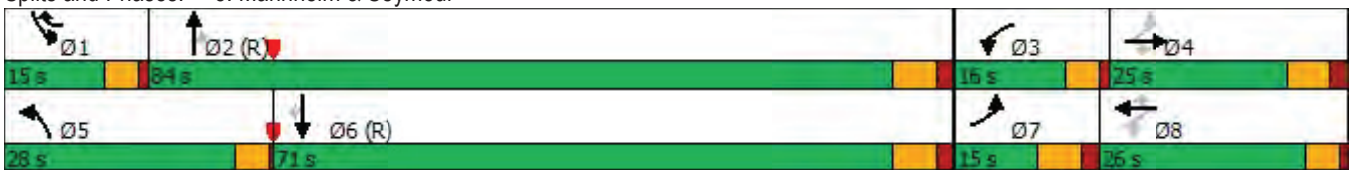


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	15.0	25.0	25.0	16.0	26.0	15.0	28.0	84.0	84.0	15.0	71.0	71.0
Total Split (%)	10.7%	17.9%	17.9%	11.4%	18.6%	10.7%	20.0%	60.0%	60.0%	10.7%	50.7%	50.7%
Maximum Green (s)	8.5	18.5	18.5	11.5	21.5	10.5	24.0	77.5	77.5	10.5	64.5	64.5
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	21.6	12.8	12.8	30.2	21.8	34.8	19.9	84.8	84.8	8.5	73.9	73.9
Actuated g/C Ratio	0.15	0.09	0.09	0.22	0.16	0.25	0.14	0.61	0.61	0.06	0.53	0.53
v/c Ratio	0.11	0.42	0.58	0.47	0.19	0.41	0.74	0.62	0.11	0.37	0.60	0.11
Control Delay	43.2	66.7	16.6	50.2	54.1	21.4	68.4	19.6	2.5	62.0	31.5	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	66.7	16.6	50.2	54.1	21.4	68.4	19.6	2.5	62.0	31.5	4.5
LOS	D	E	B	D	D	C	E	B	A	E	C	A
Approach Delay		32.8			32.1			25.4			31.7	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	62	0	103	45	69	141	389	0	35	297	7
Queue Length 95th (ft)	30	110	58	162	87	116	164	480	26	65	558	23
Internal Link Dist (ft)		178			593			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	208	246	336	295	307	868	508	3014	1002	258	2475	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.29	0.49	0.46	0.18	0.39	0.61	0.62	0.11	0.29	0.60	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 113 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	495	735	1770	630	55	1290
Future Volume (vph)	495	735	1770	630	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		413		132		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	563	826	1967	692	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	826	1967	692	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	47.0		83.0	47.0	10.0	93.0
Total Split (%)	33.6%		59.3%	33.6%	7.1%	66.4%
Maximum Green (s)	40.5		76.0	40.5	5.0	86.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	37.3	140.0	80.5	126.0	6.1	89.2
Actuated g/C Ratio	0.27	1.00	0.58	0.90	0.04	0.64
v/c Ratio	0.69	0.58	0.69	0.49	0.40	0.43
Control Delay	50.8	1.7	16.8	1.3	74.1	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	1.7	16.8	1.3	74.1	13.5
LOS	D	A	B	A	E	B
Approach Delay	21.6		12.8			16.0
Approach LOS	C		B			B
Queue Length 50th (ft)	232	0	369	0	26	224
Queue Length 95th (ft)	287	0	458	7	51	261
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	883	1422	2834	1409	143	3172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.58	0.69	0.49	0.40	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 15.9		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

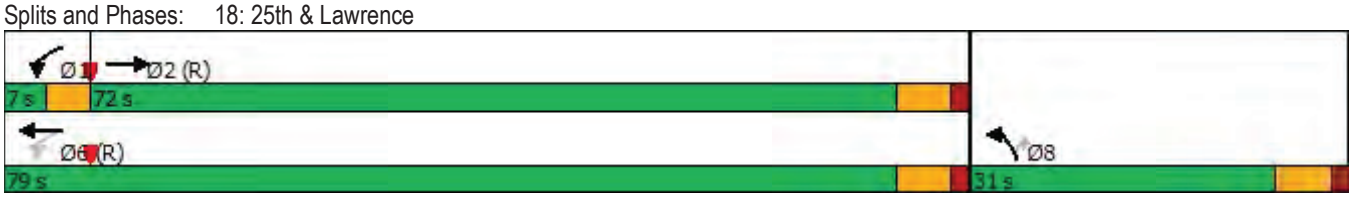
Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	695	130	55	1070	185	115
Future Volume (vph)	695	130	55	1070	185	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.969					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3290	0	0	3362	1703	1495
Flt Permitted				0.789	0.950	
Satd. Flow (perm)	3290	0	0	2660	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	52					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	739	191	79	1126	223	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	930	0	0	1205	223	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	72.0		7.0	79.0	31.0	31.0
Total Split (%)	65.5%		6.4%	71.8%	28.2%	28.2%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	66.0		3.5	73.0	25.0	25.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	77.2			77.2	20.8	20.8
Actuated g/C Ratio	0.70			0.70	0.19	0.19
v/c Ratio	0.40			0.65	0.69	0.57
Control Delay	7.4			8.3	52.7	47.9
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	7.4			8.3	52.7	47.9
LOS	A			A	D	D
Approach Delay	7.4			8.3	50.7	
Approach LOS	A			A	D	
Queue Length 50th (ft)	120			94	147	103
Queue Length 95th (ft)	175			357	202	128
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2323			1866	387	339
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.40			0.65	0.58	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 79.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 18: 25th & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.971			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3322	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3322	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		25			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1078	260	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	86.5	10.4	3.9	18.9	69.4		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	86.5	10.4	3.9	18.9	69.4		92.2	77.0		68.1	112.8	
LOS	F	B	A	B	E		F	E		E	F	
Approach Delay		18.3			66.9			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	85	100	130	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#199	m99	m33	49	#791		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1320		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.7		Intersection LOS: E	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Future Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.943	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3072	0
Flt Permitted	0.061			0.127			0.202				0.781	
Satd. Flow (perm)	105	3410	1383	219	3195	0	357	3280	0	0	2411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203		3			28			81	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1490	53	351	533	151	45	229	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1543	0	351	684	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	14.0	70.0		17.0	73.0		25.0	53.0		28.0	28.0	
Total Split (%)	10.0%	50.0%		12.1%	52.1%		17.9%	37.9%		20.0%	20.0%	
Maximum Green (s)	10.5	64.0		13.5	67.0		21.5	47.0		22.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	79.0	66.0	91.0	81.0	67.0		49.5	47.0			22.0	
Actuated g/C Ratio	0.56	0.47	0.65	0.58	0.48		0.35	0.34			0.16	
v/c Ratio	0.88	0.72	0.26	0.68	1.01		1.07	0.61			0.99	
Control Delay	82.9	23.6	1.4	33.4	44.1		105.3	40.0			88.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	82.9	23.6	1.4	33.4	44.1		105.3	40.0			88.6	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		25.8			43.1			62.1			88.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	108	227	6	80	~534		~283	262			180	
Queue Length 95th (ft)	#207	254	10	m82	m#491		#456	194			#267	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	173	1607	970	266	1530		329	1119			447	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.88	0.72	0.26	0.62	1.01		1.07	0.61			0.99	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 45.8		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	

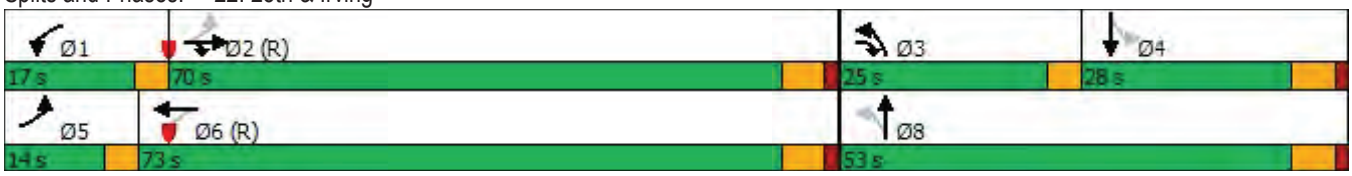
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	0	69	460	35	165	138	1887	0	0	1689	77
Future Volume (vph)	55	0	69	460	35	165	138	1887	0	0	1689	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2701	0	1277	3433	1863	1583	2918	4887	0	0	4933	1382
Flt Permitted	0.732			0.950			0.068					
Satd. Flow (perm)	2081	0	1277	3433	1863	1583	209	4887	0	0	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			105						140
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	93	0	135	500	38	179	276	2007	0	0	1816	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	0	135	500	38	179	276	2007	0	0	1816	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm

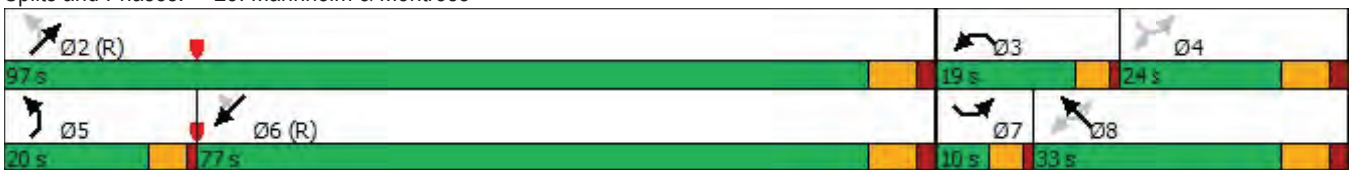
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	5.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	9.5		15.0	9.5	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	10.0		24.0	19.0	33.0	33.0	20.0	97.0			77.0	77.0
Total Split (%)	7.1%		17.1%	13.6%	23.6%	23.6%	14.3%	69.3%			55.0%	55.0%
Maximum Green (s)	5.5		17.0	14.5	26.0	26.0	15.0	90.0			70.0	70.0
Yellow Time (s)	3.5		5.0	3.5	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	1.0		2.0	1.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5		7.0	4.5	7.0	7.0	5.0	7.0			7.0	7.0
Lead/Lag	Lead		Lag	Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		5.0	3.0	3.0	3.0	4.0	7.0			7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	18.1		10.1	31.6	19.1	19.1	98.9	96.9			78.4	78.4
Actuated g/C Ratio	0.13		0.07	0.23	0.14	0.14	0.71	0.69			0.56	0.56
v/c Ratio	0.32		0.61	0.65	0.15	0.58	0.68	0.59			0.66	0.12
Control Delay	46.8		20.5	53.1	53.5	31.4	44.0	2.3			19.2	1.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	46.8		20.5	53.1	53.5	31.4	44.0	2.3			19.2	1.2
LOS	D		C	D	D	C	D	A			B	A
Approach Delay		31.2			47.7			7.3			18.3	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)	36		0	219	32	63	67	48			279	3
Queue Length 95th (ft)	36		0	260	63	137	28	m50			596	6
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	293		278	774	345	379	448	3383			2763	835
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.32		0.49	0.65	0.11	0.47	0.62	0.59			0.66	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

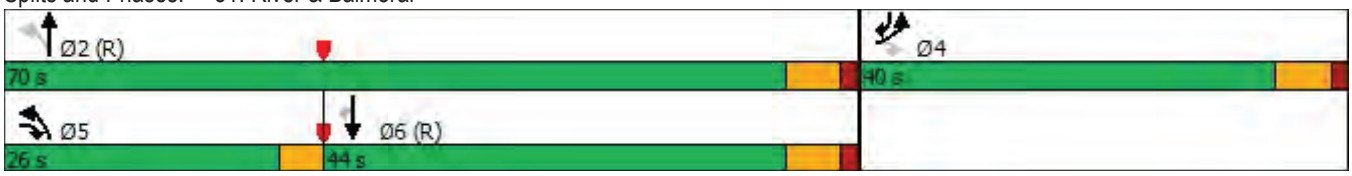


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	431	936	464	185
Future Volume (vph)	295	139	431	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.403			
Satd. Flow (perm)	3224	1468	722	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	459	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	459	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	43.3	83.7	81.2	57.2	80.0
Actuated g/C Ratio	0.15	0.39	0.76	0.74	0.52	0.73
v/c Ratio	0.66	0.26	0.63	0.37	0.29	0.19
Control Delay	50.2	5.1	8.9	6.0	17.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.1	8.9	6.0	17.3	1.3
LOS	D	A	A	A	B	A
Approach Delay	34.3			6.9	12.6	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	13	87	115	103	0
Queue Length 95th (ft)	151	31	161	177	181	21
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	711	766	2724	1836	1384
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.60	0.37	0.29	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1370	35
Future Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1370	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4803	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		6	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	1938	22	106	1442	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1938	22	106	1500	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.60	0.02	0.65	0.45	
Control Delay	63.9	33.8		57.4	60.4	22.3	92.8	5.4	0.1	50.0	19.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	92.8	5.4	0.1	50.0	19.0	
LOS	E	C		E	E	C	F	A	A	D	B	
Approach Delay		52.9			34.2			8.0			21.1	
Approach LOS		D			C			A			C	
Queue Length 50th (ft)	58	9		42	5	0	61	76	0	103	242	
Queue Length 95th (ft)	72	14		70	20	61	84	158	m0	m110	m282	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3312	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.60	0.02	0.57	0.45	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

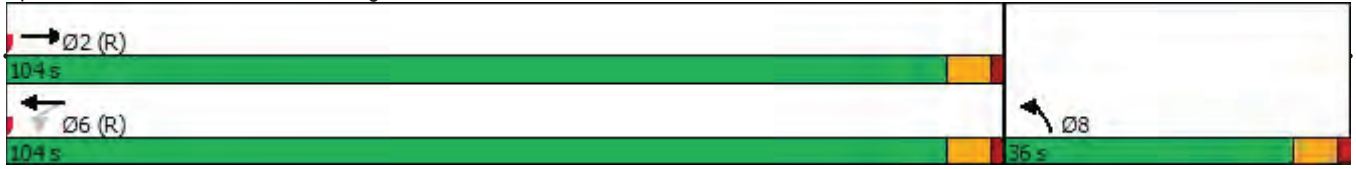
Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2060	181	28
Future Volume (vph)	1513	12	14	2060	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2168	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2184	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	104.0		104.0	104.0	36.0	
Total Split (%)	74.3%		74.3%	74.3%	25.7%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	98.0		98.0	98.0	30.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	101.8			101.8	26.2	
Actuated g/C Ratio	0.73			0.73	0.19	
v/c Ratio	0.62			0.94	0.79	
Control Delay	11.2			20.1	69.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	11.2			20.1	69.0	
LOS	B			C	E	
Approach Delay	11.2			20.1	69.0	
Approach LOS	B			C	E	
Queue Length 50th (ft)	357			491	240	
Queue Length 95th (ft)	451			m481	270	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2617			2314	408	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.94	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 41: Judd & Irving



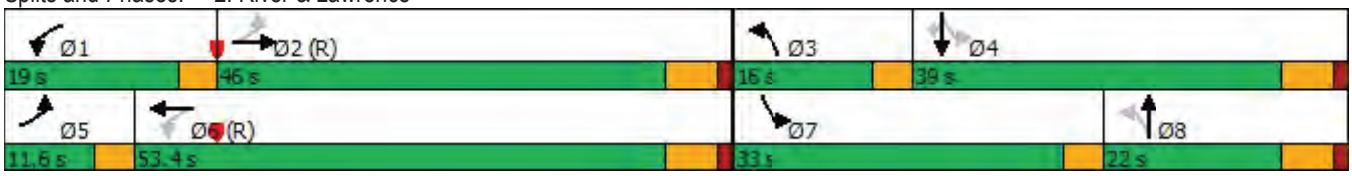
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1626	3449	0	1787	3431	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.174			0.091			0.238			0.197		
Satd. Flow (perm)	298	3449	0	171	3431	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			40			96				228
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	981	0	207	685	0	475	908	248
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	11.6	46.0		19.0	53.4		16.0	22.0		33.0	39.0	39.0
Total Split (%)	9.7%	38.3%		15.8%	44.5%		13.3%	18.3%		27.5%	32.5%	32.5%
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Act Effct Green (s)	50.7	40.3		61.2	47.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.42	0.34		0.51	0.40		0.26	0.14		0.43	0.28	0.28

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.55	0.91		0.89	0.71		0.85	0.93		0.97	0.91	0.43
Control Delay	24.2	44.1		61.0	32.7		59.1	64.5		66.1	56.4	8.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.2	44.1		61.0	32.7		59.1	64.5		66.1	56.4	8.2
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		42.1			38.6			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	30	417		141	319		103	170		307	361	11
Queue Length 95th (ft)	m52	#543		#256	371		#230	#234		#522	#484	63
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	216	1179		296	1379		247	735		496	994	583
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.54	0.91		0.86	0.71		0.84	0.93		0.96	0.91	0.43

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 48.3 Intersection LOS: D
Intersection Capacity Utilization 93.5% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: River & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	0	680	110	55	1090	720	185	2230	770
Future Volume (vph)	635	1080	100	0	680	110	55	1090	720	185	2230	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	0	810	131	60	1198	867	213	2323	885
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	33.0	45.0	10.0	17.0	29.0	21.0	10.0	57.0	17.0	21.0	68.0	33.0
Total Split (%)	23.6%	32.1%	7.1%	12.1%	20.7%	15.0%	7.1%	40.7%	12.1%	15.0%	48.6%	23.6%
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	27.0	39.7	50.7		22.0	42.6	4.0	51.4	67.8	13.6	61.0	95.0
Actuated g/C Ratio	0.19	0.28	0.36		0.16	0.30	0.03	0.37	0.48	0.10	0.44	0.68

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio	1.08	0.90	0.22		1.01	0.30	0.69	0.65	0.67	0.68	1.05	0.48
Control Delay	111.7	57.4	32.6		92.5	39.0	96.0	39.0	33.4	57.7	67.6	20.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.7	57.4	32.6		92.5	39.0	96.0	39.0	33.4	57.7	67.6	20.1
LOS	F	E	C		F	D	F	D	C	E	E	C
Approach Delay		73.0			85.0			38.3			54.7	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~348	435	75		~277	91	29	339	442	92	~857	340
Queue Length 95th (ft)	#473	431	116		#330	137	m#53	246	219	m104	#938	m398
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330			335	380		465	350		450
Base Capacity (vph)	619	1501	556		801	457	87	1839	1317	344	2202	1845
Starvation Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.90	0.22		1.01	0.29	0.69	0.65	0.66	0.62	1.05	0.48

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 58.5 Intersection LOS: E

Intersection Capacity Utilization 96.5% ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	35	300	100	40	350	70	1335	70	165	2145	25
Future Volume (vph)	50	35	300	100	40	350	70	1335	70	165	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.535			0.732			0.950			0.950		
Satd. Flow (perm)	877	1863	1473	1364	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			380			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			668			1551			1184	
Travel Time (s)		5.9			15.2			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	38	361	109	43	380	80	1435	76	179	2466	28
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	22.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	22.5	9.5	75.8	75.8	17.2	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	16.1%	6.8%	54.1%	54.1%	12.3%	59.6%	59.6%
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	33.2	33.2	33.2	19.9	19.9	19.9	7.1	77.6	77.6	11.7	82.7	82.7
Actuated g/C Ratio	0.24	0.24	0.24	0.14	0.14	0.14	0.05	0.55	0.55	0.08	0.59	0.59
v/c Ratio	0.23	0.09	0.86	0.56	0.16	0.53	0.54	0.52	0.08	0.62	0.89	0.04
Control Delay	42.0	38.8	56.8	68.2	54.5	7.7	78.1	21.6	0.2	80.8	13.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	38.8	56.8	68.2	54.5	7.7	78.1	21.6	0.2	80.8	13.1	0.1
LOS	D	D	E	E	D	A	E	C	A	F	B	A
Approach Delay		53.3			23.9			23.4			17.5	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	44	27	239	95	35	0	36	301	0	85	175	0
Queue Length 95th (ft)	72	54	304	159	73	50	#75	379	0	119	364	m0
Internal Link Dist (ft)		178			588			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	295	538	492	202	276	736	149	2760	941	312	2768	741
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.07	0.73	0.54	0.16	0.52	0.54	0.52	0.08	0.57	0.89	0.04

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 135 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 23.0 Intersection LOS: C
Intersection Capacity Utilization 80.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	55.0	30.0	25.0	80.0	30.0	30.0
Total Split (%)	50.0%	27.3%	22.7%	72.7%	27.3%	27.3%
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.4	73.0	6.2	54.6	12.1	12.1
Actuated g/C Ratio	0.64	0.92	0.08	0.69	0.15	0.15

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.85	0.24	0.10	0.67	0.27	0.12
Control Delay	18.5	0.7	37.5	9.0	32.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	0.7	37.5	9.0	32.0	13.6
LOS	B	A	D	A	C	B
Approach Delay	15.9			9.4	28.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	274	0	4	198	25	0
Queue Length 95th (ft)	#741	13	9	326	55	10
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2301	1424	661	3311	920	412
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.23	0.03	0.50	0.14	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 79.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 12: Seymour & Irving

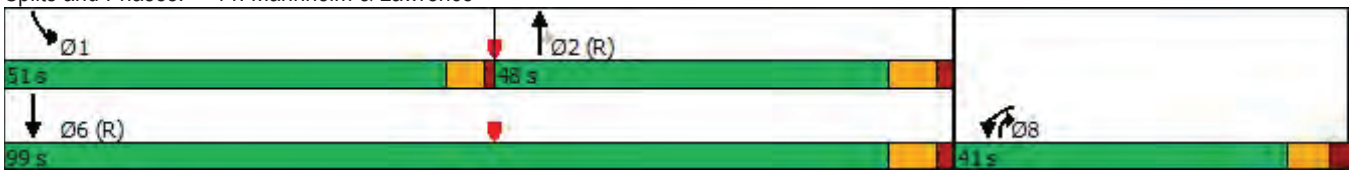
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	610	450	1235	630	850	2335
Future Volume (vph)	610	450	1235	630	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		447		16		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	685	511	1286	685	1012	2684
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	41.0		48.0	41.0	51.0	99.0
Total Split (%)	29.3%		34.3%	29.3%	36.4%	70.7%
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	34.5	140.0	41.4	82.9	45.6	92.0
Actuated g/C Ratio	0.25	1.00	0.30	0.59	0.33	0.66

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.91	0.36	0.88	0.75	0.95	0.82
Control Delay	68.5	0.7	47.4	18.0	63.4	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.5	0.7	47.4	18.0	63.4	20.6
LOS	E	A	D	B	E	C
Approach Delay	39.5		37.2			32.3
Approach LOS	D		D			C
Queue Length 50th (ft)	314	0	249	186	460	623
Queue Length 95th (ft)	#416	0	356	221	502	636
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	752	1422	1460	917	1079	3271
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.36	0.88	0.75	0.94	0.82

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 35.0 Intersection LOS: C
Intersection Capacity Utilization 79.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1095	355	115	810	195	105
Future Volume (vph)	1095	355	115	810	195	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Satd. Flow (prot)	3267	0	0	3350	1703	1495
Flt Permitted				0.524	0.950	
Satd. Flow (perm)	3267	0	0	1766	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	84					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1576	0	0	1029	210	152
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	86.0		7.0	93.0	27.0	27.0
Total Split (%)	71.7%		5.8%	77.5%	22.5%	22.5%
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	88.4			88.4	19.6	19.6
Actuated g/C Ratio	0.74			0.74	0.16	0.16
v/c Ratio	0.65			0.79	0.76	0.63
Control Delay	9.2			12.5	65.4	58.4
Queue Delay	0.2			0.0	0.0	0.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	9.4			12.5	65.4	58.4
LOS	A			B	E	E
Approach Delay	9.4			12.5	62.4	
Approach LOS	A			B	E	
Queue Length 50th (ft)	290			95	153	108
Queue Length 95th (ft)	347			474	#255	133
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2428			1303	300	263
Starvation Cap Reductn	240			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.72			0.79	0.70	0.58

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 93.1%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 18: 25th & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1589	3433	1370	1745	3373	0	1518	3296	0	1589	3315	0
Flt Permitted	0.151			0.079			0.079			0.300		
Satd. Flow (perm)	253	3433	1370	145	3373	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		7			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	795	0	350	792	0	181	1025	0
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.73	0.95	0.66	0.61	0.75		1.03	0.61		0.59	1.05	
Control Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.3			54.2			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	50	555	200	32	392		~343	343		99	~613	
Queue Length 95th (ft)	m60	m#599	m223	#73	472		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	212	1295	835	85	1066		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.72	0.95	0.66	0.61	0.75		1.03	0.61		0.51	1.05	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 53.8 Intersection LOS: D

Intersection Capacity Utilization 90.9% ICU Level of Service E

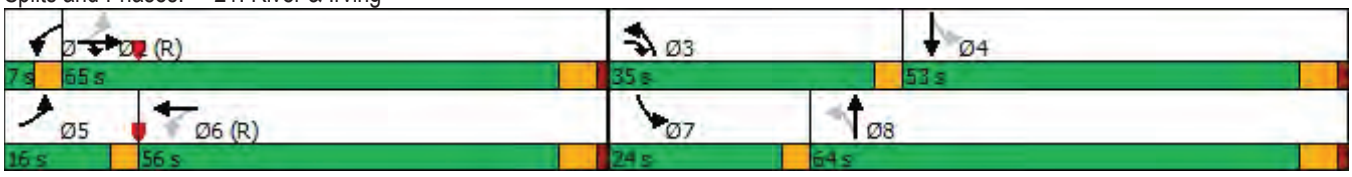
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3217	0
Flt Permitted	0.080			0.060			0.198				0.692	
Satd. Flow (perm)	138	3410	1383	103	3181	0	350	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		5			85			12	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	158	217	1112	77	285	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	158	217	1189	0	285	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	20.2	72.0		20.4	72.2		13.6	67.6		54.0	54.0	
Total Split (%)	12.6%	45.0%		12.8%	45.1%		8.5%	42.3%		33.8%	33.8%	
Maximum Green (s)	16.7	66.0		16.9	66.2		10.1	61.6		48.0	48.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.1	66.0	79.6	85.7	66.3		64.1	61.6			48.0	
Actuated g/C Ratio	0.53	0.41	0.50	0.54	0.41		0.40	0.38			0.30	
v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	
Control Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
LOS	E	D	A	F	D		F	C			F	
Approach Delay		52.9			49.7			86.8			88.1	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	174	673	18	168	576		~291	164			373	
Queue Length 95th (ft)	154	m#890	m43	m#269	m630		#504	178			#466	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	229	1406	738	217	1321		224	1279			685	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 62.9		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

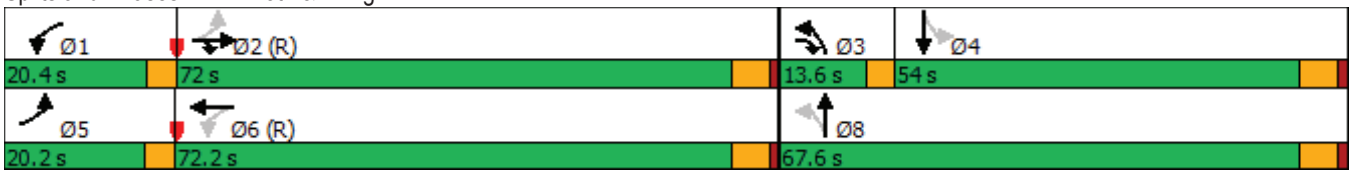
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving

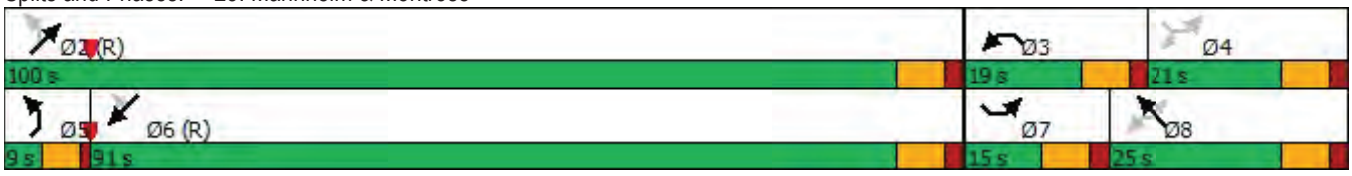


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	101	0	95	435	25	10	80	1599	0	0	2684	50
Future Volume (vph)	101	0	95	435	25	10	80	1599	0	0	2684	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	2724	0	1225	3433	1863	1583	2367	4979	0	0	4933	1259
Flt Permitted	0.527			0.950			0.046					
Satd. Flow (perm)	1511	0	1225	3433	1863	1583	115	4979	0	0	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125						125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	0	119	473	27	11	87	1666	0	0	2739	72
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	8.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	15.0		15.0	12.0	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	15.0		21.0	19.0	25.0	25.0	9.0	100.0			91.0	91.0
Total Split (%)	10.7%		15.0%	13.6%	17.9%	17.9%	6.4%	71.4%			65.0%	65.0%
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.0		7.0	7.0	7.0	7.0	5.0	7.0			7.0	7.0

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead/Lag	Lead		Lag	Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Act Effct Green (s)	22.1		9.7	20.9	11.2	11.2	99.3	97.3			85.5	85.5
Actuated g/C Ratio	0.16		0.07	0.15	0.08	0.08	0.71	0.70			0.61	0.61
v/c Ratio	0.42		0.59	0.93	0.18	0.05	0.45	0.48			0.91	0.09
Control Delay	51.5		21.3	81.0	60.1	0.4	19.3	4.4			31.0	0.9
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	51.5		21.3	81.0	60.1	0.4	19.3	4.4			31.0	0.9
LOS	D		C	F	E	A	B	A			C	A
Approach Delay		38.5			78.1			5.1			30.2	
Approach LOS		D			E			A			C	
Queue Length 50th (ft)	64		0	210	23	0	4	79			833	0
Queue Length 95th (ft)	64		37	257	53	0	m13	m238			916	m0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	373		235	511	239	312	192	3461			3011	817
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.42		0.51	0.93	0.11	0.04	0.45	0.48			0.91	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 17 (12%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 27.0		Intersection LOS: C	
Intersection Capacity Utilization 85.8%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 25: Mannheim & Montrose



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1973	20
Future Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1973	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4846	0
Flt Permitted	0.541			0.698			0.950			0.950		
Satd. Flow (perm)	836	1479	0	1145	1933	1455	1203	4933	1459	1530	4846	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				113			113		3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1967	11	65	2139	0
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	18.0	25.0		11.0	18.0	18.0	15.0	85.0	85.0	19.0	89.0	
Total Split (%)	12.9%	17.9%		7.9%	12.9%	12.9%	10.7%	60.7%	60.7%	13.6%	63.6%	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	27.6	16.3		18.0	8.2	8.2	8.8	89.7	89.7	11.0	94.1	
Actuated g/C Ratio	0.20	0.12		0.13	0.06	0.06	0.06	0.64	0.64	0.08	0.67	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.54	0.38		0.41	0.06	0.58	0.45	0.62	0.01	0.54	0.66	
Control Delay	57.6	19.5		54.8	61.8	22.1	68.8	19.0	0.0	69.9	5.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.6	19.5		54.8	61.8	22.1	68.8	19.0	0.0	69.9	5.1	
LOS	E	B		D	E	C	E	B	A	E	A	
Approach Delay		41.1			35.8			19.8			7.0	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	97	10		54	6	0	30	271	0	63	69	
Queue Length 95th (ft)	154	0		67	19	43	44	399	m0	m62	m68	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	229	271		171	165	228	91	3159	975	158	3257	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.34		0.41	0.04	0.48	0.37	0.62	0.01	0.41	0.66	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 100 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 15.3 Intersection LOS: B

Intersection Capacity Utilization 66.5% ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1383	52	162
Future Volume (vph)	2122	26	54	1383	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Satd. Flow (prot)	3466	0	0	3470	1800	0
Flt Permitted				0.572	0.987	
Satd. Flow (perm)	3466	0	0	1989	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				22	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1486	263	0
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	131.0		131.0	131.0	29.0	
Total Split (%)	81.9%		81.9%	81.9%	18.1%	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	124.8			124.8	23.2	
Actuated g/C Ratio	0.78			0.78	0.14	
v/c Ratio	0.84			1.07dl	0.94	
Control Delay	15.0			36.7	101.4	
Queue Delay	0.0			0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	15.0			36.7	101.4	
LOS	B			D	F	
Approach Delay	15.0			36.7	101.4	
Approach LOS	B			D	F	
Queue Length 50th (ft)	697			402	256	
Queue Length 95th (ft)	803			m#415	#329	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2708			1553	280	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.84			0.96	0.94	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			

Splits and Phases: 42: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.959			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3394	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.192			0.440			0.132		
Satd. Flow (perm)	192	3353	0	358	3394	0	785	4663	0	235	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			52			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	804	299	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1103	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.0		46.5	31.6		44.3	30.4	30.4
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.28	0.28
v/c Ratio	0.92	0.71		0.68	0.96		0.80	0.86		0.61	0.40	0.22
Control Delay	70.9	34.3		28.6	54.1		39.1	43.2		30.9	33.6	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	70.9	34.3		28.6	54.1		39.1	43.2		30.9	33.6	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		42.4			50.1			42.2			28.9	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	124	232		80	385		166	280		62	114	0
Queue Length 95th (ft)	#275	304		108	#520		#235	#341		112	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	252	1155		310	1146		434	1372		263	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.65	0.96		0.80	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 42.7		Intersection LOS: D	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

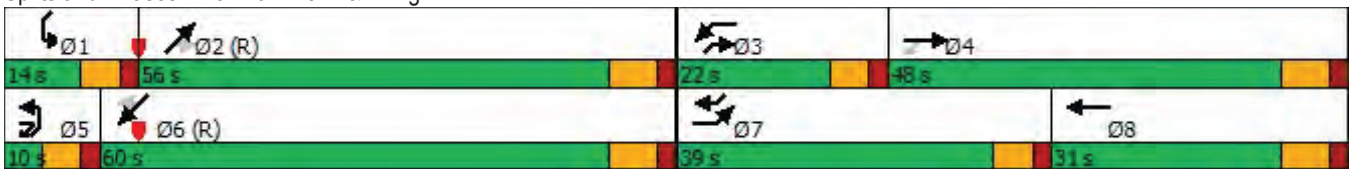
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	130	850	235	55	1470	550	145	1450	500
Future Volume (vph)	705	755	75	130	850	235	55	1470	550	145	1450	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	143	934	309	64	1670	647	188	1611	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	143	934	309	64	1670	647	188	1611	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4			Free			2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0		4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0		10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	39.0	48.0	10.0	22.0	31.0		10.0	56.0	22.0	14.0	60.0	39.0
Total Split (%)	27.9%	34.3%	7.1%	15.7%	22.1%		7.1%	40.0%	15.7%	10.0%	42.9%	27.9%
Maximum Green (s)	33.0	41.0	4.0	16.0	24.0		4.0	49.0	16.0	8.0	53.0	33.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0		6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0		0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0		0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0		0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	33.0	44.5	55.5	12.5	24.0	140.0	4.0	49.0	68.5	8.0	53.0	93.0
Actuated g/C Ratio	0.24	0.32	0.40	0.09	0.17	1.00	0.03	0.35	0.49	0.06	0.38	0.66
v/c Ratio	1.08	0.50	0.15	0.51	1.05	0.20	0.77	0.98	0.53	1.02	0.87	0.35
Control Delay	106.3	40.4	28.9	67.0	98.7	0.3	126.9	49.8	14.6	116.6	53.6	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.3	40.4	28.9	67.0	98.7	0.3	126.9	49.8	14.6	116.6	53.6	16.8
LOS	F	D	C	E	F	A	F	D	B	F	D	B
Approach Delay		70.9			73.5			42.3			49.0	
Approach LOS		E			E			D			D	
Queue Length 50th (ft)	~423	220	55	64	~338	0	28	554	239	~93	561	159
Queue Length 95th (ft)	#522	274	88	99	#432	0	m#65	#621	138	#137	613	198
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	750	1622	620	357	891	1524	83	1706	1282	185	1845	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.50	0.15	0.40	1.05	0.20	0.77	0.98	0.50	1.02	0.87	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 56.0		Intersection LOS: E	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



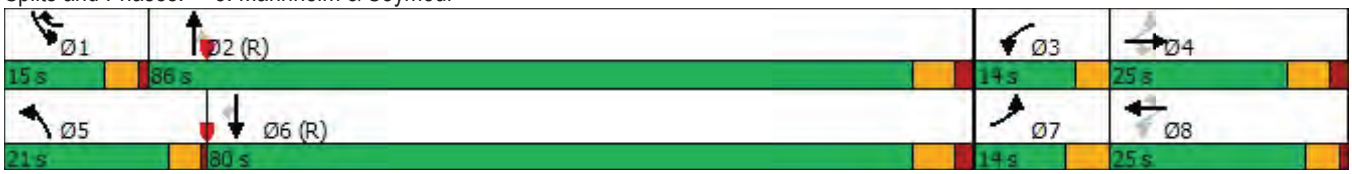
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	40	140	125	50	315	250	1700	100	100	1435	65
Future Volume (vph)	15	40	140	125	50	315	250	1700	100	100	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.722			0.591			0.950			0.950		
Satd. Flow (perm)	1184	1863	1473	1101	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			201			97			129
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			673			1551			1184	
Travel Time (s)		5.9			15.3			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	43	163	136	54	342	309	1868	109	109	1495	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	43	163	136	54	342	309	1868	109	109	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	14.0	25.0	25.0	14.0	25.0	15.0	21.0	86.0	86.0	15.0	80.0	80.0
Total Split (%)	10.0%	17.9%	17.9%	10.0%	17.9%	10.7%	15.0%	61.4%	61.4%	10.7%	57.1%	57.1%
Maximum Green (s)	9.5	18.5	18.5	10.5	20.5	10.5	17.0	79.5	79.5	10.5	73.5	73.5
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	0.0	2.0	2.0	0.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.5	6.5	3.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	22.4	11.1	11.1	29.1	20.1	34.3	19.5	85.9	85.9	9.8	76.8	76.8
Actuated g/C Ratio	0.16	0.08	0.08	0.21	0.14	0.24	0.14	0.61	0.61	0.07	0.55	0.55
v/c Ratio	0.11	0.29	0.61	0.48	0.20	0.41	0.76	0.61	0.11	0.46	0.58	0.11
Control Delay	43.5	64.6	18.5	51.7	55.9	19.1	70.2	18.8	3.5	65.7	27.2	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	64.6	18.5	51.7	55.9	19.1	70.2	18.8	3.5	65.7	27.2	3.6
LOS	D	E	B	D	E	B	E	B	A	E	C	A
Approach Delay		29.7			31.2			25.0			28.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	38	0	105	45	60	139	378	4	51	292	9
Queue Length 95th (ft)	30	76	58	165	89	108	173	474	32	86	388	12
Internal Link Dist (ft)		178			593			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	220	246	336	291	290	857	415	3063	1011	269	2612	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.17	0.49	0.47	0.19	0.40	0.74	0.61	0.11	0.41	0.57	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 114 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 27.2	Intersection LOS: C
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

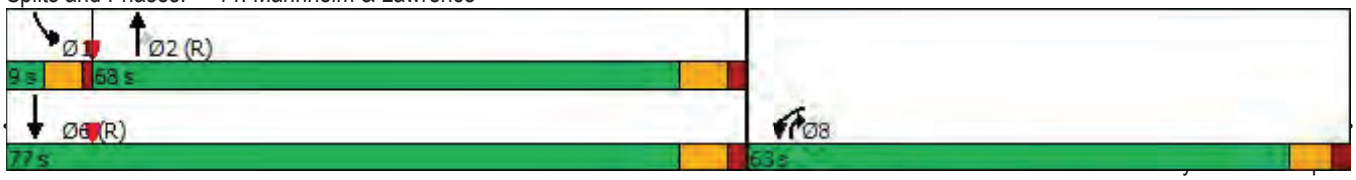
Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	735	735	1780	630	55	1290
Future Volume (vph)	735	735	1780	630	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		544		75		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	835	826	1978	692	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	835	826	1978	692	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	63.0		68.0	63.0	9.0	77.0
Total Split (%)	45.0%		48.6%	45.0%	6.4%	55.0%
Maximum Green (s)	56.5		61.0	56.5	4.0	70.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	52.6	140.0	65.8	126.7	5.5	73.9
Actuated g/C Ratio	0.38	1.00	0.47	0.90	0.04	0.53
v/c Ratio	0.73	0.58	0.85	0.49	0.45	0.52
Control Delay	41.3	1.7	30.2	1.2	77.3	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	1.7	30.2	1.2	77.3	23.0
LOS	D	A	C	A	E	C
Approach Delay	21.6		22.7			25.1
Approach LOS	C		C			C
Queue Length 50th (ft)	320	0	274	10	26	302
Queue Length 95th (ft)	380	0	463	12	#59	349
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	1232	1422	2317	1412	128	2626
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.58	0.85	0.49	0.45	0.52

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 23.0		Intersection LOS: C	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	695	130	55	1255	240	115
Future Volume (vph)	695	130	55	1255	240	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.969					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3290	0	0	3362	1703	1495
Flt Permitted				0.804	0.950	
Satd. Flow (perm)	3290	0	0	2711	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	51					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	739	191	79	1321	289	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	930	0	0	1400	289	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	71.0		7.0	78.0	32.0	32.0
Total Split (%)	64.5%		6.4%	70.9%	29.1%	29.1%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	65.0		3.5	72.0	26.0	26.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	74.3			74.3	23.7	23.7
Actuated g/C Ratio	0.68			0.68	0.22	0.22
v/c Ratio	0.42			0.76	0.79	0.50
Control Delay	8.5			12.0	56.7	43.1
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	8.5			12.0	56.7	43.1
LOS	A			B	E	D
Approach Delay	8.5			12.0	51.9	
Approach LOS	A			B	D	
Queue Length 50th (ft)	142			437	189	97
Queue Length 95th (ft)	181			m504	259	126
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2240			1832	402	353
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.42			0.76	0.72	0.45

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.3		Intersection LOS: B	
Intersection Capacity Utilization 87.9%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 18: 25th & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	979	209	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	979	209	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.973			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3329	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3329	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		22			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1100	238	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	87.8	9.8	3.5	18.9	69.3		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	87.8	9.8	3.5	18.9	69.3		92.2	77.0		68.1	112.8	
LOS	F	A	A	B	E		F	E		E	F	
Approach Delay		18.0			66.8			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	86	84	37	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#200	m100	m32	49	#792		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1321		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.6		Intersection LOS: E	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1495	30	295	320	125	35	195	75
Future Volume (vph)	130	1070	180	130	1495	30	295	320	125	35	195	75
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.951	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3110	0
Flt Permitted	0.060			0.126			0.228				0.773	
Satd. Flow (perm)	103	3410	1383	217	3195	0	403	3280	0	0	2416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177		3			28			50	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1557	53	339	533	151	45	229	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1610	0	339	684	0	0	408	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	11.0	72.0		15.0	76.0		26.0	53.0		27.0	27.0	
Total Split (%)	7.9%	51.4%		10.7%	54.3%		18.6%	37.9%		19.3%	19.3%	
Maximum Green (s)	7.5	66.0		11.5	70.0		22.5	47.0		21.0	21.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	76.8	66.8	92.8	82.9	70.0		49.5	47.0			21.0	
Actuated g/C Ratio	0.55	0.48	0.66	0.59	0.50		0.35	0.34			0.15	
v/c Ratio	1.11	0.71	0.26	0.70	1.01		0.98	0.61			1.01	
Control Delay	140.9	22.9	1.7	34.8	41.5		81.3	40.0			98.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	140.9	22.9	1.7	34.8	41.5		81.3	40.0			98.4	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		31.1			40.9			53.6			98.4	
Approach LOS		C			D			D			F	
Queue Length 50th (ft)	~113	223	9	77	~493		249	262			~178	
Queue Length 95th (ft)	m#240	250	13	m81	m#463		#409	194			#265	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	138	1626	976	245	1599		347	1119			404	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	1.11	0.71	0.26	0.67	1.01		0.98	0.61			1.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 45.4		Intersection LOS: D	
Intersection Capacity Utilization 93.0%		ICU Level of Service F	

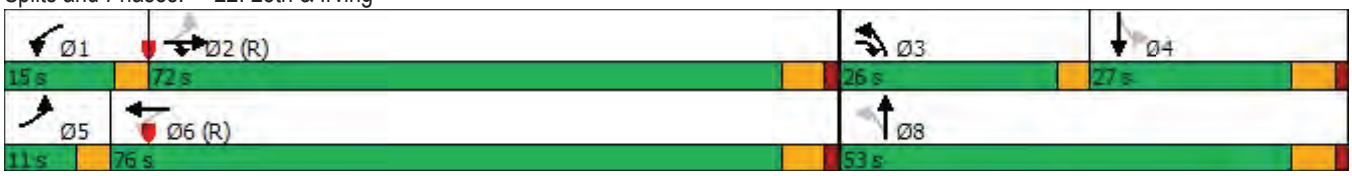
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	45	30	49	460	35	165	138	1887	110	290	1639	77
Future Volume (vph)	45	30	49	460	35	165	138	1887	110	290	1639	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2701	1863	1277	3433	1863	1583	2918	4887	1583	3433	4933	1382
Flt Permitted	0.732			0.506			0.073			0.054		
Satd. Flow (perm)	2081	1863	1277	1829	1863	1583	224	4887	1583	195	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			179			195			140
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	76	33	96	500	38	179	276	2007	120	315	1762	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	33	96	500	38	179	276	2007	120	315	1762	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Perm

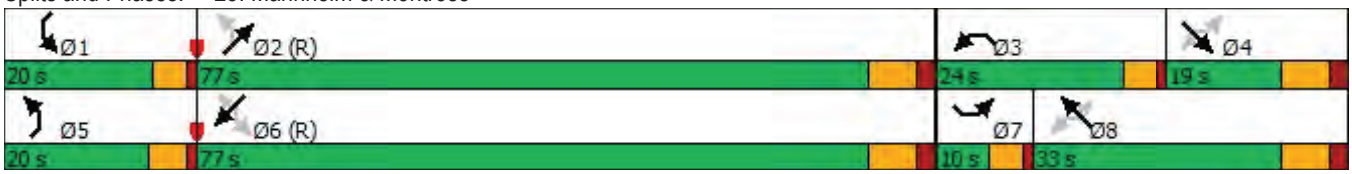
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		Free	6		6
Detector Phase	7	4	4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	5.0	5.0	3.0	15.0		5.0	15.0	15.0
Minimum Split (s)	9.5	15.0	15.0	9.5	25.0	25.0	8.0	22.0		9.5	22.0	22.0
Total Split (s)	10.0	19.0	19.0	24.0	33.0	33.0	20.0	77.0		20.0	77.0	77.0
Total Split (%)	7.1%	13.6%	13.6%	17.1%	23.6%	23.6%	14.3%	55.0%		14.3%	55.0%	55.0%
Maximum Green (s)	5.5	12.0	12.0	19.5	26.0	26.0	15.0	70.0		15.5	70.0	70.0
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	5.0		3.5	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	5.0	7.0		4.5	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes		Yes		
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0	3.0	4.0	7.0		3.0	7.0	7.0
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	17.9	9.9	9.9	36.1	23.6	23.6	90.0	74.8	140.0	89.9	74.2	74.2
Actuated g/C Ratio	0.13	0.07	0.07	0.26	0.17	0.17	0.64	0.53	1.00	0.64	0.53	0.53
v/c Ratio	0.26	0.25	0.44	0.72	0.12	0.43	0.70	0.77	0.08	0.74	0.67	0.13
Control Delay	42.7	65.7	8.7	51.7	49.6	10.0	44.4	10.6	0.0	45.6	22.1	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	65.7	8.7	51.7	49.6	10.0	44.4	10.6	0.0	45.6	22.1	1.4
LOS	D	E	A	D	D	B	D	B	A	D	C	A
Approach Delay		30.5			41.2			13.9			24.6	
Approach LOS		C			D			B			C	
Queue Length 50th (ft)	27	29	0	204	30	0	53	471	0	104	304	0
Queue Length 95th (ft)	30	64	0	257	63	66	25	m492	m0	150	481	5
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250		250	200		200
Base Capacity (vph)	290	159	237	694	345	439	439	2611	1583	486	2616	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.21	0.41	0.72	0.11	0.41	0.63	0.77	0.08	0.65	0.67	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization 78.1%		ICU Level of Service D	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

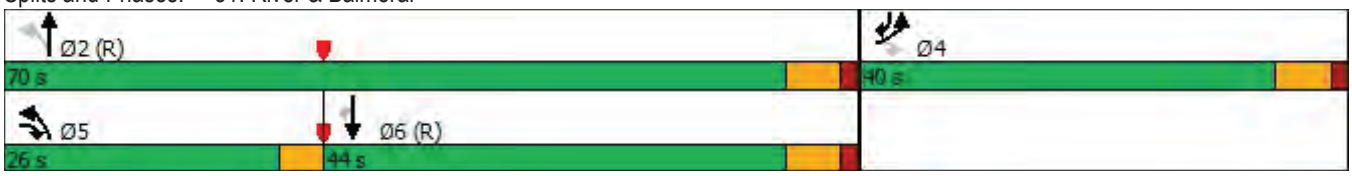


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	381	936	464	185
Future Volume (vph)	295	139	381	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.408			
Satd. Flow (perm)	3224	1468	731	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	405	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	405	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	41.0	83.7	81.2	59.5	82.3
Actuated g/C Ratio	0.15	0.37	0.76	0.74	0.54	0.75
v/c Ratio	0.66	0.28	0.56	0.37	0.28	0.18
Control Delay	50.2	5.6	7.9	6.0	15.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.6	7.9	6.0	15.7	1.2
LOS	D	A	A	A	B	A
Approach Delay	34.5			6.5	11.4	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	14	74	115	98	0
Queue Length 95th (ft)	151	34	137	177	169	18
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	699	762	2724	1911	1409
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.53	0.37	0.28	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1400	35
Future Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1400	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4804	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4804	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		5	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	1938	22	106	1474	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1938	22	106	1532	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.60	0.02	0.65	0.46	
Control Delay	63.9	33.8		57.4	60.4	22.3	90.2	5.9	0.1	52.4	18.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	90.2	5.9	0.1	52.4	18.7	
LOS	E	C		E	E	C	F	A	A	D	B	
Approach Delay		52.9			34.2			8.4			20.9	
Approach LOS		D			C			A			C	
Queue Length 50th (ft)	58	9		42	5	0	61	71	0	95	252	
Queue Length 95th (ft)	72	14		70	20	61	85	194	m0	m122	318	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3312	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.60	0.02	0.57	0.46	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2080	181	28
Future Volume (vph)	1513	12	14	2080	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2189	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2205	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	105.0		105.0	105.0	35.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	99.0		99.0	99.0	29.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	102.2			102.2	25.8	
Actuated g/C Ratio	0.73			0.73	0.18	
v/c Ratio	0.62			0.95	0.80	
Control Delay	10.9			20.0	70.6	
Queue Delay	0.0			0.0	0.0	
Total Delay	10.9			20.0	70.6	
LOS	B			B	E	
Approach Delay	10.9			20.0	70.6	
Approach LOS	B			B	E	
Queue Length 50th (ft)	357			480	240	
Queue Length 95th (ft)	438			m485	272	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2628			2323	395	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.95	0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 89.0%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

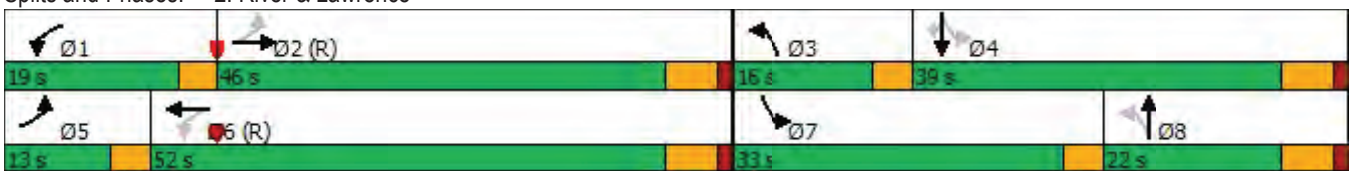
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.984			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3490	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.169			0.091			0.238			0.197		
Satd. Flow (perm)	289	3449	0	171	3490	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			13			96				227
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	867	106	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	973	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	13.0	46.0		19.0	52.0		16.0	22.0		33.0	39.0	39.0
Total Split (%)	10.8%	38.3%		15.8%	43.3%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	9.5	40.0		15.5	46.0		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.7	40.3		61.2	46.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.43	0.34		0.51	0.39		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.52	0.91		0.89	0.72		0.85	0.93		0.97	0.91	0.43
Control Delay	21.5	45.2		61.0	34.5		59.1	64.5		66.1	56.4	8.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.5	45.2		61.0	34.5		59.1	64.5		66.1	56.4	8.3
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		42.9			40.0			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	29	417		141	330		103	170		307	361	12
Queue Length 95th (ft)	m54	#543		#256	382		#230	#234		#522	#484	64
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	232	1179		296	1357		247	735		496	994	582
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.50	0.91		0.86	0.72		0.84	0.93		0.96	0.91	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.8		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



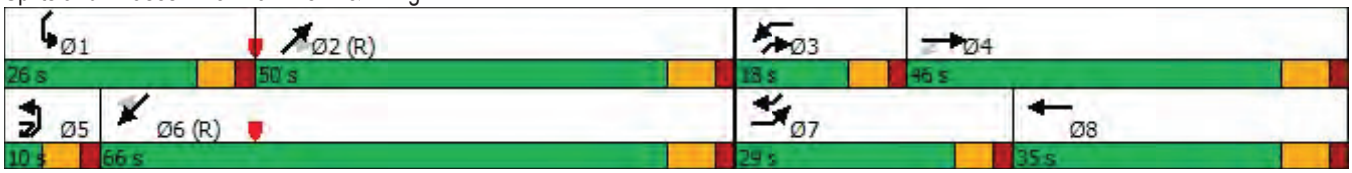
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	125	680	250	55	1090	720	185	2060	770
Future Volume (vph)	635	1080	100	125	680	250	55	1090	720	185	2060	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	144	810	298	60	1198	867	213	2146	885
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	144	810	298	60	1198	867	213	2146	885
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4			Free			2			6
Detector Phase	7	4	5	3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0		4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	25.0	10.0	10.0	25.0		10.0	25.0	10.0	10.0	25.0	10.0
Total Split (s)	29.0	46.0	10.0	18.0	35.0		10.0	50.0	18.0	26.0	66.0	29.0
Total Split (%)	20.7%	32.9%	7.1%	12.9%	25.0%		7.1%	35.7%	12.9%	18.6%	47.1%	20.7%
Maximum Green (s)	23.0	39.0	4.0	12.0	28.0		4.0	43.0	12.0	20.0	59.0	23.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0		6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0		0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0		0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0		0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	23.0	39.0	50.4	11.3	27.3	140.0	4.4	49.1	67.4	14.6	59.2	89.2
Actuated g/C Ratio	0.16	0.28	0.36	0.08	0.20	1.00	0.03	0.35	0.48	0.10	0.42	0.64
v/c Ratio	1.27	0.91	0.22	0.58	0.81	0.20	0.62	0.68	0.68	0.64	1.00	0.51
Control Delay	181.2	59.3	32.6	71.4	61.2	0.3	83.7	42.5	32.7	55.6	50.9	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	181.2	59.3	32.6	71.4	61.2	0.3	83.7	42.5	32.7	55.6	50.9	26.1
LOS	F	E	C	E	E	A	F	D	C	E	D	C
Approach Delay		95.9			47.9			39.7			44.4	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)	~393	438	76	65	259	0	29	256	431	91	~739	396
Queue Length 95th (ft)	#518	426	115	99	286	0	m#53	294	224	m103	#852	m447
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	527	1481	554	265	1020	1455	96	1756	1291	459	2138	1733
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	0.91	0.22	0.54	0.79	0.20	0.63	0.68	0.67	0.46	1.00	0.51

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 56.3		Intersection LOS: E	
Intersection Capacity Utilization 93.4%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	25	300	100	40	350	70	1335	75	140	2145	25
Future Volume (vph)	40	25	300	100	40	350	70	1335	75	140	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.540			0.740			0.950			0.950		
Satd. Flow (perm)	886	1863	1473	1378	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			326			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			668			1551			1184	
Travel Time (s)		5.9			15.2			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	49	27	361	109	43	380	80	1435	82	152	2466	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	27	361	109	43	380	80	1435	82	152	2466	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

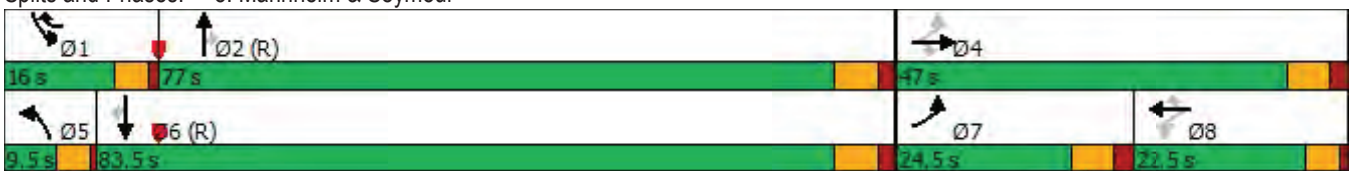
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	9.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	16.0	9.5	77.0	77.0	16.0	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	11.4%	6.8%	55.0%	55.0%	11.4%	59.6%	59.6%
Maximum Green (s)	18.0	40.5	40.5	18.0	18.0	11.5	5.5	70.5	70.5	11.5	77.0	77.0
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)				7.0	7.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
Act Effct Green (s)	33.1	33.1	33.1	20.6	20.6	35.9	7.3	78.6	78.6	10.8	82.6	82.6
Actuated g/C Ratio	0.24	0.24	0.24	0.15	0.15	0.26	0.05	0.56	0.56	0.08	0.59	0.59
v/c Ratio	0.19	0.06	0.86	0.54	0.16	0.40	0.53	0.51	0.09	0.58	0.89	0.04
Control Delay	40.9	38.3	57.0	65.9	53.6	8.3	77.1	20.9	0.2	84.8	14.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	38.3	57.0	65.9	53.6	8.3	77.1	20.9	0.2	84.8	14.9	0.1
LOS	D	D	E	E	D	A	E	C	A	F	B	A
Approach Delay		54.0			23.8			22.6			18.8	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	35	19	239	94	35	21	36	296	0	70	183	0
Queue Length 95th (ft)	61	42	304	157	72	65	#75	372	0	113	553	m0
Internal Link Dist (ft)		178			588			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	295	538	492	209	282	972	152	2796	952	286	2766	740
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.05	0.73	0.52	0.15	0.39	0.53	0.51	0.09	0.53	0.89	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 135 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1952	333	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1		8	
Permitted Phases		2		6		8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	55.0	30.0	25.0	80.0	30.0	30.0
Total Split (%)	50.0%	27.3%	22.7%	72.7%	27.3%	27.3%
Maximum Green (s)	48.5	24.0	20.5	73.5	24.0	24.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.4	73.0	6.2	54.6	12.1	12.1
Actuated g/C Ratio	0.64	0.92	0.08	0.69	0.15	0.15
v/c Ratio	0.85	0.24	0.10	0.67	0.27	0.12
Control Delay	18.5	0.7	37.5	9.0	32.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	0.7	37.5	9.0	32.0	13.6
LOS	B	A	D	A	C	B
Approach Delay	15.9			9.4	28.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	274	0	4	198	25	0
Queue Length 95th (ft)	#741	13	9	326	55	10
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2301	1424	661	3311	920	412
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.23	0.03	0.50	0.14	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 79.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	715	450	1230	630	850	2335
Future Volume (vph)	715	450	1230	630	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		381		7		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	803	511	1281	685	1012	2684
Shared Lane Traffic (%)						
Lane Group Flow (vph)	803	511	1281	685	1012	2684
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	37.0		59.0	37.0	44.0	103.0
Total Split (%)	26.4%		42.1%	26.4%	31.4%	73.6%
Maximum Green (s)	30.5		52.0	30.5	39.0	96.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	30.5	140.0	52.0	89.5	39.0	96.0
Actuated g/C Ratio	0.22	1.00	0.37	0.64	0.28	0.69
v/c Ratio	1.21	0.36	0.70	0.70	1.11	0.79
Control Delay	153.1	0.7	52.2	15.5	109.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	153.1	0.7	52.2	15.5	109.5	17.2
LOS	F	A	D	B	F	B
Approach Delay	93.8		39.4			42.5
Approach LOS	F		D			D
Queue Length 50th (ft)	~458	0	321	128	~539	563
Queue Length 95th (ft)	#576	0	391	233	#599	575
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	665	1422	1832	985	915	3414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.36	0.70	0.70	1.11	0.79

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 51.3 Intersection LOS: D
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15

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

Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1095	355	115	940	170	105
Future Volume (vph)	1095	355	115	940	170	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.962					0.850
Flt Protected				0.995	0.950	
Satd. Flow (prot)	3267	0	0	3354	1703	1495
Flt Permitted				0.536	0.950	
Satd. Flow (perm)	3267	0	0	1807	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	81					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1177	399	129	1044	183	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1576	0	0	1173	183	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	85.0		13.0	98.0	22.0	22.0
Total Split (%)	70.8%		10.8%	81.7%	18.3%	18.3%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	79.0		9.5	92.0	16.0	16.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	90.8			90.8	17.2	17.2
Actuated g/C Ratio	0.76			0.76	0.14	0.14
v/c Ratio	0.63			0.86	0.75	0.71
Control Delay	7.8			15.3	69.2	68.1
Queue Delay	0.2			0.0	0.0	0.0
Total Delay	8.0			15.3	69.2	68.1
LOS	A			B	E	E
Approach Delay	8.0			15.3	68.7	
Approach LOS	A			B	E	
Queue Length 50th (ft)	283			185	132	109
Queue Length 95th (ft)	282			238	#260	140
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2492			1389	248	217
Starvation Cap Reductn	267			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.71			0.84	0.74	0.70

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 17.4		Intersection LOS: B	
Intersection Capacity Utilization 95.4%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 18: 25th & Lawrence

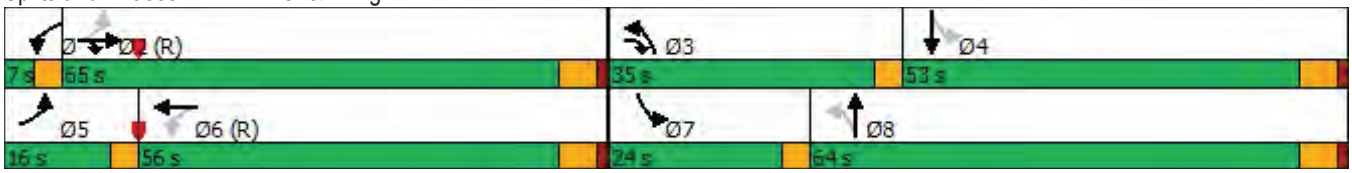
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	708	37	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	708	37	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.991			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3390	0	1518	3296	0	1589	3315	0
Flt Permitted	0.154			0.079			0.079			0.300		
Satd. Flow (perm)	258	3433	1370	145	3390	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		4			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	745	45	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	790	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Maximum Green (s)	12.5	59.0		3.5	50.0		31.5	58.0		20.5	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.72	0.95	0.66	0.61	0.74		1.03	0.61		0.59	1.05	
Control Delay	37.4	36.3	10.8	60.3	53.7		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	36.3	10.8	60.3	53.7		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.1			54.1			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	47	561	215	32	389		~343	343		99	~613	
Queue Length 95th (ft)	m57	m595	m239	#73	468		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	214	1295	835	85	1070		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.71	0.95	0.66	0.61	0.74		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.7		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	160	180	1135	65	275	250	140	155	340	60
Future Volume (vph)	130	1340	160	180	1135	65	275	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.991			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3184	0	1678	3187	0	0	3217	0
Flt Permitted	0.061			0.061			0.192				0.692	
Satd. Flow (perm)	105	3410	1383	105	3184	0	339	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112		5			85			11	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	174	217	1207	77	296	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	174	217	1284	0	296	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	21.0	72.0		20.4	71.4		14.6	67.6		53.0	53.0	
Total Split (%)	13.1%	45.0%		12.8%	44.6%		9.1%	42.3%		33.1%	33.1%	
Maximum Green (s)	17.5	66.0		16.9	65.4		11.1	61.6		47.0	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	86.0	66.0	80.6	84.8	65.4		64.1	61.6			47.0	
Actuated g/C Ratio	0.54	0.41	0.50	0.53	0.41		0.40	0.38			0.29	
v/c Ratio	0.97	0.97	0.23	1.00	0.98		1.30	0.39			1.02	
Control Delay	88.5	53.6	7.5	119.0	51.2		195.2	30.1			93.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	88.5	53.6	7.5	119.0	51.2		195.2	30.1			93.5	
LOS	F	D	A	F	D		F	C			F	
Approach Delay		53.3			61.0			91.5			93.5	
Approach LOS		D			E			F			F	
Queue Length 50th (ft)	186	673	20	170	661		~310	164			~393	
Queue Length 95th (ft)	166	m#874	m46	m#272	m#810		#528	178			#475	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	223	1406	752	217	1304		228	1279			671	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.97	0.97	0.23	1.00	0.98		1.30	0.39			1.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 68.0		Intersection LOS: E	
Intersection Capacity Utilization 94.5%		ICU Level of Service F	

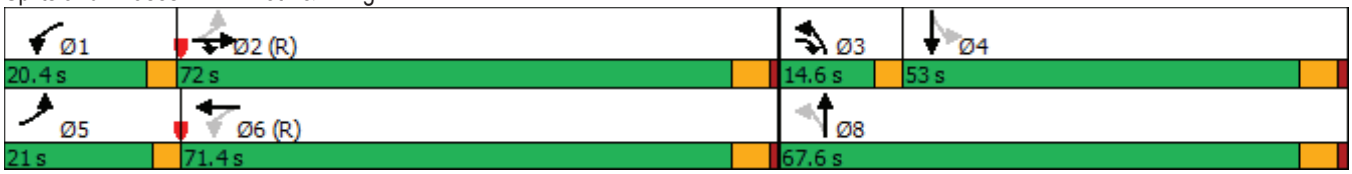
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	86	30	80	435	25	10	80	1599	140	260	2529	50
Future Volume (vph)	86	30	80	435	25	10	80	1599	140	260	2529	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2724	1863	1225	3433	1863	1583	2367	4979	1583	3433	4933	1259
Flt Permitted	0.555			0.736			0.053			0.082		
Satd. Flow (perm)	1591	1863	1225	2660	1863	1583	132	4979	1583	296	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125			179			125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Adj. Flow (vph)	134	33	100	473	27	11	87	1666	152	283	2581	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	33	100	473	27	11	87	1666	152	283	2581	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Perm

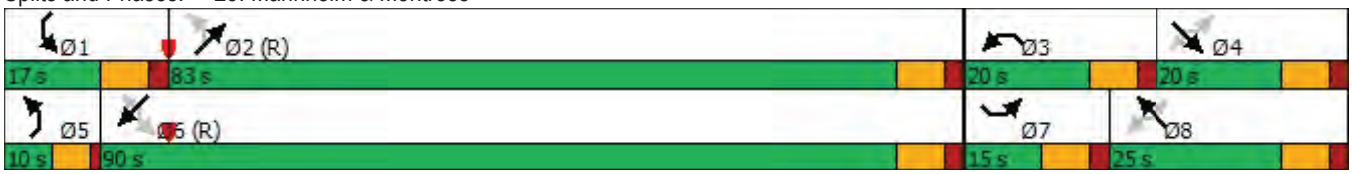
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		Free	6		6
Detector Phase	7	4	4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	15.0		8.0	15.0	15.0
Minimum Split (s)	15.0	15.0	15.0	12.0	25.0	25.0	8.0	22.0		15.0	22.0	22.0
Total Split (s)	15.0	20.0	20.0	20.0	25.0	25.0	10.0	83.0		17.0	90.0	90.0
Total Split (%)	10.7%	14.3%	14.3%	14.3%	17.9%	17.9%	7.1%	59.3%		12.1%	64.3%	64.3%
Maximum Green (s)	8.0	13.0	13.0	13.0	18.0	18.0	5.0	76.0		10.0	83.0	83.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	7.0		7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes		Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	4.0	7.0		5.0	7.0	7.0
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	22.8	10.0	10.0	22.6	12.0	12.0	87.1	78.1	140.0	94.9	84.0	84.0
Actuated g/C Ratio	0.16	0.07	0.07	0.16	0.09	0.09	0.62	0.56	1.00	0.68	0.60	0.60
v/c Ratio	0.34	0.25	0.49	0.94	0.17	0.04	0.45	0.60	0.10	0.64	0.87	0.09
Control Delay	48.5	65.4	13.3	83.5	59.0	0.3	22.1	20.8	0.1	16.8	31.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	65.4	13.3	83.5	59.0	0.3	22.1	20.8	0.1	16.8	31.1	0.5
LOS	D	E	B	F	E	A	C	C	A	B	C	A
Approach Delay		37.4			80.4			19.2			28.9	
Approach LOS		D			F			B			C	
Queue Length 50th (ft)	52	29	0	204	23	0	7	379	0	42	810	0
Queue Length 95th (ft)	56	64	18	258	53	0	m13	m419	m0	m60	m808	m0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250		250	200		200
Base Capacity (vph)	389	172	227	501	239	312	193	2778	1583	445	2959	805
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.19	0.44	0.94	0.11	0.04	0.45	0.60	0.10	0.64	0.87	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 24 (17%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 30.7		Intersection LOS: C	
Intersection Capacity Utilization 84.7%		ICU Level of Service E	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

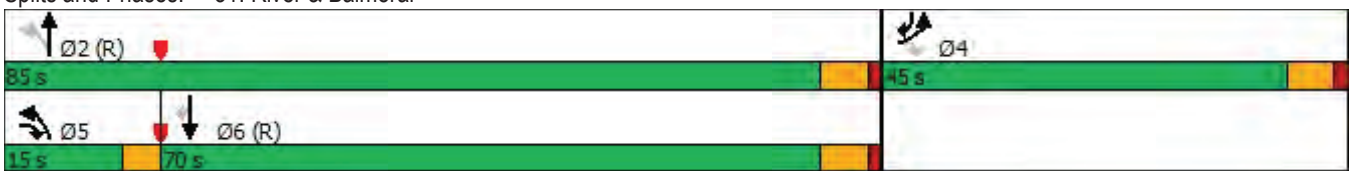


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Maximum Green (s)	39.0	11.5	11.5	79.0	64.0	39.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1948	20
Future Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1948	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4845	0
Flt Permitted	0.528			0.698			0.950			0.950		
Satd. Flow (perm)	816	1479	0	1145	1933	1455	1203	4933	1459	1530	4845	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				121			121		4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	1967	11	65	2072	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1967	11	65	2112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	20.0	15.0		20.0	15.0	15.0	15.0	85.0	85.0	20.0	90.0	
Total Split (%)	14.3%	10.7%		14.3%	10.7%	10.7%	10.7%	60.7%	60.7%	14.3%	64.3%	
Maximum Green (s)	16.5	9.0		16.5	9.0	9.0	10.5	79.0	79.0	15.5	84.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	27.5	13.2		20.6	7.4	7.4	8.8	89.2	89.2	11.2	93.8	
Actuated g/C Ratio	0.20	0.09		0.15	0.05	0.05	0.06	0.64	0.64	0.08	0.67	
v/c Ratio	0.53	0.43		0.35	0.07	0.58	0.45	0.63	0.01	0.53	0.65	
Control Delay	57.1	23.0		51.2	63.6	20.6	69.5	18.8	0.0	77.7	4.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.1	23.0		51.2	63.6	20.6	69.5	18.8	0.0	77.7	4.2	
LOS	E	C		D	E	C	E	B	A	E	A	
Approach Delay		42.4			33.7			19.5			6.4	
Approach LOS		D			C			B			A	
Queue Length 50th (ft)	96	10		54	6	0	31	263	0	63	76	
Queue Length 95th (ft)	155	0		68	19	37	46	395	m0	m69	m78	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	236	211		259	124	206	91	3142	973	169	3246	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.51	0.43		0.27	0.06	0.53	0.37	0.63	0.01	0.38	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 100 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

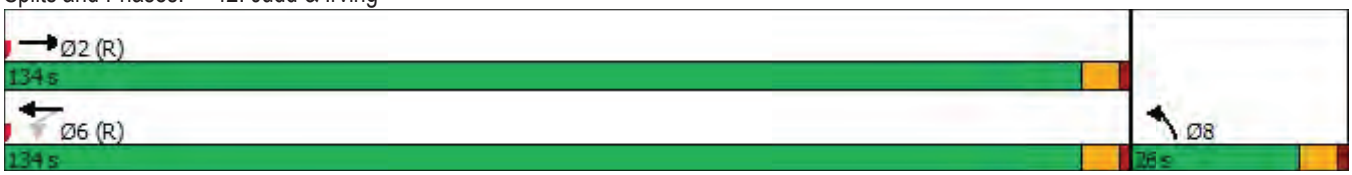
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1508	52	162
Future Volume (vph)	2122	26	54	1508	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3469	1800	0
Flt Permitted				0.586	0.987	
Satd. Flow (perm)	3466	0	0	2037	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				25	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1555	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1615	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	134.0		134.0	134.0	26.0	
Total Split (%)	83.8%		83.8%	83.8%	16.3%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	128.0		128.0	128.0	20.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	128.0			128.0	20.0	
Actuated g/C Ratio	0.80			0.80	0.12	
v/c Ratio	0.82			0.99	1.07	
Control Delay	12.5			39.7	134.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	12.5			39.7	134.3	
LOS	B			D	F	
Approach Delay	12.5			39.7	134.3	
Approach LOS	B			D	F	
Queue Length 50th (ft)	625			412	~279	
Queue Length 95th (ft)	720			m#434	#360	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2773			1629	246	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.82			0.99	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 30.8		Intersection LOS: C	
Intersection Capacity Utilization 103.8%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 42: Judd & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.959			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3394	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.192			0.440			0.132		
Satd. Flow (perm)	192	3353	0	358	3394	0	785	4663	0	235	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			52			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	804	299	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1103	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.0		46.5	31.6		44.3	30.4	30.4
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.28	0.28
v/c Ratio	0.92	0.71		0.68	0.96		0.80	0.86		0.61	0.40	0.22
Control Delay	70.0	34.3		28.6	54.1		39.1	43.2		30.9	33.6	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	70.0	34.3		28.6	54.1		39.1	43.2		30.9	33.6	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		42.2			50.1			42.2			28.9	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	122	216		80	385		166	280		62	114	0
Queue Length 95th (ft)	#275	312		108	#520		#235	#341		112	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	252	1155		310	1146		434	1372		263	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.65	0.96		0.80	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 42.7		Intersection LOS: D	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

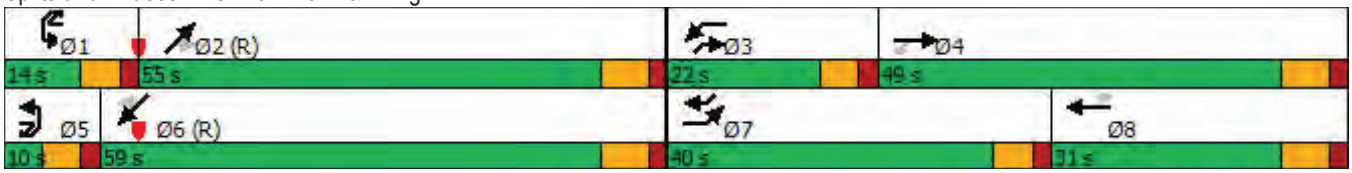
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	30	850	125	55	1470	550	545	1520	500
Future Volume (vph)	705	755	75	30	850	125	55	1470	550	545	1520	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	33	934	164	64	1670	647	708	1689	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	33	934	164	64	1670	647	708	1689	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	40.0	49.0	10.0	22.0	31.0	14.0	10.0	55.0	22.0	14.0	59.0	40.0
Total Split (%)	28.6%	35.0%	7.1%	15.7%	22.1%	10.0%	7.1%	39.3%	15.7%	10.0%	42.1%	28.6%
Maximum Green (s)	34.0	42.0	4.0	16.0	24.0	8.0	4.0	48.0	16.0	8.0	52.0	34.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	34.0	50.0	61.0	8.0	24.0	39.0	4.0	48.0	63.0	8.0	52.0	93.0
Actuated g/C Ratio	0.24	0.36	0.44	0.06	0.17	0.28	0.03	0.34	0.45	0.06	0.37	0.66
v/c Ratio	1.05	0.45	0.14	0.18	1.05	0.39	0.77	1.00	0.58	3.83	0.93	0.35
Control Delay	96.2	35.5	24.8	64.8	98.7	44.1	127.5	54.2	18.3	1301.3	52.8	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.2	35.5	24.8	64.8	98.7	44.1	127.5	54.2	18.3	1301.3	52.8	10.9
LOS	F	D	C	E	F	D	F	D	B	F	D	B
Approach Delay		63.6			89.8			46.4			336.6	
Approach LOS		E			F			D			F	
Queue Length 50th (ft)	~412	205	50	14	~338	121	28	561	260	~599	538	131
Queue Length 95th (ft)	#510	252	80	33	#432	157	m#65	#634	150	#607	#620	143
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	773	1821	681	357	891	424	83	1671	1264	185	1810	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.45	0.14	0.09	1.05	0.39	0.77	1.00	0.51	3.83	0.93	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 3.83			
Intersection Signal Delay: 162.2		Intersection LOS: F	
Intersection Capacity Utilization 99.9%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	65	140	125	50	315	250	1700	100	70	1435	65
Future Volume (vph)	15	65	140	125	50	315	250	1700	100	70	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.722			0.567			0.950			0.950		
Satd. Flow (perm)	1184	1863	1473	1056	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			183			113			144
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			673			1551			1184	
Travel Time (s)		5.9			15.3			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	71	163	136	54	342	309	1868	109	76	1495	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	71	163	136	54	342	309	1868	109	76	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	15.0	25.0	25.0	16.0	26.0	15.0	28.0	84.0	84.0	15.0	71.0	71.0
Total Split (%)	10.7%	17.9%	17.9%	11.4%	18.6%	10.7%	20.0%	60.0%	60.0%	10.7%	50.7%	50.7%
Maximum Green (s)	8.5	18.5	18.5	11.5	21.5	10.5	24.0	77.5	77.5	10.5	64.5	64.5
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	21.6	12.8	12.8	30.2	21.8	34.8	19.9	84.8	84.8	8.5	73.9	73.9
Actuated g/C Ratio	0.15	0.09	0.09	0.22	0.16	0.25	0.14	0.61	0.61	0.06	0.53	0.53
v/c Ratio	0.11	0.42	0.58	0.47	0.19	0.41	0.74	0.62	0.11	0.37	0.60	0.11
Control Delay	43.2	66.7	16.6	50.2	54.1	21.4	68.4	19.6	2.5	62.0	31.5	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	66.7	16.6	50.2	54.1	21.4	68.4	19.6	2.5	62.0	31.5	4.5
LOS	D	E	B	D	D	C	E	B	A	E	C	A
Approach Delay		32.8			32.1			25.4			31.7	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	62	0	103	45	69	141	389	0	35	298	7
Queue Length 95th (ft)	30	110	58	162	87	116	164	480	26	65	558	23
Internal Link Dist (ft)		178			593			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	208	246	336	295	307	868	508	3014	1002	258	2475	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.29	0.49	0.46	0.18	0.39	0.61	0.62	0.11	0.29	0.60	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 113 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	735	735	1770	735	55	1290
Future Volume (vph)	735	735	1770	735	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		413		132		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	835	826	1967	808	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	835	826	1967	808	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	47.0		83.0	47.0	10.0	93.0
Total Split (%)	33.6%		59.3%	33.6%	7.1%	66.4%
Maximum Green (s)	40.5		76.0	40.5	5.0	86.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	40.5	140.0	78.0	126.8	5.0	86.0
Actuated g/C Ratio	0.29	1.00	0.56	0.91	0.04	0.61
v/c Ratio	0.95	0.58	0.72	0.58	0.49	0.44
Control Delay	68.3	1.7	25.1	3.2	80.4	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.3	1.7	25.1	3.2	80.4	14.9
LOS	E	A	C	A	F	B
Approach Delay	35.2		18.7			17.5
Approach LOS	D		B			B
Queue Length 50th (ft)	385	0	483	92	26	228
Queue Length 95th (ft)	#492	0	541	138	51	261
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	883	1422	2748	1405	117	3058
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.58	0.72	0.58	0.49	0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 23.1		Intersection LOS: C	
Intersection Capacity Utilization 64.7%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	740	190	55	1255	185	115
Future Volume (vph)	740	190	55	1255	185	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.961					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3264	0	0	3362	1703	1495
Flt Permitted				0.779	0.950	
Satd. Flow (perm)	3264	0	0	2627	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	81					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	787	279	79	1321	223	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1066	0	0	1400	223	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	72.0		7.0	79.0	31.0	31.0
Total Split (%)	65.5%		6.4%	71.8%	28.2%	28.2%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	66.0		3.5	73.0	25.0	25.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	77.2			77.2	20.8	20.8
Actuated g/C Ratio	0.70			0.70	0.19	0.19
v/c Ratio	0.46			0.76	0.69	0.57
Control Delay	7.8			11.4	52.7	47.9
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	7.8			11.4	52.7	47.9
LOS	A			B	D	D
Approach Delay	7.8			11.4	50.7	
Approach LOS	A			B	D	
Queue Length 50th (ft)	143			389	147	103
Queue Length 95th (ft)	207			m502	202	128
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2314			1843	387	339
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.46			0.76	0.58	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 88.1%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 18: 25th & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.971			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3322	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3322	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		25			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1078	260	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	94.5	8.6	1.5	18.9	69.4		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	94.5	8.6	1.5	18.9	69.4		92.2	77.0		68.1	112.8	
LOS	F	A	A	B	E		F	E		E	F	
Approach Delay		17.6			66.9			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	96	46	1	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#199	m52	m8	49	#791		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1320		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.5		Intersection LOS: E	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Future Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.943	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3072	0
Flt Permitted	0.061			0.126			0.202				0.781	
Satd. Flow (perm)	105	3410	1383	217	3195	0	357	3280	0	0	2411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		3			28			81	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1490	53	351	533	151	45	229	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1543	0	351	684	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	13.7	69.9		17.1	73.3		25.0	53.0		28.0	28.0	
Total Split (%)	9.8%	49.9%		12.2%	52.4%		17.9%	37.9%		20.0%	20.0%	
Maximum Green (s)	10.2	63.9		13.6	67.3		21.5	47.0		22.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	78.6	65.9	90.9	81.4	67.3		49.5	47.0			22.0	
Actuated g/C Ratio	0.56	0.47	0.65	0.58	0.48		0.35	0.34			0.16	
v/c Ratio	0.90	0.72	0.26	0.68	1.00		1.07	0.61			0.99	
Control Delay	87.7	23.0	1.1	33.6	39.5		105.3	40.0			88.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	87.7	23.0	1.1	33.6	39.5		105.3	40.0			88.6	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		25.8			39.0			62.1			88.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	105	203	4	74	~500		~283	262			180	
Queue Length 95th (ft)	#211	244	7	m76	m465		#456	194			#267	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	170	1606	968	267	1537		329	1119			447	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.90	0.72	0.26	0.62	1.00		1.07	0.61			0.99	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 129 (92%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 44.4		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	

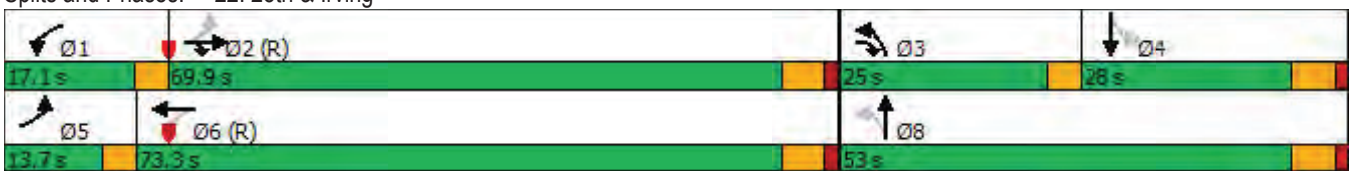
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	0	69	860	35	270	138	1887	0	290	1689	77
Future Volume (vph)	55	0	69	860	35	270	138	1887	0	290	1689	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2701	0	1277	3433	1863	1583	2918	4887	0	1770	4933	1382
Flt Permitted	0.000			0.950			0.072			0.071		
Satd. Flow (perm)	0	0	1277	3433	1863	1583	221	4887	0	132	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150			168						99
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	93	0	135	935	38	293	276	2007	0	315	1816	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	0	135	935	38	293	276	2007	0	315	1816	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1		1	1	1
Detector Template	Left		Right	Left	Thru	Right	Left			Left		Right
Leading Detector (ft)	36		36	20	100	20	36	256		20	256	36
Trailing Detector (ft)	0		0	0	0	0	0	250		0	250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250		0	250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6		20	6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Detector Phase	7		4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0		8.0	5.0	5.0	5.0	3.0	15.0		5.0	15.0	15.0
Minimum Split (s)	9.5		15.0	9.5	25.0	25.0	8.0	22.0		9.5	22.0	22.0
Total Split (s)	9.6		15.0	25.4	30.8	30.8	11.0	99.5		9.6	98.1	98.1
Total Split (%)	6.4%		10.0%	17.0%	20.6%	20.6%	7.4%	66.6%		6.4%	65.6%	65.6%
Maximum Green (s)	5.1		8.0	20.9	23.8	23.8	6.0	92.5		5.1	91.1	91.1
Yellow Time (s)	3.5		5.0	3.5	5.0	5.0	4.0	5.0		3.5	5.0	5.0
All-Red Time (s)	1.0		2.0	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5		7.0	4.5	7.0	7.0	5.0	7.0		4.5	7.0	7.0
Lead/Lag	Lag		Lag	Lead	Lead	Lead	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes		Yes		Yes		
Vehicle Extension (s)	3.0		5.0	3.0	3.0	3.0	4.0	7.0		3.0	7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min		None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	11.5		8.0	23.0	17.4	17.4	93.9	91.9		93.6	91.1	91.1
Actuated g/C Ratio	0.08		0.05	0.15	0.12	0.12	0.63	0.61		0.63	0.61	0.61
v/c Ratio	0.45		0.64	1.77	0.18	0.88	1.12	0.67		2.17	0.60	0.11
Control Delay	73.4		21.8	390.3	58.3	53.4	114.8	20.2		574.5	19.1	2.5
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	73.4		21.8	390.3	58.3	53.4	114.8	20.2		574.5	19.1	2.5
LOS	E		C	F	E	D	F	C		F	B	A
Approach Delay		42.8			302.3			31.6			96.8	
Approach LOS		D			F			C			F	
Queue Length 50th (ft)	45		0	~720	34	124	~68	442		~421	383	1
Queue Length 95th (ft)	#57		0	#793	69	233	38	491		#619	427	15
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250			200		200
Base Capacity (vph)	207		210	527	296	393	246	3023		145	3005	880
Starvation Cap Reductn	0		0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0		0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0		0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.45		0.64	1.77	0.13	0.75	1.12	0.66		2.17	0.60	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.17			
Intersection Signal Delay: 113.3		Intersection LOS: F	
Intersection Capacity Utilization 88.6%		ICU Level of Service E	

Analysis Period (min) 15

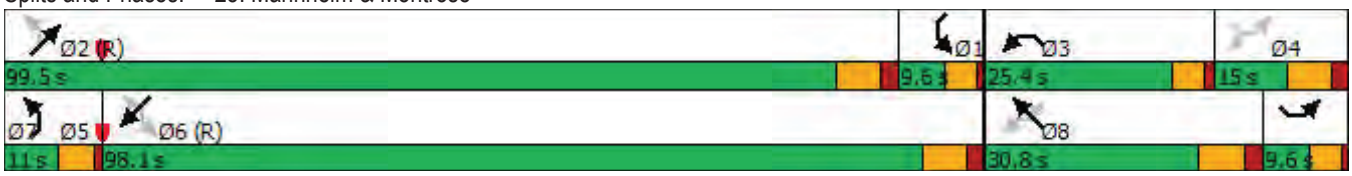
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 25: Mannheim & Montrose

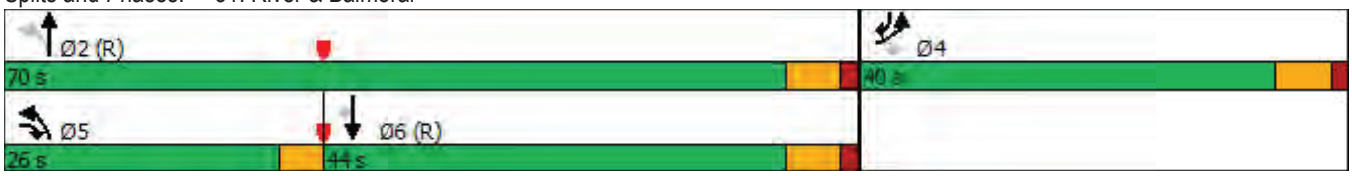


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	431	936	464	185
Future Volume (vph)	295	139	431	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.403			
Satd. Flow (perm)	3224	1468	722	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	459	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	459	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	43.3	83.7	81.2	57.2	80.0
Actuated g/C Ratio	0.15	0.39	0.76	0.74	0.52	0.73
v/c Ratio	0.66	0.26	0.63	0.37	0.29	0.19
Control Delay	50.2	5.1	8.9	6.0	17.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.1	8.9	6.0	17.3	1.3
LOS	D	A	A	A	B	A
Approach Delay	34.3			6.9	12.6	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	13	87	115	103	0
Queue Length 95th (ft)	151	31	161	177	181	21
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	711	766	2724	1836	1384
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.60	0.37	0.29	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1370	35
Future Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1370	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4803	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		6	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	1938	22	106	1442	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1938	22	106	1500	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.60	0.02	0.65	0.45	
Control Delay	63.9	33.8		57.4	60.4	22.3	92.8	5.4	0.1	50.0	18.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	92.8	5.4	0.1	50.0	18.9	
LOS	E	C		E	E	C	F	A	A	D	B	
Approach Delay		52.9			34.2			8.0			20.9	
Approach LOS		D			C			A			C	
Queue Length 50th (ft)	58	9		42	5	0	61	76	0	103	242	
Queue Length 95th (ft)	72	14		70	20	61	84	158	m0	m110	m283	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3312	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.60	0.02	0.57	0.45	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2060	181	28
Future Volume (vph)	1513	12	14	2060	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2168	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2184	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	104.0		104.0	104.0	36.0	
Total Split (%)	74.3%		74.3%	74.3%	25.7%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	98.0		98.0	98.0	30.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	101.8			101.8	26.2	
Actuated g/C Ratio	0.73			0.73	0.19	
v/c Ratio	0.62			0.94	0.79	
Control Delay	11.2			22.2	69.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	11.2			22.2	69.0	
LOS	B			C	E	
Approach Delay	11.2			22.2	69.0	
Approach LOS	B			C	E	
Queue Length 50th (ft)	357			556	240	
Queue Length 95th (ft)	451			m550	270	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2617			2314	408	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.94	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

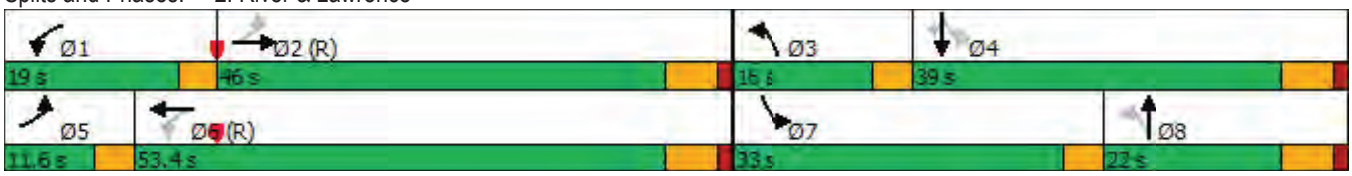
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.984			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3490	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.178			0.091			0.238			0.197		
Satd. Flow (perm)	305	3449	0	171	3490	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			13			96				208
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	867	106	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	973	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	11.6	46.0		19.0	53.4		16.0	22.0		33.0	39.0	39.0
Total Split (%)	9.7%	38.3%		15.8%	44.5%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	8.1	40.0		15.5	47.4		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	50.7	40.3		61.2	47.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.42	0.34		0.51	0.40		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.54	0.91		0.89	0.70		0.85	0.93		0.97	0.91	0.44
Control Delay	21.8	43.8		61.0	33.3		59.1	64.5		66.1	56.4	10.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.8	43.8		61.0	33.3		59.1	64.5		66.1	56.4	10.1
LOS	C	D		E	C		E	E		E	E	B
Approach Delay		41.6			39.1			63.2			52.2	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	32	417		141	323		103	170		307	361	23
Queue Length 95th (ft)	m49	#543		#256	375		#230	#234		#522	#484	79
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	218	1179		296	1386		247	735		496	994	568
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.54	0.91		0.86	0.70		0.84	0.93		0.96	0.91	0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.4		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



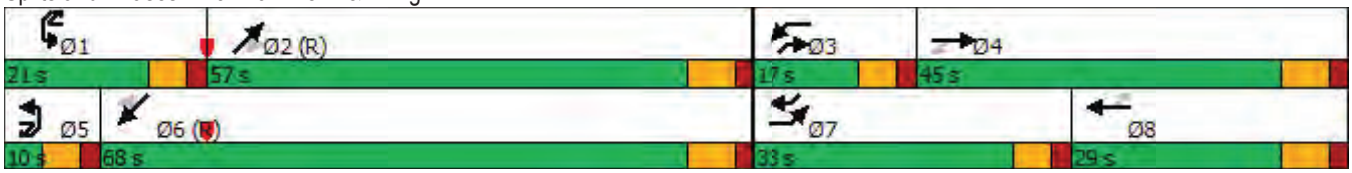
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	0	680	110	55	1090	720	585	2230	770
Future Volume (vph)	635	1080	100	0	680	110	55	1090	720	585	2230	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	0	810	131	60	1198	867	672	2323	885
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	0	810	131	60	1198	867	672	2323	885
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	33.0	45.0	10.0	17.0	29.0	21.0	10.0	57.0	17.0	21.0	68.0	33.0
Total Split (%)	23.6%	32.1%	7.1%	12.1%	20.7%	15.0%	7.1%	40.7%	12.1%	15.0%	48.6%	23.6%
Maximum Green (s)	27.0	38.0	4.0	11.0	22.0	15.0	4.0	50.0	11.0	15.0	61.0	27.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	27.0	39.7	50.7		22.0	44.0	4.0	50.0	66.3	15.0	61.0	95.0
Actuated g/C Ratio	0.19	0.28	0.36		0.16	0.31	0.03	0.36	0.47	0.11	0.44	0.68
v/c Ratio	1.08	0.90	0.22		1.01	0.29	0.69	0.67	0.69	1.95	1.05	0.48
Control Delay	111.7	57.4	32.6		92.5	38.3	87.2	43.3	36.4	470.9	74.0	11.8
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.7	57.4	32.6		92.5	38.3	87.2	43.3	36.4	470.9	74.0	11.8
LOS	F	E	C		F	D	F	D	D	F	E	B
Approach Delay		73.0			84.9			41.7			128.5	
Approach LOS		E			F			D			F	
Queue Length 50th (ft)	~348	435	75		~277	90	28	276	401	~487	~845	202
Queue Length 95th (ft)	#473	431	116		#330	137	m#53	320	273	#585	#935	238
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330			335	380		465	350		450
Base Capacity (vph)	619	1501	556		801	457	87	1788	1290	344	2202	1845
Starvation Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.90	0.22		1.01	0.29	0.69	0.67	0.67	1.95	1.05	0.48

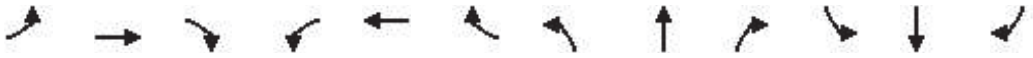
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.95			
Intersection Signal Delay: 90.6		Intersection LOS: F	
Intersection Capacity Utilization 96.5%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	35	300	100	40	350	70	1335	70	165	2145	25
Future Volume (vph)	50	35	300	100	40	350	70	1335	70	165	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.535			0.732			0.950			0.950		
Satd. Flow (perm)	877	1863	1473	1364	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			380			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			668			1551			1184	
Travel Time (s)		5.9			15.2			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	61	38	361	109	43	380	80	1435	76	179	2466	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	38	361	109	43	380	80	1435	76	179	2466	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm



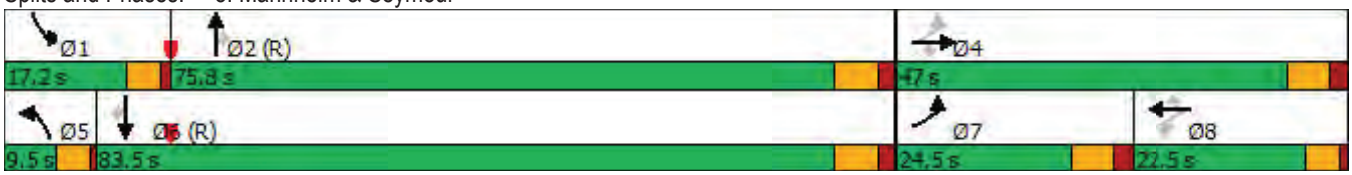
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	22.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	22.5	9.5	75.8	75.8	17.2	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	16.1%	6.8%	54.1%	54.1%	12.3%	59.6%	59.6%
Maximum Green (s)	18.0	40.5	40.5	18.0	18.0	18.0	5.5	69.3	69.3	12.7	77.0	77.0
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)				7.0	7.0	7.0						
Flash Dont Walk (s)				11.0	11.0	11.0						
Pedestrian Calls (#/hr)				0	0	0						
Act Effct Green (s)	33.2	33.2	33.2	19.9	19.9	19.9	7.1	77.6	77.6	11.7	82.7	82.7
Actuated g/C Ratio	0.24	0.24	0.24	0.14	0.14	0.14	0.05	0.55	0.55	0.08	0.59	0.59
v/c Ratio	0.23	0.09	0.86	0.56	0.16	0.53	0.54	0.52	0.08	0.62	0.89	0.04
Control Delay	42.0	38.8	56.8	68.2	54.5	7.7	78.1	21.6	0.2	86.5	10.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	38.8	56.8	68.2	54.5	7.7	78.1	21.6	0.2	86.5	10.9	0.1
LOS	D	D	E	E	D	A	E	C	A	F	B	A
Approach Delay		53.3			23.9			23.4			15.8	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	44	27	239	95	35	0	36	301	0	85	136	0
Queue Length 95th (ft)	72	54	304	159	73	50	#75	379	0	125	150	m0
Internal Link Dist (ft)		178			588			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	295	538	492	202	276	736	149	2760	941	312	2768	741
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.07	0.73	0.54	0.16	0.52	0.54	0.52	0.08	0.57	0.89	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 139 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1952	333	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	84.5	16.0	9.5	94.0	16.0	16.0
Total Split (%)	76.8%	14.5%	8.6%	85.5%	14.5%	14.5%
Maximum Green (s)	78.0	10.0	5.0	87.5	10.0	10.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	60.1	81.3	5.2	63.2	10.3	10.3
Actuated g/C Ratio	0.70	0.94	0.06	0.73	0.12	0.12
v/c Ratio	0.78	0.24	0.13	0.63	0.35	0.15
Control Delay	11.7	0.5	46.9	6.7	41.7	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	0.5	46.9	6.7	41.7	18.9
LOS	B	A	D	A	D	B
Approach Delay	10.1			7.2	37.8	
Approach LOS	B			A	D	
Queue Length 50th (ft)	255	0	4	185	25	0
Queue Length 95th (ft)	493	9	11	226	72	11
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	3249	1400	151	3354	360	177
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.24	0.13	0.49	0.35	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	715	450	1235	735	850	2335
Future Volume (vph)	715	450	1235	735	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		381		13		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	803	511	1286	799	1012	2684
Shared Lane Traffic (%)						
Lane Group Flow (vph)	803	511	1286	799	1012	2684
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	45.0		46.0	45.0	49.0	95.0
Total Split (%)	32.1%		32.9%	32.1%	35.0%	67.9%
Maximum Green (s)	38.5		39.0	38.5	44.0	88.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	38.5	140.0	39.0	84.5	44.0	88.0
Actuated g/C Ratio	0.28	1.00	0.28	0.60	0.31	0.63
v/c Ratio	0.96	0.36	0.94	0.86	0.98	0.86
Control Delay	72.1	0.7	62.5	33.4	71.1	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	0.7	62.5	33.4	71.1	24.6
LOS	E	A	E	C	E	C
Approach Delay	44.3		51.3			37.4
Approach LOS	D		D			D
Queue Length 50th (ft)	372	0	420	562	471	682
Queue Length 95th (ft)	#491	0	#512	801	#542	696
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	839	1422	1374	933	1032	3129
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.36	0.94	0.86	0.98	0.86

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 42.8 Intersection LOS: D

Intersection Capacity Utilization 82.7% ICU Level of Service E

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1135	405	115	940	195	105
Future Volume (vph)	1135	405	115	940	195	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.959					0.850
Flt Protected				0.995	0.950	
Satd. Flow (prot)	3258	0	0	3354	1703	1495
Flt Permitted				0.521	0.950	
Satd. Flow (perm)	3258	0	0	1756	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	105					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1220	455	129	1044	210	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1675	0	0	1173	210	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	89.5		6.5	96.0	24.0	24.0
Total Split (%)	74.6%		5.4%	80.0%	20.0%	20.0%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	83.5		3.0	90.0	18.0	18.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	90.0			90.0	18.0	18.0
Actuated g/C Ratio	0.75			0.75	0.15	0.15
v/c Ratio	0.68			0.89	0.82	0.68
Control Delay	8.8			17.8	75.1	64.4
Queue Delay	0.3			0.0	0.0	0.0
Total Delay	9.1			17.8	75.1	64.4
LOS	A			B	E	E
Approach Delay	9.1			17.8	70.6	
Approach LOS	A			B	E	
Queue Length 50th (ft)	278			192	160	113
Queue Length 95th (ft)	345			#578	#289	137
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2469			1323	261	229
Starvation Cap Reductn	266			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.76			0.89	0.80	0.66

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 57 (48%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 99.4%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 18: 25th & Lawrence

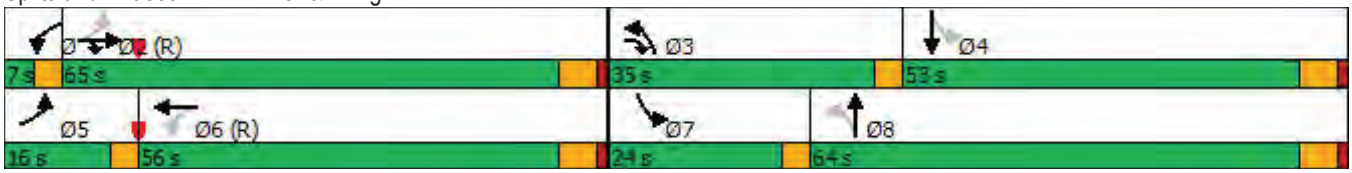
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3373	0	1518	3296	0	1589	3315	0
Flt Permitted	0.151			0.079			0.079			0.300		
Satd. Flow (perm)	253	3433	1370	145	3373	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		7			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	719	76	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	795	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Maximum Green (s)	12.5	59.0		3.5	50.0		31.5	58.0		20.5	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.73	0.95	0.66	0.61	0.75		1.03	0.61		0.59	1.05	
Control Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.3			54.2			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	50	555	200	32	392		~343	343		99	~613	
Queue Length 95th (ft)	m60	m#599	m223	#73	472		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	212	1295	835	85	1066		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.72	0.95	0.66	0.61	0.75		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.8		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3217	0
Flt Permitted	0.080			0.060			0.198				0.692	
Satd. Flow (perm)	138	3410	1383	103	3181	0	350	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		5			85			12	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	158	217	1112	77	285	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	158	217	1189	0	285	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	20.2	72.0		20.4	72.2		13.6	67.6		54.0	54.0	
Total Split (%)	12.6%	45.0%		12.8%	45.1%		8.5%	42.3%		33.8%	33.8%	
Maximum Green (s)	16.7	66.0		16.9	66.2		10.1	61.6		48.0	48.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.1	66.0	79.6	85.7	66.3		64.1	61.6			48.0	
Actuated g/C Ratio	0.53	0.41	0.50	0.54	0.41		0.40	0.38			0.30	
v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	
Control Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
LOS	E	D	A	F	D		F	C			F	
Approach Delay		52.9			49.7			86.8			88.1	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	174	673	18	168	576		~291	164			373	
Queue Length 95th (ft)	154	m#890	m43	m#269	m630		#504	178			#466	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	229	1406	738	217	1321		224	1279			685	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 62.9		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

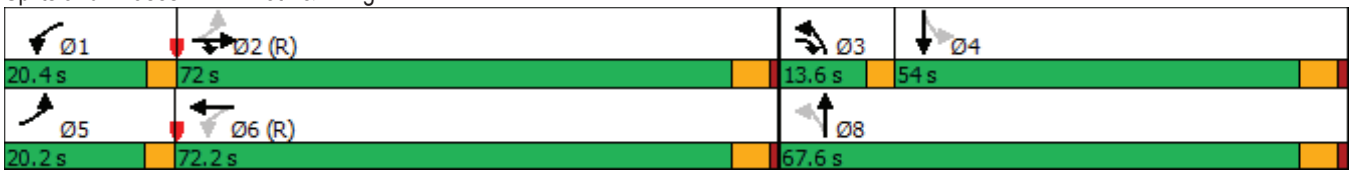
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	101	0	95	835	25	90	80	1599	0	260	2684	50
Future Volume (vph)	101	0	95	835	25	90	80	1599	0	260	2684	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2724	0	1225	3433	1863	1583	2367	4979	0	1770	4933	1259
Flt Permitted	0.000			0.950			0.058			0.064		
Satd. Flow (perm)	0	0	1225	3433	1863	1583	145	4979	0	119	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150			150						117
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Adj. Flow (vph)	158	0	119	908	27	98	87	1666	0	283	2739	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	0	119	908	27	98	87	1666	0	283	2739	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1		1	1	1
Detector Template	Left		Right	Left	Thru	Right	Left			Left		Right
Leading Detector (ft)	36		36	20	100	20	36	256		20	256	36
Trailing Detector (ft)	0		0	0	0	0	0	250		0	250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250		0	250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6		20	6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Detector Phase	7		4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	8.0		8.0	5.0	5.0	5.0	3.0	15.0		5.0	15.0	15.0
Minimum Split (s)	15.0		15.0	12.0	25.0	25.0	8.0	22.0		9.5	22.0	22.0
Total Split (s)	16.0		15.0	32.0	31.0	31.0	8.0	73.9		28.6	94.5	94.5
Total Split (%)	10.7%		10.0%	21.4%	20.7%	20.7%	5.4%	49.4%		19.1%	63.2%	63.2%
Maximum Green (s)	9.0		8.0	25.0	24.0	24.0	3.0	66.9		24.1	87.5	87.5
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0	4.0	5.0		3.5	5.0	5.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0		7.0	7.0	7.0	7.0	5.0	7.0		4.5	7.0	7.0
Lead/Lag	Lag		Lag	Lead	Lead	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes		Yes		Yes		
Vehicle Extension (s)	5.0		5.0	3.0	3.0	3.0	4.0	7.0		3.0	7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min		None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	25.3		8.0	25.0	7.7	7.7	74.1	69.1		98.0	87.5	87.5
Actuated g/C Ratio	0.17		0.05	0.17	0.05	0.05	0.50	0.46		0.66	0.59	0.59
v/c Ratio	0.34		0.57	1.58	0.28	0.44	0.75	0.72		0.88	0.95	0.09
Control Delay	57.7		15.5	308.9	74.9	7.5	56.1	35.2		68.9	37.6	0.5
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	57.7		15.5	308.9	74.9	7.5	56.1	35.2		68.9	37.6	0.5
LOS	E		B	F	E	A	E	D		E	D	A
Approach Delay		39.6			274.2			36.2			39.6	
Approach LOS		D			F			D			D	
Queue Length 50th (ft)	71		0	~646	26	0	14	487		207	878	0
Queue Length 95th (ft)	76		15	#780	59	9	#41	547		#354	957	0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250			200		200
Base Capacity (vph)	461		207	574	299	380	116	2301		344	2887	785
Starvation Cap Reductn	0		0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0		0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0		0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.34		0.57	1.58	0.09	0.26	0.75	0.72		0.82	0.95	0.09

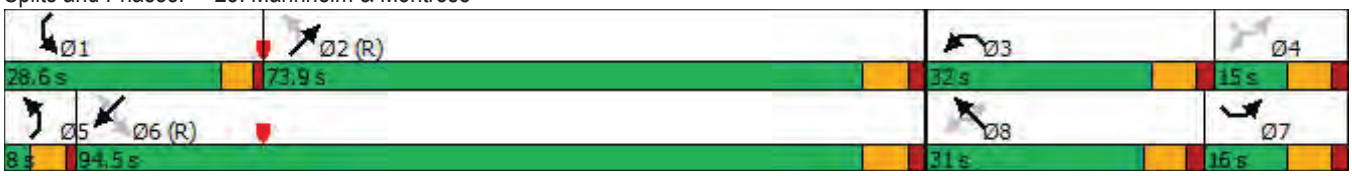
Intersection Summary			
Area Type:	Other		
Cycle Length: 149.5			
Actuated Cycle Length: 149.5			
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.58			
Intersection Signal Delay: 78.0		Intersection LOS: E	
Intersection Capacity Utilization 97.3%		ICU Level of Service F	

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 25: Mannheim & Montrose

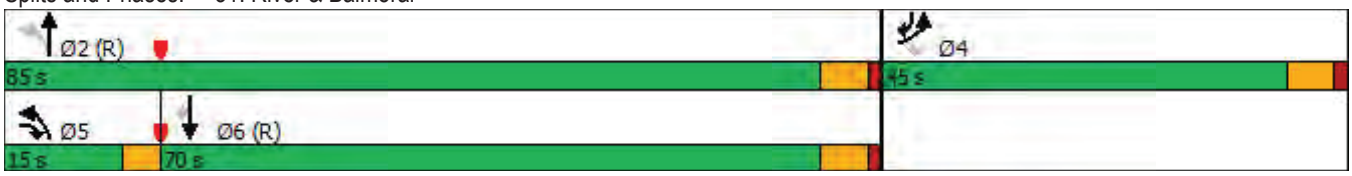


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Maximum Green (s)	39.0	11.5	11.5	79.0	64.0	39.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1973	20
Future Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1973	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4846	0
Flt Permitted	0.541			0.698			0.950			0.950		
Satd. Flow (perm)	836	1479	0	1145	1933	1455	1203	4933	1459	1530	4846	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				113			113		3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	1967	11	65	2099	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1967	11	65	2139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	18.0	25.0		11.0	18.0	18.0	15.0	85.0	85.0	19.0	89.0	
Total Split (%)	12.9%	17.9%		7.9%	12.9%	12.9%	10.7%	60.7%	60.7%	13.6%	63.6%	
Maximum Green (s)	14.5	19.0		7.5	12.0	12.0	10.5	79.0	79.0	14.5	83.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	27.6	16.3		18.0	8.2	8.2	8.8	89.7	89.7	11.0	94.1	
Actuated g/C Ratio	0.20	0.12		0.13	0.06	0.06	0.06	0.64	0.64	0.08	0.67	
v/c Ratio	0.54	0.38		0.41	0.06	0.58	0.45	0.62	0.01	0.54	0.66	
Control Delay	57.6	19.5		54.8	61.8	22.1	71.8	15.7	0.0	80.7	2.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.6	19.5		54.8	61.8	22.1	71.8	15.7	0.0	80.7	2.0	
LOS	E	B		D	E	C	E	B	A	F	A	
Approach Delay		41.1			35.8			16.5			4.3	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	97	10		54	6	0	31	241	0	63	32	
Queue Length 95th (ft)	154	0		67	19	43	45	316	m0	m62	m32	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	229	271		171	165	228	91	3159	975	158	3257	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.34		0.41	0.04	0.48	0.37	0.62	0.01	0.41	0.66	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 111 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 34: Mannheim & United

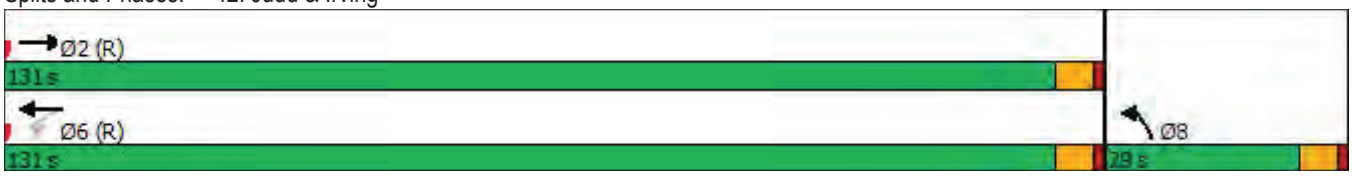
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1383	52	162
Future Volume (vph)	2122	26	54	1383	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3470	1800	0
Flt Permitted				0.572	0.987	
Satd. Flow (perm)	3466	0	0	1989	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				22	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1426	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1486	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	131.0		131.0	131.0	29.0	
Total Split (%)	81.9%		81.9%	81.9%	18.1%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	125.0		125.0	125.0	23.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	124.8			124.8	23.2	
Actuated g/C Ratio	0.78			0.78	0.14	
v/c Ratio	0.84			1.07dl	0.94	
Control Delay	15.0			36.7	101.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	15.0			36.7	101.4	
LOS	B			D	F	
Approach Delay	15.0			36.7	101.4	
Approach LOS	B			D	F	
Queue Length 50th (ft)	697			402	256	
Queue Length 95th (ft)	803			m#415	#329	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2708			1553	280	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.84			0.96	0.94	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 42: Judd & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.945			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3345	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.191			0.429			0.134		
Satd. Flow (perm)	192	3353	0	356	3345	0	765	4663	0	239	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			114			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	642	376	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1018	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.1		46.4	31.6		43.7	29.9	29.9
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.27	0.27
v/c Ratio	0.92	0.71		0.68	0.87		0.81	0.86		0.61	0.41	0.22
Control Delay	69.5	33.8		28.7	40.0		39.4	43.2		30.9	34.0	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	69.5	33.8		28.7	40.0		39.4	43.2		30.9	34.0	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		41.7			38.1			42.3			29.1	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	126	245		80	319		166	280		62	114	0
Queue Length 95th (ft)	#275	312		108	#402		#240	#341		111	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	253	1155		309	1173		433	1372		262	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.66	0.87		0.81	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 39.1		Intersection LOS: D	
Intersection Capacity Utilization 84.6%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	30	850	125	55	1470	550	545	1520	500
Future Volume (vph)	705	755	75	30	850	125	55	1470	550	545	1520	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	33	934	164	64	1670	647	708	1689	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	33	934	164	64	1670	647	708	1689	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	40.0	49.0	10.0	22.0	31.0	14.0	10.0	55.0	22.0	14.0	59.0	40.0
Total Split (%)	28.6%	35.0%	7.1%	15.7%	22.1%	10.0%	7.1%	39.3%	15.7%	10.0%	42.1%	28.6%
Maximum Green (s)	34.0	42.0	4.0	16.0	24.0	8.0	4.0	48.0	16.0	8.0	52.0	34.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	34.0	50.0	61.0	8.0	24.0	39.0	4.0	48.0	63.0	8.0	52.0	93.0
Actuated g/C Ratio	0.24	0.36	0.44	0.06	0.17	0.28	0.03	0.34	0.45	0.06	0.37	0.66
v/c Ratio	1.05	0.45	0.14	0.18	1.05	0.39	0.77	1.00	0.58	3.83	0.93	0.35
Control Delay	96.2	35.5	24.8	64.8	98.7	44.1	127.5	54.2	18.3	1296.1	47.7	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.2	35.5	24.8	64.8	98.7	44.1	127.5	54.2	18.3	1296.1	47.7	13.0
LOS	F	D	C	E	F	D	F	D	B	F	D	B
Approach Delay		63.6			89.8			46.4			333.0	
Approach LOS		E			F			D			F	
Queue Length 50th (ft)	~412	205	50	14	~338	121	28	561	260	~612	533	139
Queue Length 95th (ft)	#510	252	80	33	#432	157	m#65	#634	150	m#597	m544	m162
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	773	1821	681	357	891	424	83	1671	1264	185	1810	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.45	0.14	0.09	1.05	0.39	0.77	1.00	0.51	3.83	0.93	0.35

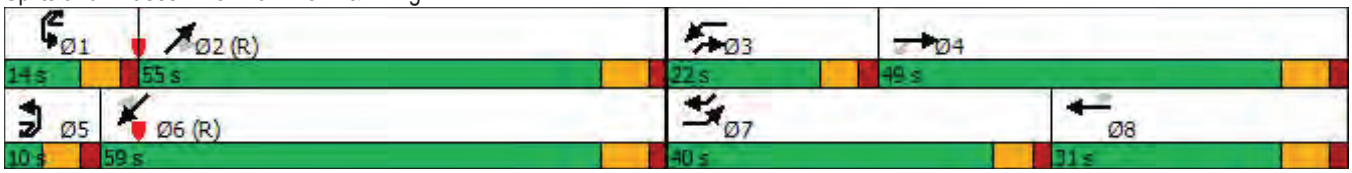
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 3.83			
Intersection Signal Delay: 160.9		Intersection LOS: F	
Intersection Capacity Utilization 99.9%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	65	140	125	50	315	250	1700	100	70	1435	65
Future Volume (vph)	15	65	140	125	50	315	250	1700	100	70	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.722			0.567			0.950			0.950		
Satd. Flow (perm)	1184	1863	1473	1056	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			183			113			144
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			673			1551			1184	
Travel Time (s)		5.9			15.3			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	71	163	136	54	342	309	1868	109	76	1495	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	71	163	136	54	342	309	1868	109	76	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	15.0	25.0	25.0	16.0	26.0	15.0	28.0	84.0	84.0	15.0	71.0	71.0
Total Split (%)	10.7%	17.9%	17.9%	11.4%	18.6%	10.7%	20.0%	60.0%	60.0%	10.7%	50.7%	50.7%
Maximum Green (s)	8.5	18.5	18.5	11.5	21.5	10.5	24.0	77.5	77.5	10.5	64.5	64.5
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	21.6	12.8	12.8	30.2	21.8	34.8	19.9	84.8	84.8	8.5	73.9	73.9
Actuated g/C Ratio	0.15	0.09	0.09	0.22	0.16	0.25	0.14	0.61	0.61	0.06	0.53	0.53
v/c Ratio	0.11	0.42	0.58	0.47	0.19	0.41	0.74	0.62	0.11	0.37	0.60	0.11
Control Delay	43.2	66.7	16.6	50.2	54.1	21.4	68.4	19.6	2.5	62.0	31.5	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	66.7	16.6	50.2	54.1	21.4	68.4	19.6	2.5	62.0	31.5	4.5
LOS	D	E	B	D	D	C	E	B	A	E	C	A
Approach Delay		32.8			32.1			25.4			31.7	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	62	0	103	45	69	141	389	0	35	298	7
Queue Length 95th (ft)	30	110	58	162	87	116	164	480	26	65	558	23
Internal Link Dist (ft)		178			593			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	208	246	336	295	307	868	508	3014	1002	258	2475	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.29	0.49	0.46	0.18	0.39	0.61	0.62	0.11	0.29	0.60	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 113 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	495	735	1770	735	55	1290
Future Volume (vph)	495	735	1770	735	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		413		132		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	563	826	1967	808	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	826	1967	808	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	47.0		83.0	47.0	10.0	93.0
Total Split (%)	33.6%		59.3%	33.6%	7.1%	66.4%
Maximum Green (s)	40.5		76.0	40.5	5.0	86.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	37.9	140.0	80.0	126.2	6.0	88.6
Actuated g/C Ratio	0.27	1.00	0.57	0.90	0.04	0.63
v/c Ratio	0.68	0.58	0.70	0.58	0.41	0.43
Control Delay	49.9	1.7	17.7	2.3	74.9	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	1.7	17.7	2.3	74.9	13.8
LOS	D	A	B	A	E	B
Approach Delay	21.3		13.2			16.3
Approach LOS	C		B			B
Queue Length 50th (ft)	230	0	404	17	26	228
Queue Length 95th (ft)	287	0	489	41	51	261
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	883	1422	2817	1406	139	3149
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.58	0.70	0.57	0.41	0.43

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 58.4% ICU Level of Service B
Analysis Period (min) 15

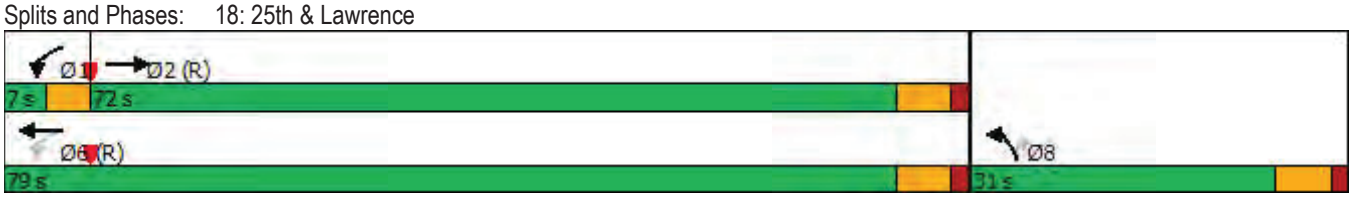
Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	740	190	55	1070	185	115
Future Volume (vph)	740	190	55	1070	185	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.961					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3264	0	0	3362	1703	1495
Flt Permitted				0.763	0.950	
Satd. Flow (perm)	3264	0	0	2573	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	81					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	787	279	79	1126	223	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1066	0	0	1205	223	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	72.0		7.0	79.0	31.0	31.0
Total Split (%)	65.5%		6.4%	71.8%	28.2%	28.2%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	66.0		3.5	73.0	25.0	25.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	77.2			77.2	20.8	20.8
Actuated g/C Ratio	0.70			0.70	0.19	0.19
v/c Ratio	0.46			0.67	0.69	0.57
Control Delay	7.8			8.5	52.7	47.9
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	7.8			8.5	52.7	47.9
LOS	A			A	D	D
Approach Delay	7.8			8.5	50.7	
Approach LOS	A			A	D	
Queue Length 50th (ft)	143			84	147	103
Queue Length 95th (ft)	207			360	202	128
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2314			1805	387	339
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.46			0.67	0.58	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.3		Intersection LOS: B	
Intersection Capacity Utilization 82.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 18: 25th & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.971			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3322	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3322	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		25			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1078	260	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	94.5	8.6	1.5	18.9	69.4		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	94.5	8.6	1.5	18.9	69.4		92.2	77.0		68.1	112.8	
LOS	F	A	A	B	E		F	E		E	F	
Approach Delay		17.6			66.9			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	96	46	1	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#199	m52	m8	49	#791		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1320		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.5		Intersection LOS: E	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Future Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.943	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3072	0
Flt Permitted	0.061			0.126			0.202				0.781	
Satd. Flow (perm)	105	3410	1383	217	3195	0	357	3280	0	0	2411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		3			28			81	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1490	53	351	533	151	45	229	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1543	0	351	684	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	13.7	69.9		17.1	73.3		25.0	53.0		28.0	28.0	
Total Split (%)	9.8%	49.9%		12.2%	52.4%		17.9%	37.9%		20.0%	20.0%	
Maximum Green (s)	10.2	63.9		13.6	67.3		21.5	47.0		22.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	78.6	65.9	90.9	81.4	67.3		49.5	47.0			22.0	
Actuated g/C Ratio	0.56	0.47	0.65	0.58	0.48		0.35	0.34			0.16	
v/c Ratio	0.90	0.72	0.26	0.68	1.00		1.07	0.61			0.99	
Control Delay	87.7	23.0	1.1	33.6	39.5		105.3	40.0			88.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	87.7	23.0	1.1	33.6	39.5		105.3	40.0			88.6	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		25.8			39.0			62.1			88.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	105	203	4	74	~500		~283	262			180	
Queue Length 95th (ft)	#211	244	7	m76	m465		#456	194			#267	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	170	1606	968	267	1537		329	1119			447	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.90	0.72	0.26	0.62	1.00		1.07	0.61			0.99	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 129 (92%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 44.4		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	

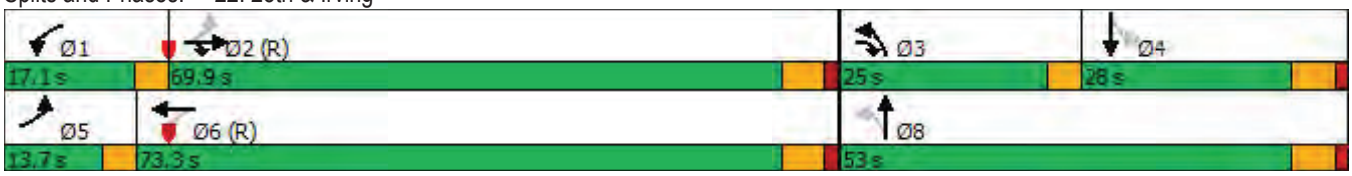
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	0	69	860	35	270	138	1887	0	0	1689	77
Future Volume (vph)	55	0	69	860	35	270	138	1887	0	0	1689	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2701	0	1277	3433	1863	1583	2918	4887	0	0	4933	1382
Flt Permitted	0.732			0.950			0.064					
Satd. Flow (perm)	2081	0	1277	3433	1863	1583	197	4887	0	0	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			105						140
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	93	0	135	935	38	293	276	2007	0	0	1816	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	0	135	935	38	293	276	2007	0	0	1816	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	5.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	9.5		15.0	9.5	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	10.0		24.0	19.0	33.0	33.0	20.0	97.0			77.0	77.0
Total Split (%)	7.1%		17.1%	13.6%	23.6%	23.6%	14.3%	69.3%			55.0%	55.0%
Maximum Green (s)	5.5		17.0	14.5	26.0	26.0	15.0	90.0			70.0	70.0
Yellow Time (s)	3.5		5.0	3.5	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	1.0		2.0	1.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5		7.0	4.5	7.0	7.0	5.0	7.0			7.0	7.0
Lead/Lag	Lead		Lag	Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		5.0	3.0	3.0	3.0	4.0	7.0			7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	21.4		13.4	34.9	22.4	22.4	95.6	93.6			75.6	75.6
Actuated g/C Ratio	0.15		0.10	0.25	0.16	0.16	0.68	0.67			0.54	0.54
v/c Ratio	0.27		0.54	1.09	0.13	0.86	0.71	0.61			0.68	0.12
Control Delay	43.0		16.5	108.2	49.8	59.8	45.5	2.6			21.6	1.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	43.0		16.5	108.2	49.8	59.8	45.5	2.6			21.6	1.2
LOS	D		B	F	D	E	D	A			C	A
Approach Delay		27.3			95.3			7.8			20.5	
Approach LOS		C			F			A			C	
Queue Length 50th (ft)	34		0	~480	30	172	63	50			526	2
Queue Length 95th (ft)	36		0	#583	63	#299	32	m50			596	6
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	341		278	854	345	379	425	3268			2662	810
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.27		0.49	1.09	0.11	0.77	0.65	0.61			0.68	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 32.3		Intersection LOS: C	
Intersection Capacity Utilization 77.6%		ICU Level of Service D	

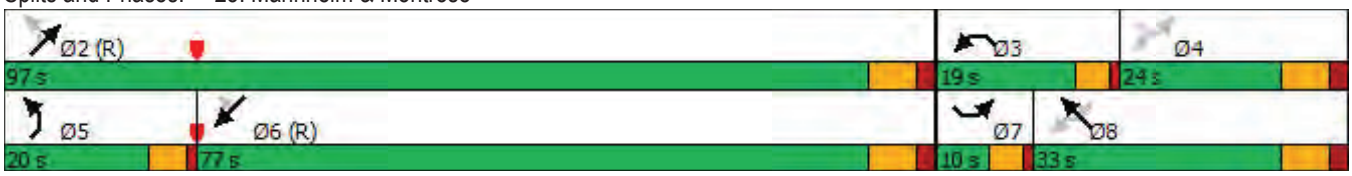
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

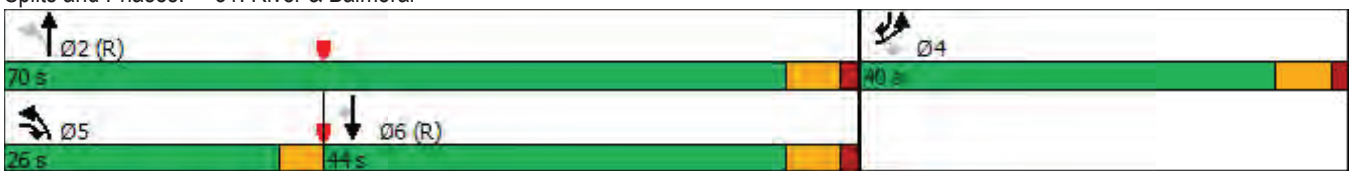


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	431	936	464	185
Future Volume (vph)	295	139	431	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.403			
Satd. Flow (perm)	3224	1468	722	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	459	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	459	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	43.3	83.7	81.2	57.2	80.0
Actuated g/C Ratio	0.15	0.39	0.76	0.74	0.52	0.73
v/c Ratio	0.66	0.26	0.63	0.37	0.29	0.19
Control Delay	50.2	5.1	8.9	6.0	17.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.1	8.9	6.0	17.3	1.3
LOS	D	A	A	A	B	A
Approach Delay	34.3			6.9	12.6	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	13	87	115	103	0
Queue Length 95th (ft)	151	31	161	177	181	21
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	711	766	2724	1836	1384
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.60	0.37	0.29	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1370	35
Future Volume (vph)	45	5	25	40	5	105	45	1860	20	90	1370	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4803	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		6	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	1938	22	106	1442	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	1938	22	106	1500	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.60	0.02	0.65	0.45	
Control Delay	63.9	33.8		57.4	60.4	22.3	92.8	5.4	0.1	50.0	19.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	92.8	5.4	0.1	50.0	19.0	
LOS	E	C		E	E	C	F	A	A	D	B	
Approach Delay		52.9			34.2			8.0			21.1	
Approach LOS		D			C			A			C	
Queue Length 50th (ft)	58	9		42	5	0	61	76	0	103	242	
Queue Length 95th (ft)	72	14		70	20	61	84	158	m0	m110	m282	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3312	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.60	0.02	0.57	0.45	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2060	181	28
Future Volume (vph)	1513	12	14	2060	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2168	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2184	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	104.0		104.0	104.0	36.0	
Total Split (%)	74.3%		74.3%	74.3%	25.7%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	98.0		98.0	98.0	30.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	101.8			101.8	26.2	
Actuated g/C Ratio	0.73			0.73	0.19	
v/c Ratio	0.62			0.94	0.79	
Control Delay	11.2			22.2	69.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	11.2			22.2	69.0	
LOS	B			C	E	
Approach Delay	11.2			22.2	69.0	
Approach LOS	B			C	E	
Queue Length 50th (ft)	357			556	240	
Queue Length 95th (ft)	451			m550	270	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2617			2314	408	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.94	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

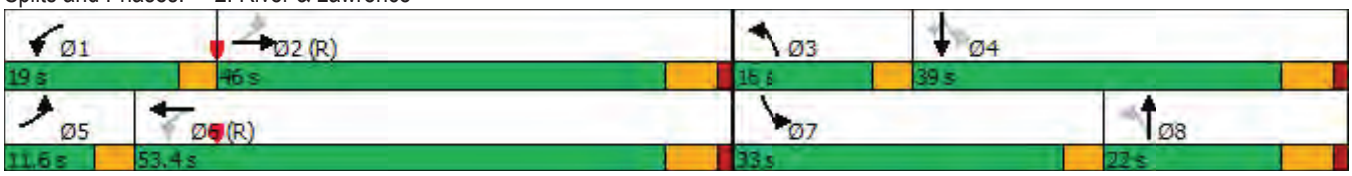
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.965			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3431	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.174			0.091			0.238			0.197		
Satd. Flow (perm)	298	3449	0	171	3431	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			40			96				228
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	751	230	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	981	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	11.6	46.0		19.0	53.4		16.0	22.0		33.0	39.0	39.0
Total Split (%)	9.7%	38.3%		15.8%	44.5%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	8.1	40.0		15.5	47.4		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	50.7	40.3		61.2	47.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.42	0.34		0.51	0.40		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.55	0.91		0.89	0.71		0.85	0.93		0.97	0.91	0.43
Control Delay	22.0	43.2		61.0	32.7		59.1	64.5		66.1	56.4	8.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	22.0	43.2		61.0	32.7		59.1	64.5		66.1	56.4	8.2
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		41.1			38.6			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	31	417		141	319		103	170		307	361	11
Queue Length 95th (ft)	m48	#543		#256	371		#230	#234		#522	#484	63
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	216	1179		296	1379		247	735		496	994	583
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.54	0.91		0.86	0.71		0.84	0.93		0.96	0.91	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.0		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



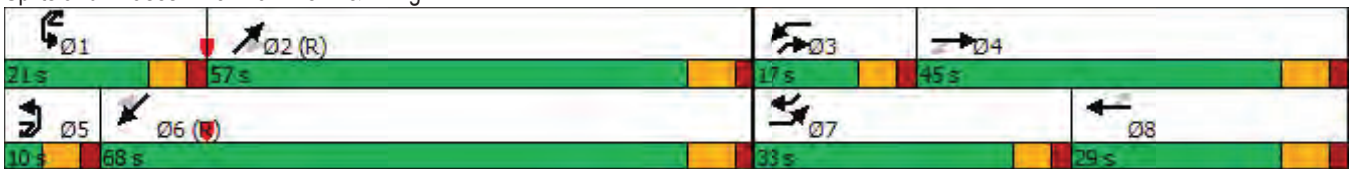
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	0	680	110	55	1090	720	585	2230	770
Future Volume (vph)	635	1080	100	0	680	110	55	1090	720	585	2230	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	0	810	131	60	1198	867	672	2323	885
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	0	810	131	60	1198	867	672	2323	885
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	33.0	45.0	10.0	17.0	29.0	21.0	10.0	57.0	17.0	21.0	68.0	33.0
Total Split (%)	23.6%	32.1%	7.1%	12.1%	20.7%	15.0%	7.1%	40.7%	12.1%	15.0%	48.6%	23.6%
Maximum Green (s)	27.0	38.0	4.0	11.0	22.0	15.0	4.0	50.0	11.0	15.0	61.0	27.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	27.0	39.7	50.7		22.0	44.0	4.0	50.0	66.3	15.0	61.0	95.0
Actuated g/C Ratio	0.19	0.28	0.36		0.16	0.31	0.03	0.36	0.47	0.11	0.44	0.68
v/c Ratio	1.08	0.90	0.22		1.01	0.29	0.69	0.67	0.69	1.95	1.05	0.48
Control Delay	111.7	57.4	32.6		92.5	38.3	87.2	43.3	36.4	461.7	63.1	3.9
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.7	57.4	32.6		92.5	38.3	87.2	43.3	36.4	461.7	63.1	3.9
LOS	F	E	C		F	D	F	D	D	F	E	A
Approach Delay		73.0			84.9			41.7			118.6	
Approach LOS		E			F			D			F	
Queue Length 50th (ft)	~348	435	75		~277	90	28	276	401	~491	~836	106
Queue Length 95th (ft)	#473	431	116		#330	137	m#53	320	273	m#436	m590	m98
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330			335	380		465	350		450
Base Capacity (vph)	619	1501	556		801	457	87	1788	1290	344	2202	1845
Starvation Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.90	0.22		1.01	0.29	0.69	0.67	0.67	1.95	1.05	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.95			
Intersection Signal Delay: 86.4		Intersection LOS: F	
Intersection Capacity Utilization 96.5%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	35	300	100	40	350	70	1335	70	165	2145	25
Future Volume (vph)	50	35	300	100	40	350	70	1335	70	165	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	150		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1770	1863	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.535			0.732			0.950			0.950		
Satd. Flow (perm)	877	1863	1473	1364	1863	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			380			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			668			1551			1184	
Travel Time (s)		5.9			15.2			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	61	38	361	109	43	380	80	1435	76	179	2466	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	38	361	109	43	380	80	1435	76	179	2466	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

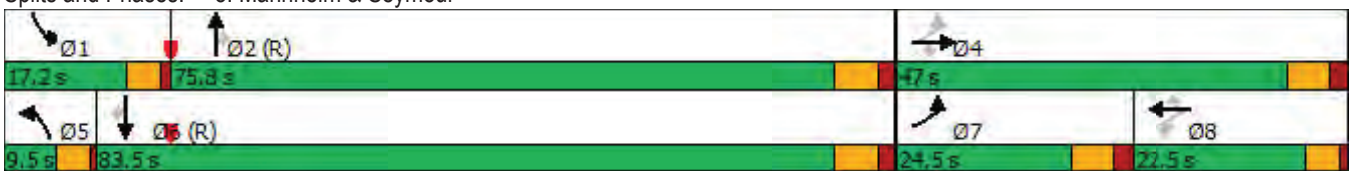
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	22.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	22.5	9.5	75.8	75.8	17.2	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	16.1%	6.8%	54.1%	54.1%	12.3%	59.6%	59.6%
Maximum Green (s)	18.0	40.5	40.5	18.0	18.0	18.0	5.5	69.3	69.3	12.7	77.0	77.0
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)				7.0	7.0	7.0						
Flash Dont Walk (s)				11.0	11.0	11.0						
Pedestrian Calls (#/hr)				0	0	0						
Act Effct Green (s)	33.2	33.2	33.2	19.9	19.9	19.9	7.1	77.6	77.6	11.7	82.7	82.7
Actuated g/C Ratio	0.24	0.24	0.24	0.14	0.14	0.14	0.05	0.55	0.55	0.08	0.59	0.59
v/c Ratio	0.23	0.09	0.86	0.56	0.16	0.53	0.54	0.52	0.08	0.62	0.89	0.04
Control Delay	42.0	38.8	56.8	68.2	54.5	7.7	78.1	21.6	0.2	86.5	10.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	38.8	56.8	68.2	54.5	7.7	78.1	21.6	0.2	86.5	10.9	0.1
LOS	D	D	E	E	D	A	E	C	A	F	B	A
Approach Delay		53.3			23.9			23.4			15.9	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	44	27	239	95	35	0	36	301	0	85	136	0
Queue Length 95th (ft)	72	54	304	159	73	50	#75	379	0	125	150	m0
Internal Link Dist (ft)		178			588			1471			1104	
Turn Bay Length (ft)	115		115	150		150	145		145	200		150
Base Capacity (vph)	295	538	492	202	276	736	149	2760	941	312	2768	741
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.07	0.73	0.54	0.16	0.52	0.54	0.52	0.08	0.57	0.89	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 139 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1952	333	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	84.5	16.0	9.5	94.0	16.0	16.0
Total Split (%)	76.8%	14.5%	8.6%	85.5%	14.5%	14.5%
Maximum Green (s)	78.0	10.0	5.0	87.5	10.0	10.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	60.1	81.3	5.2	63.2	10.3	10.3
Actuated g/C Ratio	0.70	0.94	0.06	0.73	0.12	0.12
v/c Ratio	0.78	0.24	0.13	0.63	0.35	0.15
Control Delay	11.7	0.5	46.9	6.7	41.7	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	0.5	46.9	6.7	41.7	18.9
LOS	B	A	D	A	D	B
Approach Delay	10.1			7.2	37.8	
Approach LOS	B			A	D	
Queue Length 50th (ft)	255	0	4	185	25	0
Queue Length 95th (ft)	493	9	11	226	72	11
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	3249	1400	151	3354	360	177
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.24	0.13	0.49	0.35	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

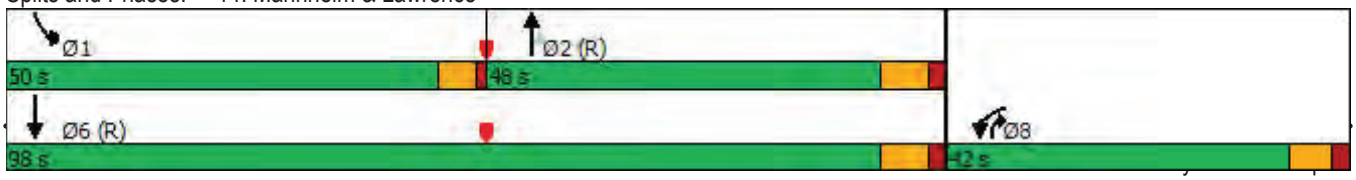
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	610	450	1235	720	850	2335
Future Volume (vph)	610	450	1235	720	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		447		15		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	685	511	1286	783	1012	2684
Shared Lane Traffic (%)						
Lane Group Flow (vph)	685	511	1286	783	1012	2684
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	42.0		48.0	42.0	50.0	98.0
Total Split (%)	30.0%		34.3%	30.0%	35.7%	70.0%
Maximum Green (s)	35.5		41.0	35.5	45.0	91.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	35.5	140.0	41.1	83.6	44.9	91.0
Actuated g/C Ratio	0.25	1.00	0.29	0.60	0.32	0.65
v/c Ratio	0.89	0.36	0.89	0.85	0.96	0.83
Control Delay	64.6	0.7	46.7	27.9	66.1	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.6	0.7	46.7	27.9	66.1	21.6
LOS	E	A	D	C	E	C
Approach Delay	37.3		39.6			33.8
Approach LOS	D		D			C
Queue Length 50th (ft)	311	0	342	681	465	638
Queue Length 95th (ft)	#406	0	420	873	#530	651
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	774	1422	1446	924	1056	3236
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.36	0.89	0.85	0.96	0.83

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 134 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 36.1 Intersection LOS: D
Intersection Capacity Utilization 79.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1135	405	115	810	195	105
Future Volume (vph)	1135	405	115	810	195	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.959					0.850
Flt Protected				0.994	0.950	
Satd. Flow (prot)	3258	0	0	3350	1703	1495
Flt Permitted				0.513	0.950	
Satd. Flow (perm)	3258	0	0	1729	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	100					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1220	455	129	900	210	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1675	0	0	1029	210	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	87.5		6.5	94.0	26.0	26.0
Total Split (%)	72.9%		5.4%	78.3%	21.7%	21.7%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	81.5		3.0	88.0	20.0	20.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	89.0			89.0	19.0	19.0
Actuated g/C Ratio	0.74			0.74	0.16	0.16
v/c Ratio	0.69			0.94dl	0.78	0.64
Control Delay	9.5			10.7	68.4	60.2
Queue Delay	0.3			0.0	0.0	0.0
Total Delay	9.8			10.7	68.4	60.2
LOS	A			B	E	E
Approach Delay	9.8			10.7	65.0	
Approach LOS	A			B	E	
Queue Length 50th (ft)	311			104	155	110
Queue Length 95th (ft)	375			410	#266	134
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2441			1283	285	250
Starvation Cap Reductn	237			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.76			0.80	0.74	0.61

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 56 (47%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 18: 25th & Lawrence

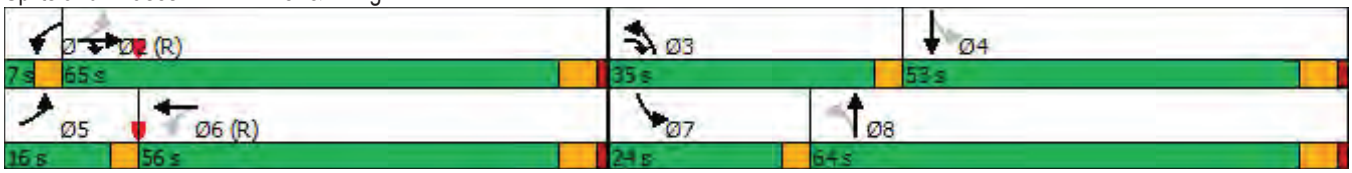
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3373	0	1518	3296	0	1589	3315	0
Flt Permitted	0.151			0.079			0.079			0.300		
Satd. Flow (perm)	253	3433	1370	145	3373	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		7			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	719	76	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	795	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Maximum Green (s)	12.5	59.0		3.5	50.0		31.5	58.0		20.5	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.73	0.95	0.66	0.61	0.75		1.03	0.61		0.59	1.05	
Control Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.3			54.2			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	50	555	200	32	392		~343	343		99	~613	
Queue Length 95th (ft)	m60	m#599	m223	#73	472		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	212	1295	835	85	1066		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.72	0.95	0.66	0.61	0.75		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.8		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3217	0
Flt Permitted	0.080			0.060			0.198				0.692	
Satd. Flow (perm)	138	3410	1383	103	3181	0	350	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		5			85			12	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	158	217	1112	77	285	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	158	217	1189	0	285	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	20.2	72.0		20.4	72.2		13.6	67.6		54.0	54.0	
Total Split (%)	12.6%	45.0%		12.8%	45.1%		8.5%	42.3%		33.8%	33.8%	
Maximum Green (s)	16.7	66.0		16.9	66.2		10.1	61.6		48.0	48.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.1	66.0	79.6	85.7	66.3		64.1	61.6			48.0	
Actuated g/C Ratio	0.53	0.41	0.50	0.54	0.41		0.40	0.38			0.30	
v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	
Control Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
LOS	E	D	A	F	D		F	C			F	
Approach Delay		52.9			49.7			86.8			88.1	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	174	673	18	168	576		~291	164			373	
Queue Length 95th (ft)	154	m#890	m43	m#269	m630		#504	178			#466	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	229	1406	738	217	1321		224	1279			685	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 62.9		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

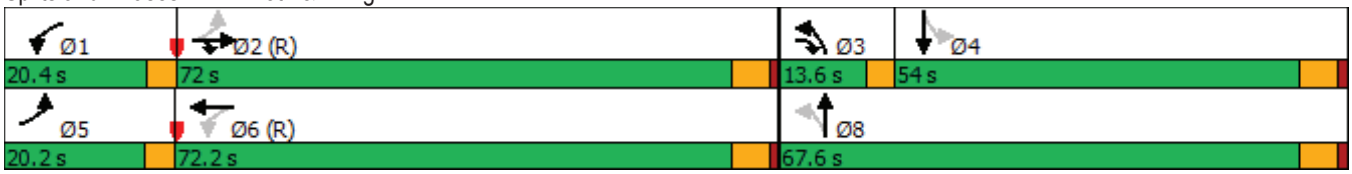
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	101	0	95	835	25	90	80	1599	0	0	2684	50
Future Volume (vph)	101	0	95	835	25	90	80	1599	0	0	2684	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2724	0	1225	3433	1863	1583	2367	4979	0	0	4933	1259
Flt Permitted	0.000			0.950			0.053					
Satd. Flow (perm)	0	0	1225	3433	1863	1583	132	4979	0	0	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125						125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Adj. Flow (vph)	158	0	119	908	27	98	87	1666	0	0	2739	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	0	119	908	27	98	87	1666	0	0	2739	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	8.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	15.0		15.0	12.0	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	20.0		15.0	39.0	34.0	34.0	8.0	86.0			78.0	78.0
Total Split (%)	14.3%		10.7%	27.9%	24.3%	24.3%	5.7%	61.4%			55.7%	55.7%
Maximum Green (s)	13.0		8.0	32.0	27.0	27.0	3.0	79.0			71.0	71.0
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.0		7.0	7.0	7.0	7.0	5.0	7.0			7.0	7.0
Lead/Lag	Lead		Lead	Lag	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	5.0		5.0	3.0	3.0	3.0	4.0	7.0			7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	12.6		8.0	32.0	27.4	27.4	81.0	79.0			71.0	71.0
Actuated g/C Ratio	0.09		0.06	0.23	0.20	0.20	0.58	0.56			0.51	0.51
v/c Ratio	0.64		0.64	1.16	0.07	0.24	0.70	0.59			1.10	0.10
Control Delay	74.2		25.0	132.4	47.1	4.9	49.5	19.9			72.3	0.4
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	74.2		25.0	132.4	47.1	4.9	49.5	19.9			72.3	0.4
LOS	E		C	F	D	A	D	B			E	A
Approach Delay		53.1			118.1			21.3			70.5	
Approach LOS		D			F			C			E	
Queue Length 50th (ft)	72		0	~502	20	0	25	290			~1030	0
Queue Length 95th (ft)	77		39	#633	48	29	m38	m343			#1108	m0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	252		187	784	364	410	124	2809			2501	700
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.63		0.64	1.16	0.07	0.24	0.70	0.59			1.10	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 95 (68%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.16			
Intersection Signal Delay: 63.4		Intersection LOS: E	
Intersection Capacity Utilization 97.3%		ICU Level of Service F	

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

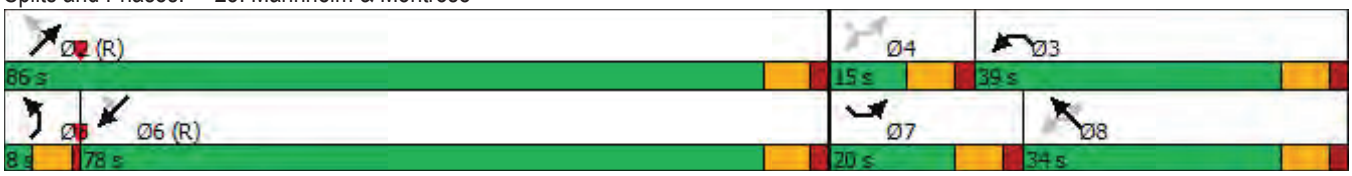
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Mannheim & Montrose

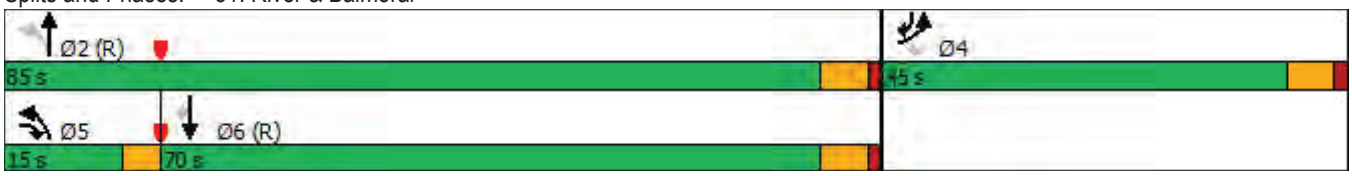


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Maximum Green (s)	39.0	11.5	11.5	79.0	64.0	39.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1973	20
Future Volume (vph)	110	5	70	45	5	90	20	1692	10	55	1973	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4846	0
Flt Permitted	0.541			0.698			0.950			0.950		
Satd. Flow (perm)	836	1479	0	1145	1933	1455	1203	4933	1459	1530	4846	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				113			113		3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	1967	11	65	2099	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	1967	11	65	2139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	18.0	25.0		11.0	18.0	18.0	15.0	85.0	85.0	19.0	89.0	
Total Split (%)	12.9%	17.9%		7.9%	12.9%	12.9%	10.7%	60.7%	60.7%	13.6%	63.6%	
Maximum Green (s)	14.5	19.0		7.5	12.0	12.0	10.5	79.0	79.0	14.5	83.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	27.6	16.3		18.0	8.2	8.2	8.8	89.7	89.7	11.0	94.1	
Actuated g/C Ratio	0.20	0.12		0.13	0.06	0.06	0.06	0.64	0.64	0.08	0.67	
v/c Ratio	0.54	0.38		0.41	0.06	0.58	0.45	0.62	0.01	0.54	0.66	
Control Delay	57.6	19.5		54.8	61.8	22.1	71.8	15.7	0.0	80.7	2.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.6	19.5		54.8	61.8	22.1	71.8	15.7	0.0	80.7	2.0	
LOS	E	B		D	E	C	E	B	A	F	A	
Approach Delay		41.1			35.8			16.5			4.3	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	97	10		54	6	0	31	241	0	63	32	
Queue Length 95th (ft)	154	0		67	19	43	45	316	m0	m62	m32	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	229	271		171	165	228	91	3159	975	158	3257	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.34		0.41	0.04	0.48	0.37	0.62	0.01	0.41	0.66	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 111 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 34: Mannheim & United

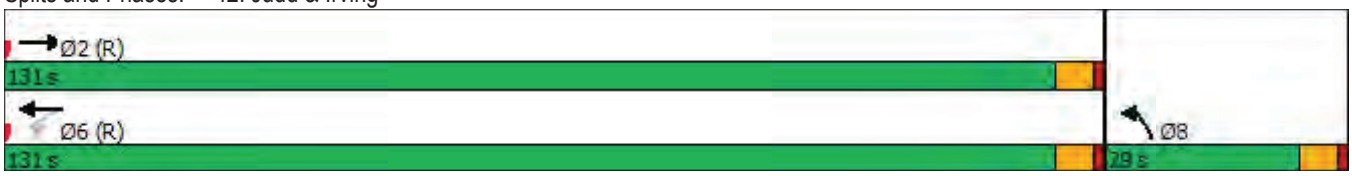
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1383	52	162
Future Volume (vph)	2122	26	54	1383	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3470	1800	0
Flt Permitted				0.572	0.987	
Satd. Flow (perm)	3466	0	0	1989	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				22	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1426	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1486	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	131.0		131.0	131.0	29.0	
Total Split (%)	81.9%		81.9%	81.9%	18.1%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	125.0		125.0	125.0	23.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	124.8			124.8	23.2	
Actuated g/C Ratio	0.78			0.78	0.14	
v/c Ratio	0.84			1.07dl	0.94	
Control Delay	15.0			36.7	101.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	15.0			36.7	101.4	
LOS	B			D	F	
Approach Delay	15.0			36.7	101.4	
Approach LOS	B			D	F	
Queue Length 50th (ft)	697			402	256	
Queue Length 95th (ft)	803			m#415	#329	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2708			1553	280	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.84			0.96	0.94	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 42: Judd & Irving



	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
	909	40	267	241	477	674	9 6	06	233	263	638	82
	909	40	267	241	477	674	9 6	06	233	263	638	82
	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00
	29	29	29	29	29	29	22	22	29	22	22	22
	284		0	960		0	214		600	240		930
	2		0	2		0	2		2	2		2
	94			94			94			94		
	2.00	0. 4	0. 4	2.00	0. 4	0. 4	2.00	0. 2	0. 2	2.00	0. 4	2.00
		0. 77			0. 33			0. 86				0.140
	0. 40			0. 40			0. 40			0. 40		
	2718	6637	0	2880	6632	0	27 3	3776	0	27 3	6374	2629
	0.202			0.987			0.362			0.263		
	28	6637	0	423	6632	0	87	3776	0	96	6374	2629
			Yl e			Yl e			Yl e			Yl e
		61			228			34				
		64			64			30			30	
		6961			2692			9 39			670	
		76.2			94.8			40.2			7.2	
	0. 2	0. 2	0.13	0.81	0.1	0. 8	0.13	0. 3	0.78	0. 0	0. 2	0.83
	8%	3%	4%	9%	9%	9%	6%	4%	6%	6%	7%	2 %
	999	44	279	906	767	687	63	72	924	23	612	7
	999	892	0	906	2029	0	63	2287	0	23	612	7
	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
	Gl VP	Gl VP	pnLrP	Gl VP	Gl VP	pnLrP	Gl VP	Gl VP	pnLrP	Gl VP	Gl VP	pnLrP
		29			29			22			22	
		0			0			0			0	
		27			27			27			27	
	2.00	2.00	2.00	2.00	2.00	2.00	2.03	2.03	2.00	2.03	0. 1	2.03
	24			24			24			24		
	2	2		2	2		2	2		2	2	2
	Gl VP			Gl VP			Gl VP			Gl VP		pnLrP
	67	947		67	947		67	947		67	947	67
	0	940		0	940		0	940		0	940	0
	0	940		0	940		0	940		0	940	0
	67	7		67	7		67	7		67	7	67
	f i+Tx	f i+Tx		f i+Tx	f i+Tx		f i+Tx	f i+Tx		f i+Tx	f i+Tx	f i+Tx
	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
	t(+tP	CA		t(+tP	CA		t(+tP	CA		t(+tP	CA	gl o(
	4	9		2	7		6	1		8	3	
	9			7			1			3		3
	4	9		2	7		6	1		8	3	3
	6.0	24.0		6.0	24.0		6.0	24.0		6.0	24.0	24.0

GsSl Bu cRE t	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MrSr(E(By t imRe5	7.4	92.0		7.4	92.0		7.4	92.0		7.4	68.0	68.0
WRsiBy t imRe5	27.0	34.0		26.0	39.0		24.0	68.0		24.0	68.0	68.0
WRsiBy t imB%5	23.4%	30. %		22.1%	61.9%		26.7%	66.7%		26.7%	66.7%	66.7%
Msxn(E(Bu d l SBe5	29.4	6 .0		.4	67.0		22.4	62.0		22.4	62.0	62.0
Yl iiRwBW(l Be5	6.4	3.4		6.4	3.4		6.4	3.4		6.4	3.4	3.4
Aii-pl dBW(l Be5	0.0	2.4		0.0	2.4		0.0	2.4		0.0	2.4	2.4
GReBW(l BAdjEeRe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRsiBGReBW(l Be5	6.4	7.0		6.4	7.0		6.4	7.0		6.4	7.0	7.0
Gl sd/GsL	Gl sd	GsL		Gl sd	GsL		Gl sd	GsL		Gl sd	GsL	GsL
Gl sd-GsLBOt P(nzl ?												
ml r mil BTxP SemRSBe5	6.0	8.0		6.0	8.0		6.0	8.0		6.0	8.0	8.0
pl hsiiBMRdl	CRSl	f -MrS		CRSl	f -MrS		CRSl	CRSl		CRSl	CRSl	CRSl
N sikBW(l Be5											8.0	8.0
Fiser BDRSPBN sikBe5											93.0	93.0
gl dl eRsSB siieB#/r o5											0	0
AhPTWhBu d l SBe5	43.6	6 .7		31.4	67.8		34.3	62.3		36.0	9 .1	9 .1
AhEsP dBL/f Bp sPR	0.3	0.67		0.33	0.66		0.32	0.9		0.6	0.98	0.98
)/hBp sPR	0.18	0.4		0.72	0.14		0.16	0.17		0.73	0.32	0.99
f RSPRiBDl isc	70.6	94.7		94.2	61.6		39.	36.7		66.0	63.0	8.2
QEl El BDl isc	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRsiBDl isc	70.6	94.7		94.2	61.6		39.	36.7		66.0	63.0	8.2
GOy	T	f		f	D		D	D		f	f	A
At t oRshr BDl isc		66.1			67.2			36.4			9 .8	
At t oRshr BGOy		f			D			D			f	
QEl El BGl SLP B40P BW5	204	992		8	624		280	910		76	223	0
QEl El BGl SLP B 4P BW5	#938	908		207	6 8		#948	#632		226	24	92
ISP oSsiBGsk BDreBW5		6241			2932			9179			910	
WEoSBasc BGl SLP BW5	284			960			214			240		930
asel B st shrRB)t r 5	970	2998		664	22 2		392	2673		938	87	330
yRo)sPRSB st Bp l dEhPS	0	0		0	0		0	0		0	0	0
yt mibshkB st Bp l dEhPS	0	0		0	0		0	0		0	0	0
yRosLl B st Bp l dEhPS	0	0		0	0		0	0		0	0	0
pl dEhl dB)/hBp sPR	0.14	0.4		0.72	0.14		0.16	0.17		0.70	0.6	0.99

ISP oel hPRSBy E((soc

Ad sBWctl : OPl o

f chil BGl SLP :B220

AhEsP dB chil BGl SLP :B220

OWel PB0B98%5Bpl V d Shl dBRBr sel B9:TaWGBSdB7:N aWG,By RsdPRVBu d l S

CsPEosiB chil :B 0

f RSPRiBWctl :BAhEsP d-f RRodnSsP d

Msxn(E(B)/hBp sPRB0.18

ISP oel hPRSBy nLSsiBDl isc:B68.6 ISP oel hPRSBGOy :BD

ISP oel hPRSB st shrPBUPnzsPRSB16. % If UBG)l iBRWy l o)ml BT

ASsicereBgl oRdB(nS5B24

#BBB 4P Bl chl SPl B)RE(l B xhl l deBst shrP,BqEl El B(scBl BRSLl o.

BBBBQEl El Ber RwSBeB(sxn(E(BsVP dBwRBchil e.


Ø1
13 s
Ø2 (R)
45 s
Ø3
15 s
Ø4
37 s
Ø5
16 s
Ø6 (R)
42 s
Ø7
15 s
Ø8
37 s

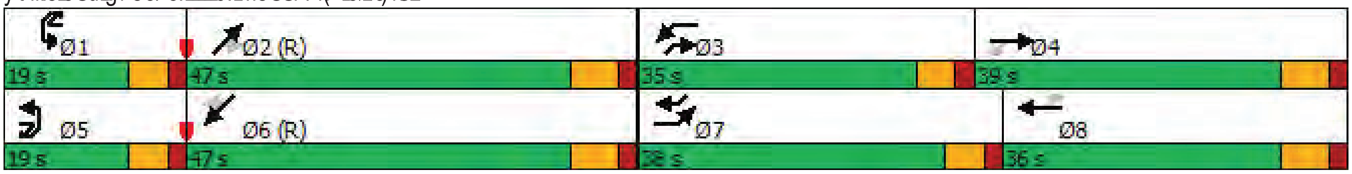
GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
GsSlBFRSVuLEosPRSe												
WosWmBnRiE(lBv)tr5	804	340	610	2234	140	70	44	2464	844	294	2270	390
FEPEdBnRiE(lBv)tr5	804	340	610	2234	140	70	44	2464	844	294	2270	390
IdlsiBFiRwBv)trti5	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNmdPBW5	29	29	23	29	29	29	29	29	29	29	29	26
yPRosLIBGSLPBW5	684		660	930		664	610		374	640		340
yPRosLIBGsSle	9		2	9		2	9		9	9		9
WstldBGSLPBW5	94			94			94			94		
GsSlBuPhuBFshPRo	0. 8	0. 2	2.00	0. 8	0. 2	2.00	0. 8	0. 2	0.11	0. 8	0. 2	0.11
FdP			0.140			0.140			0.140			0.140
FiRgdRPhPd	0. 40			0. 40			0. 40			0. 40		
ysRd.BFiRwBvtdR5	6216	4206	2477	6298	4900	2493	9 21	3184	93 6	6939	3184	97 4
FiRgld(mPd	0. 40			0. 40			0. 40			0. 40		
ysRd.BFiRwBvtld(5	6216	4206	2477	6298	4900	2493	9 21	3184	93 6	6939	3184	97 4
pruLrPBWEdGsBRSBpld			CR			CR			CR			CR
ysRd.BFiRwBvpWOp5												
GrSkBytlldBv(tr5		30			30			40			40	
GrSkBDmeRShlBW5		876			804			4 3			2 18	
Wos)liBW(lBe5		26.0			29.0			1.2			98.2	
glskBHREdBFshPRo	0.18	0. 6	0.10	0. 2	0. 2	0.87	0.17	0.11	0.14	0.88	0. 0	0.10
Hls)cBnlrmileBv%5	20%	8%	20%	29%	4%	7%	90%	29%	23%	1%	29%	%
Adj.BFiRwBv)tr5	120	313	384	2941	63	8	73	2833	111	279	291	494
yrsdldBGsSlBWosWmBv%5												
GsSlBudREtBFiRwBv)tr5	120	313	384	2941	63	8	73	2833	111	279	291	494
TSPdBaiRnkldBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	prLrP	GlVP	GlVP	prLrP	GlVP	GlVP	prLrP	GlVP	GlVP	prLrP
MldrsSBNmdPvW5		93			93			93			93	
GrSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.00	0. 3	0. 9	2.00	0. 3	2.00	2.00	0. 3	2.00	2.00	0. 3	0. 7
WEdGrSLBytlldBv(tr5	24			24			24			24		
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2	2	2	2	2	2	2
DlPhPRdeBW(tisPB	GlVP		prLrP	GlVP		prLrP	GlVP		prLrP	GlVP		prLrP
GlsdrSLBDlPhPRdeBW5	67	947	67	67	947	67	67	947	67	67	947	67
WosmrSLBDlPhPRdeBW5	0	940	0	0	940	0	0	940	0	0	940	0
DlPhPRde2BgPemPRSW5	0	940	0	0	940	0	0	940	0	0	940	0
DlPhPRde2BymzlW5	67	7	67	67	7	67	67	7	67	67	7	67
DlPhPRde2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRde2BrsSSli												
DlPhPRde2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRde2BQEIEIBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRde2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	CA	t(+R)	gdRP	CA	t(+R)	gdRP	CA	t(+R)	gdRP	CA	t(+R)
gdRPhPdBgrsele	8	3	4	6	1	2	4	9	6	2	7	8
gld(mPdBgrsele			3			1			9			7
DlPhPRdeBgrsel	8	3	4	6	1	2	4	9	6	2	7	8
ywmPrBgrsel												
MrSr(E(BSmPsiBe5	3.0	24.0	3.0	3.0	24.0	3.0	3.0	24.0	3.0	3.0	24.0	3.0

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
MrSn(E(BytimBe5	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0
WRRsiBytimBe5	61.0	6 .0	2 .0	64.0	67.0	2 .0	2 .0	38.0	64.0	2 .0	38.0	61.0
WRRsiBytimB%5	98.2%	98. %	26.7%	94.0%	94.8%	26.7%	26.7%	66.7%	94.0%	26.7%	66.7%	98.2%
Msxn(E(BudlSBe5	69.0	69.0	26.0	9 .0	9 .0	26.0	26.0	30.0	9 .0	26.0	30.0	69.0
YliiRwBW(lBe5	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
Aii-pldBW(lBe5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
GReBW(lBAdjEeBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReBW(lBe5	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0
Glsd/GsL	Glsd	GsL	Glsd	Glsd	GsL	Glsd	Glsd	GsL	Glsd	Glsd	GsL	Glsd
Glsd-GsLBDtP(nzl?												
mlrmilBTxPSenRSBe5	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0
MrSn(E(BustBe5	0.9	6.0	0.9	0.9	6.0	0.9	0.9	3.0	0.9	0.9	3.0	0.9
W(lBalVRdBpldEhlBe5	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0
W(lBWRBpldEhlBe5	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0
plhsiiBMRdl	CRSI	CRSI	CRSI	CRSI	CRSI	CRSI	CRSI	f-MnS	CRSI	CRSI	f-MnS	CRSI
AhPBTWhRBudlSBe5	69.0	69.0	40.4	9 .0	9 .0	38.7	22.4	32.3	88.3	22.7	32.4	10.4
AhPEsPdBL/fBpsPR	0.96	0.96	0.67	0.92	0.92	0.63	0.01	0.60	0.44	0.01	0.60	0.41
)/hBpsPR	2.22	0.39	0.13	2. 3	0.18	0.24	0.98	2.92	0.73	0.70	0.1	0.63
fRSPRRBDlisc	221.2	38.6	44.1	370.6	76.6	69.8	89.6	23 .4	28.3	46.4	72.0	64.
QEl ElBDlisc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDlisc	221.2	38.6	44.1	370.6	76.6	69.8	89.6	23 .4	28.3	46.4	72.0	64.
GOy	F	D	T	F	T	f	T	F	a	D	T	D
AttdRshrBDlisc		19.0			919.2			203.2			46.8	
AttdRshrBGOy		F			F			F			D	
QEl ElBGlSLPB4PBW5	~363	261	611	~ 0	603	40	62	~862	967	87	347	991
QEl ElBGlSLPB4PBW5	#469	287	342	#2038	670	83	(37	#104	232	8	#421	946
lSPodSsiBGSkBDreBW5		716			794			423			2 08	
WEcSBascBGlSLPBW5	684		660	930		664	610		374	640		340
aselBstshmcB)tr5	898	2277	412	738	2088	466	980	2339	2681	602	2337	2440
yRo)sPRSBstBpldEhPS	0	0	0	0	0	0	0	0	0	0	0	0
ytniibshkBstBpldEhPS	0	0	0	0	0	0	0	0	0	0	0	0
yPRosLIBstBpldEhPS	0	0	0	0	0	0	0	0	0	0	0	0
pldEhldB)/hBpsPR	2.22	0.39	0.19	2. 3	0.18	0.24	0.93	2.92	0.73	0.43	0.1	0.63

lSPœlhPRSBy E((socc			
AdsBW:tl:	OPlo		
fchilBGlSLP:B230			
AhPEsPdBchilBGlSLP:B230			
OWelP:B267Bv 8%5,BplVdShldBPRBrselB9:CTWBsSdB7:yNWBy RsdPBRWBudlS			
CsPEcsiBchil:B240			
fRSPRRBW:tl:BAhPEsPd-fPRodnSsPd			
Msxn(E(B)/hBpsPRB2. 3			
lSPœlhPRSBynLSsiBDlisc:B263.7		lSPœlhPRSBGOy:BF	
lSPœlhPRSBstshmcB2BUPhnzsPRSB 1.7%		lf UBG)liBRWBylo)mlBF	
ASsicemBglodRdB(nS52.4			
~BBBmRE(lBxhlldeBstshmc,BqEl ElBeBPlRdPhsiicBSWSnP.			
BBBQEl ElBerRwSBeB(sxn(E(BsVPdBwRBchile.			
#BBB4PBlchlSPhlB)RE(lBxhlldeBstshmc,BqEl ElB(scBblBRSLlo			
BBBQEl ElBerRwSBeB(sxn(E(BsVPdBwRBchile.			

(BBBmRiE(l BVRcB 4PB l chl SPhl BqEl El BeB(l Pd dBcBEteRd s(BenLSsi.

ytimPBsSdBgrsel e:BBBB:BMsSSrl n(BxBo)nSL



GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	4	84	230	484	294	1 0	940	2304	6 4	2430	2004	74
FEPEd BnRE(lB)tr5	4	84	230	484	294	1 0	940	2304	6 4	2430	2004	74
IdlsiBFiRwB)trti5	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	22	29	22	29	29	29	22	22	29	29	22	29
yPRosLlBGlSLPBW5	224		224	0		0	234		234	400		0
yPRosLlBGsSle	2		2	2		2	2		0	9		0
WstldBGlSLPBW5	94			94			94			94		
GsSlBuJPuBFshPRo	2.00	2.00	2.00	2.00	0. 4	0. 4	2.00	0. 2	0. 2	0. 8	0. 2	0. 2
FdP			0.140		0.117	0.140		0. 78			0. 0	
FiPBgdRPhPd	0. 40			0. 40			0. 40			0. 40		
ysPd.BFiRwBtdR5	2441	2176	2386	2880	2471	2403	2428	3144	0	6366	3442	0
FiPBgl(mPd	0.290			0.803			0.271			0.0 3		
ysPd.BFiRwBtl(5	2 8	2176	2386	2622	2471	2403	971	3144	0	630	3442	0
pruLrPBWEdGsBRSBpld			Yle			Yle			Yle			Yle
ysPd.BFiRwBpWOp5			276		29	381		3				
GrSkBytlldB(tr5		60			60			30			30	
GrSkBDmePSShlBW5		2846			31			2442			2213	
Wos)liBW(lBe5		6 .1			22.2			97.3			90.9	
glskBHREdBFshPRo	0.77	0. 9	0.17	0. 9	0. 9	0. 9	0.12	0. 2	0. 9	0. 9	0. 7	0.16
Hls)cBnlrmileB%5	29%	9%	7%	9%	9%	9%	24%	7%	9%	9%	8%	68%
Adj.BFiRwB)tr5	1	19	276	794	267	78	60	2433	39	2783	2038	81
yrsdldBGsSlBWosWmB%5						33%						
GsSlBudREtBFiRwB)tr5	1	19	276	794	472	439	60	2 86	0	2783	2294	0
TSPdaiPnkldBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP
MldrsSBNmdPvW5		29			29			93			93	
GrSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.03	2.00	2.03	2.00	2.00	2.00	2.03	0. 1	2.00	2.00	2.03	2.00
WEdSrSLBytlldB(tr5	24			24			24			24		
CE(bldBRVBDlPhPRceB	2	9	2	2	9	2	2	2		2	2	
DlPhPRdBW(tisPB	GlVP	WrdE	pruLrP	GlVP	WrdE	pruLrP	GlVP			GlVP		
GlsdrSLBDlPhPRdBW5	67	200	67	90	200	90	67	947		90	947	
WosmrSLBDlPhPRdBW5	0	0	0	0	0	0	0	940		0	940	
DlPhPRd2BgRemPRSW5	0	0	0	0	0	0	0	940		0	940	
DlPhPRd2BynzlvW5	67	7	67	90	7	90	67	7		90	7	
DlPhPRd2BVctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BQEElBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BDliscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd9BgRemPRSW5		3			3							
DlPhPRd9BynzlvW5		7			7							
DlPhPRd9BVctl		fi+Tx			fi+Tx							
DlPhPRd9BBrsSSli												
DlPhPRd9BTxPSdBe5		0.0			0.0							
WEdSBVctl	gl(	CA	gl(	gl(	CA	gl(	t(+tP	CA		t(+tP	CA	

GsSl Bu dRE t	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
gdRPhPdBgr sel e		3			1		4	9		2	7	
gl d(mPdBgr sel e	3		3	1		1	9			7		
DlPhPRdBgr sel	3	3	3	1	1	1	4	9		2	7	
ywmPr Bgr sel												
MrSr(E(BSmsiBe5	1.0	1.0	1.0	2.0	2.0	2.0	6.0	90.0		4.0	90.0	
MrSr(E(Bytim Be5	23.4	23.4	23.4	31.0	31.0	31.0	8.0	97.4		.4	97.4	
WRRsiBytim Be5	48.0	48.0	48.0	48.0	48.0	48.0	62.0	34.0		61.0	49.0	
WRRsiBytim B%5	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	99.2%	69.2%		98.2%	68.2%	
Msxr(E(Bu dl SBe5	49.4	49.4	49.4	49.4	49.4	49.4	98.0	61.4		63.0	34.4	
YliiRwBW(l Be5	6.4	6.4	6.4	6.4	6.4	6.4	6.4	3.4		6.4	3.4	
Aii-pl dBW(l Be5	2.0	2.0	2.0	2.0	2.0	2.0	0.4	9.0		0.4	9.0	
GRePBW(l BAdjEePBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
WRRsiBGRePBW(l Be5	3.4	3.4	3.4	3.4	3.4	3.4	3.0	7.4		3.0	7.4	
Gl sd/GsL							Gl sd	GsL		Gl sd	GsL	
Gl sd-GsLBDt R(nzl ?								Yl e		Yl e		
ml r mil EBTxPSenRSBe5	4.0	4.0	4.0	6.0	6.0	6.0	6.0	8.0		6.0	8.0	
MrSr(E(Bu st Be5	0.9	0.9	0.9	6.0	6.0	6.0	0.9	3.0		6.0	3.0	
W(l Bal VRd Bpl dEhl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.0		0.0	94.0	
W(l BWRBpl dEhl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.0		0.0	94.0	
pl hsiiBMRdl	CRSI	CRSI	CRSI	CRSI	CRSI	CRSI	CRSI	f -MrS		CRSI	f -MrS	
N sikBW(l Be5				8.0	8.0	8.0						
Fiser BDRSPBN sikBe5				22.0	22.0	22.0						
gl dl ePosSBsiieB#/r d5				0	0	0						
AhPBTWhPBu dl SBe5	49.4	49.4	49.4	49.4	49.4	49.4	74.1	61.4		8 .0	38.8	
AhPEsPdBL/f Bpsl PR	0.61	0.61	0.61	0.61	0.61	0.61	0.38	0.91		0.47	0.63	
)/hBpsl PR	0.22	0.29	0.94	2.98	0.13	0.76	0.1	2.33		2.81	0.89	
f RSRRIBDl isc	66.3	9 .6	4.2	284.0	36.2	1.3	4 .8	961.7		613.	39.6	
QEl El BDl isc	0.0	0.0	0.0	0.8	28.9	0.7	0.0	0.0		0.0	0.0	
WRRsiBDl isc	66.3	9 .6	4.2	284.8	70.6	.0	4 .8	961.7		613.	39.6	
GOy	f	f	A	F	T	A	T	F		F	D	
At t dRshr BDl isc		26.1			17.0			923.3			938.9	
At t dRshr BGOy		a			F			F			F	
QEl El BGl SLPB40PBW5	4	3	0	~828	6 9	30	2 6	~113		~2221	980	
QEl El BGl SLPB 4PBW5	26	18	30	# 44	#722	241	979	# 10		#2910	666	
ISPdGsiBGSkBDreBW5		2786			30			2382			2203	
WEdSBascBGl SLPBW5	224		224				234			400		
asel Bl st shmRBW)t r 5	86	7 1	743	3 2	771	179	682	2680		36	2448	
yRo)sPRSBl st Bpl dEhPS	0	0	0	61	201	9	0	0		0	0	
yt niibshkBl st Bpl dEhPS	0	0	0	0	0	0	0	0		0	0	
yPRosLI Bl st Bpl dEhPS	0	0	0	0	0	0	0	0		0	0	
pl dEhl dB/hBpsl PR	0.22	0.29	0.94	2.61	2.00	0.80	0.16	2.33		2.81	0.89	

ISPœl hPRSBy E((scc	
Ad sBWctl :	OPl o
f chil BGl SLP:B230	
AhPEsPdBl chil BGl SLP:B230	
OWel PBDB0%5Bpl Vd Shl dBPRBr sel B9:CaWGBsSdB7:yaWG,ByRsdPBRWBu dl S	
CsPEosiBl chil :B234	
f RSRRIBWctl :BAhPEsPd-f PRodnSsPd	

Msxn(E(B)/hBpsmRRE2.81	
ISPœlhmRRSEyrLSsiBDlisc:B211.1	ISPœlhmRRSBBOy:BF
ISPœlhmRRSBstshmcBJRmzsmRRSE29 .2%	If UBG)liBRVBylo)rmlBH
ASsicemeBglomRdBv(nS5224	
~BBBmRE(lBxhlldeBistshmc,BqEIEIBeBPlRdRmsiicBSVSmP.	
BBBQEIEIBerRwSBeB(sxn(E(BsVPdBvRBchile.	
#BBB4PrBlchlSRmlB)RE(lBxhlldeBistshmc,BqEIEIB(scBblBRSLlo	
BBBQEIEIBerRwSBeB(sxn(E(BsVPdBvRBchile.	

ytimeBSdBgrsele:BBBB:BMsSSrln(BxBylc(REo

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBRSVuLEosRRSe						
WosWmBnRE(lB)tr5	23 0	2 0	24	2674	600	4
FEREd BnRE(lB)tr5	23 0	2 0	24	2674	600	4
IdlsiBFiRwB)trti5	9000	2 00	2 00	9000	2 00	2 00
GsSlBNmdPBW5	29	29	29	29	29	26
yRRosLlBGSLPBW5		670	684		9 4	9 4
yRRosLlBGsSle		2	9		2	2
WstldBGSLPBW5			94		94	
GsSlBuRmLBFshRRo	0. 4	2.00	0. 8	0. 4	0. 8	2.00
FdP		0.140				0.140
FiRBgdRPhPd			0. 40		0. 40	
ysRd.BFiRwBtdR5	672	2371	9468	6414	602	29 3
FiRBgl(mPd			0. 40		0. 40	
ysRd.BFiRwBtl(5	672	2371	9468	6414	602	29 3
pmLrPBWEdGSBRSBpld		Yle				Yle
ysRd.BFiRwBpWOp5		922				24
GSkBytlldB(tr5	44			44	60	
GSkBDmeRShlBW5	206			0	2287	
Wos)liBW(lBe5	29.			29.6	97.8	
glskBHREdBFshRRo	0. 9	0. 0	0.32	0.11	0.13	0.66
Hls)cBmlrmileB%5	4%	20%	61%	7%	27%	9 %
Adj.BFiRwB)tr5	2790	922	68	2442	648	24
yrsdldBGsSlBWosWmB%5						
GsSlBudREtBFiRwB)tr5	2790	922	68	2442	648	24
TSRPdBaiRhkldBSPoelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAimLS(lSP	GlVP	pmLrP	GlVP	GlVP	GlVP	pmLrP
Mldms SBNmdPvW5	93			93	93	
GSkBDWelRW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwRBwscBGlVBWEdSBGsSl						
Hlsdwsc BFshRRo	0. 3	2.00	2.00	0. 3	2.00	0. 7
WEdSSLBytlldB(tr5			24		24	
CE(bldBRVBDlPhRRceB	2	2	2	2	2	2
DlPhRRceBW(tisPB		pmLrP	GlVP		GlVP	pmLrP
GlsdnSLBDlPhRRceBW5	947	67	67	947	67	67
WosmnSLBDlPhRRceBW5	940	0	0	940	0	0
DlPhRRcB2BgRemRRSW5	940	0	0	940	0	0
DlPhRRcB2BynzlvW5	7	67	67	7	67	67
DlPhRRcB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhRRcB2BBrsSSli						
DlPhRRcB2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRcB2BQEiElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRcB2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	CA	t(+R)	gdRP	CA	gdRP	gl d(
gdRPhPdBgrsele	9	1	2		1	
gl d(mPdBgrsele		9		7		1
DlPhRRcBgrsel	9	1	2	7	1	1
ywmPmrBgrsel						
MnSn(E(BSmRsiBe5	94.0	20.0	4.0	94.0	20.0	20.0

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
MrSn(E(BytimBe5	62.4	27.0	.4	62.4	27.0	27.0
WRRsiBytimBe5	44.0	60.0	94.0	10.0	60.0	60.0
WRRsiBytimB%5	40.0%	98.6%	99.8%	89.8%	98.6%	98.6%
Msxn(E(BudlSBe5	31.4	93.0	90.4	86.4	93.0	93.0
YliiRwBW(lBe5	3.4	3.4	6.4	3.4	3.4	3.4
Aii-pldBW(lBe5	9.0	2.4	2.0	9.0	2.4	2.4
GReBW(lBAdjEeBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReBW(lBe5	7.4	7.0	3.4	7.4	7.0	7.0
Gisd/GsL	GsL		Gisd			
Gisd-GsLBOtP(nzl?						
ml r mil ETxPSenRSBe5	8.0	4.0	6.0	8.0	4.0	4.0
MrSn(E(BustBe5	3.0	0.9	0.9	3.0	0.9	0.9
W(lBalVRdBpldEhlBe5	94.0	0.0	0.0	94.0	0.0	0.0
W(lBWRBpldEhlBe5	90.0	0.0	0.0	90.0	0.0	0.0
plhsiiBMRdl	MnS	CRSI	CRSI	MnS	CRSI	CRSI
AhPBTWhRBudlSBe5	31.	87.8	7.1	44.7	21.6	21.6
AhPEsPdBL/fBpsPR	0.47	0.1	0.01	0.73	0.92	0.92
)/hBpsPR	0.8	0.27	0.21	0.78	0.47	0.04
fRSRRBDlisc	90.	0.7	39.8	29.0	63.8	23.9
QEl EiBDlisc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDlisc	90.	0.7	39.8	29.0	63.8	23.9
GOy	f	A	D	a	f	a
AttdRshrBDlisc	21.4			29.8	66.	
AttdRshrBGOy	a			a	f	
QEl EiBGlSLPB40PBW5	300	0	20	970	4	0
QEl EiBGlSLPB4PBW5	#700	22	29	674	262	2
lSPdSsiBGSkDrePBW5	4			20	20 7	
WEdSBascBGlSLPBW5		670	684		9 4	9 4
aselBstshrcB)tr5	9041	2636	70	6087	13	684
yRo)sPRSBstBpldEhPS	0	0	0	0	0	0
ytnibshkBstBpldEhPS	0	0	0	0	0	0
yPRosLIBstBpldEhPS	0	0	0	0	0	0
pldEhldB/hBpsPR	0.8	0.27	0.07	0.40	0.39	0.03

lSPœlhPRSBy E((socc			
Ad sBVctl:	OPlo		
fchilBGlSLP:B220			
AhPEsPdBchilBGlSLP:B17.7			
CsPEcsiBchil:B74			
fRSRRBVctl:BAhPEsPd-UShRRodnSsPd			
Msxn(E(B/hBpsPRB0.8			
lSPœlhPRSBynLSsiBDlisc:B28.7		lSPœlhPRSBGOy:Ba	
lSPœlhPRSBstshrcBUPhzsPRSB41.2%		If UBG)liBRBylo)mlBa	
ASsicemeBglonRdBV(nS52B24			
#BBBB4PBlchlSPmlB)RtE(lBxhlldeBstshrc,BqEl EiB(scBlBRSLlo			
BBBBQEl EiBerRwSBeB(sxn(E(BsVPdBWRBchile.			

ytimeBsSdBgrsele:BBBB29:Bylc(REcBxBo)nSL

GsSlBudREt	NaG	Nap	CaW	Cap	yaG	yaW
GsSlBRSVuLEosRRSe						
WosWmBnRE(lB)tr5	3 4	864	2880	374	990	2694
FERFEd BnRE(lB)tr5	3 4	864	2880	374	990	2694
IdlsiBFiRwB)trti5	2 00	2 00	9000	2 00	2 00	9000
GsSlBNmdPBW5	20	20	22	29	22	22
yPRosLlBGSLPBW5	0	984		640	3 4	
yPRosLlBGsSle	9	2		2	9	
WstldBGSLPBW5	94				94	
GsSlBuRhLBFshPRo	0. 8	2.00	0. 2	2.00	0. 8	0. 2
FdP		0.140		0.140		
FiRBgdRPhPd	0. 40				0. 40	
ysRd.BFiRwBtdR5	6043	2399	3 66	2461	6917	3 8
FiRBgld(mPd	0. 40				0. 40	
ysRd.BFiRwBtld(5	6043	2399	3 66	2461	6917	3 8
pnLrPBWEdGSBRSBpld		Yle		Yle		
ysRd.BFiRwBpWOp5		36		1		
GSkBytlldB(tr5	64		40			40
GSkBDmRSShlBW5	144		2740			88
Wos)liBW(lBe5	27.8		99.4			20.7
glskBHREdBFshPRo	0.11	0.1	0. 0	0. 2	0. 7	0. 4
Hls)cBnlrmileB%5	8%	7%	8%	4%	6%	7%
Adj.BFiRwB)tr5	476	197	2 78	422	99	26 4
yrsdldBGsSlBWosWmB%5						
GsSlBudREtBFiRwB)tr5	476	197	2 78	422	99	26 4
TSPdBaiRhkldBSPdelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	pnLrP	GlVP	GlVP
Mldns SBNmdPvW5	90		99			99
GSkBDWelPW5	0		0			0
fdReewsikBNmdPvW5	27		27			27
VwRBwscBGlVBWEdSBGsSl						
Hlsdwsc BFshPRo	2.0	2.0	0. 1	2.00	2.03	0. 1
WEdSSLBytlldB(tr5	24				24	
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2
DlPhPRdBW(tisPB	GlVP	pnLrP		pnLrP	GlVP	
GlsdnSLBDlPhPRdBW5	67	67	947	67	67	947
WosnnSLBDlPhPRdBW5	0	0	940	0	0	940
DlPhPRdB2BgRemPRSW5	0	0	940	0	0	940
DlPhPRdB2BynzlW5	67	67	7	67	67	7
DlPhPRdB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRdB2BBrsSSli						
DlPhPRdB2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRdB2BQEl ElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRdB2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	Fdl	CA	t(+R)	gdRP	CA
gdRPhPdBgrsele	1		9	1	2	7
glq(mPdBgrsele		Fdl		9		
DlPhPRdBgrsel	1		9	1	2	7
ywmPrBgrsel						
MnSr(E(BSmsiBe5	1.0		24.0	1.0	3.0	24.0

MrSr(E(Bytim Be5	23.4		99.0	23.4	.0	99.0
WRRsiBytim Be5	61.0		10.0	61.0	99.0	209.0
WRRsiBytim B%5	98.2%		48.2%	98.2%	24.8%	89. %
Msxr(E(Bud l SBe5	62.4		86.0	62.4	28.0	4.0
Yl iiRwBW(l Be5	3.4		4.0	3.4	3.0	4.0
Aii-pl dBW(l Be5	9.0		9.0	9.0	2.0	9.0
GReBW(l BAdjEeBe5	0.0		0.0	0.0	0.0	0.0
WRRsiBGReBW(l Be5	7.4		8.0	7.4	4.0	8.0
Gl sd/GsL			GsL		Gl sd	
Gl sd-GsLBDt P(rzl ?						
ml r mil ETxP SenRSBe5	4.0		8.0	4.0	3.0	8.0
pl hsiiBMRdl	CRSI		f -MrS	CRSI	CRSI	f -MrS
AhPBTWhRBud l SBe5	60.	230.0	84.3	226.6	24.9	4.7
AhPEsP dBL/f Bp sPR	0.99	2.00	0.43	0.12	0.22	0.71
)/hBp sPR	0.13	0.41	0.83	0.32	0.73	0.32
f RSPRPRBDl isc	73.0	2.8	26.3	2.9	71.9	20.6
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	73.0	2.8	26.3	2.9	71.9	20.6
GOy	T	A	a	A	T	a
At t dRshr BDl isc	98.0		20.			21.4
At t dRshr BGOy	f		a			a
QEl El BGl SLP B40P BW5	946	0	270	21	203	2 9
QEl El BGl SLP B 4P BW5	623	0	963	92	231	990
ISP dGsiBGlSkBDreBW5	884		2480			7
WEcSBascBGl SLP BW5		984		640	3 4	
asel B st shmPBW) t r 5	718	2399	9744	2978	6	66
yRo)sPRSB st Bp l dEhPS	0	0	0	0	0	0
yt nibshkB st Bp l dEhPS	0	0	0	0	0	0
yPRosLI B st Bp l dEhPS	0	0	0	0	0	0
pl dEhl dB/hBp sPR	0.19	0.41	0.83	0.30	0.48	0.32

ISP el hPRSBy E((soc			
Ad sBVctl :	OPl o		
f chil BGl SLP :B230			
AhPEsP dB chil BGl SLP :B230			
OWel P:B30B9 %5,Bp l Vd Shl dBPRBr sel B9:CaWBsSdB7:yaWBy RsdPBVBud l S			
CsPEosiB chil :B30			
f RSPRPRBVctl :BAhPEsP d-f PRodnSsP d			
Msxr(E(B/hBp sPR B0.13			
ISP el hPRSBy nLSsiBDl isc:B28.9		ISP el hPRSBGOy :Ba	
ISP el hPRSB st shmPBUPmzsPRSB71.6%		If UBGl)l iBRVBy l o)mlB	
ASsicemBgl onRdBV(rS52.4			

yt imBsSdBgr sel e:BBBB23:BMsSSr l n(B&BGswd Shl

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBRSVuLEosPRSe						
WosWmBnRiE(lBv)tr5	4 4	80	44	2080	214	224
FEPEd BnRiE(lBv)tr5	4 4	80	44	2080	214	224
IdlsiBFiRwBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	22	29	29	29	29	29
GsSlBuJRuBFshPRo	0. 4	0. 4	0. 4	0. 4	2.00	2.00
FdP	0. 8					0.140
FiRBgdRPhPd				0. 8	0. 40	
ysPd.BFiRwBvtdR5	6692	0	0	6679	2806	23 4
FiRBgl(nPPd				0.194	0. 40	
ysPd.BFiRwBvtl(5	6692	0	0	9819	2806	23 4
pnLrPBWEoSBRSBpl d		Yl e				CR
ysPd.BFiRwBvpWOp5	69					
GrSkBytl ldBv(tr5	64			64	60	
GrSkBDmeRShl BW5	144			6961	788	
Wos)liBW(lBve5	27.8			76.2	24.3	
glskBHREdBFshPRo	0. 3	0.71	0.80	0. 4	0.16	0.89
Hls)cBnlrmhileB%5	6%	9%	1%	8%	7%	1%
Adj.BFiRwBv)tr5	766	206	8	2297	996	270
yrsd dBGsSl BWosWmB%5						
GsSlBudREtBFiRwBv)tr5	867	0	0	2904	996	270
TSPdaiRhkldBSPoelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
Mldns SBNmdPvW5	29			29	29	
GrSkBDWelRW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwvRBwscBGlVBWEoSBGsSl						
Hlsdwsc BFshPRo	2.03	2.00	2.00	2.00	2.00	2.00
WEoSrSLBytl ldBv(tr5			24		24	
CE(bl dBRVBDlPhPRoeB	2		2	2	2	2
DlPhPRoBW(tisPB			GlVP		GlVP	pnLrP
GlsdrSLBDlPhPRoBW5	947		90	947	67	67
WosmrSLBDlPhPRoBW5	940		0	940	0	0
DlPhPRoB2BgRemPRSW5	940		0	940	0	0
DlPhPRoB2BynzlW5	7		90	7	67	67
DlPhPRoB2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRoB2BrsSSli						
DlPhPRoB2BTxPSdBve5	0.0		0.0	0.0	0.0	0.0
DlPhPRoB2BQEl Elve5	0.0		0.0	0.0	0.0	0.0
DlPhPRoB2BDliscBve5	0.0		0.0	0.0	0.0	0.0
WEoSBWctl	CA		t(+tP	CA	gdRP	gl q(
gdRPhPdBgrsel e	9		2	7	1	
gl q(nPPdBgrsel e			7			1
DlPhPRoBgrsel	9		2	7	1	1
ywnPhrBgrsel						
MrSn(E(BSmBiBve5	24.0		6.0	24.0	4.0	4.0
MrSn(E(BytimBve5	92.0		7.4	92.0	22.0	22.0
WRRsiBytimBve5	84.0		20.0	14.0	94.0	94.0
WRRsiBytimB%5	71.9%		.2%	88.6%	99.8%	99.8%

GsSl Bu cREt	TaW	Tap	NaG	NaW	CaG	Cap
Msxn(E(Bu d l SBe5	7 .0		7.4	8 .0	2 .0	2 .0
Yl iiRwBW(l Be5	3.4		6.4	3.4	3.4	3.4
Aii-pl dBW(l Be5	2.4		0.0	2.4	2.4	2.4
GReFBW(l BAdjEeFBe5	0.0			0.0	0.0	0.0
WRsiBGReFBW(l Be5	7.0			7.0	7.0	7.0
Gl sd/GsL	GsL		Gl sd			
Gl sd-GsLBOt Pl(nzl ?						
ml r mil BTxPl SenRSBe5	8.0		6.0	8.0	4.0	4.0
pl hsiiBMRdl	f -MnS		CRSl	f -MnS	CRSl	CRSl
AhFBTWhFBu d l SBe5	81.0			81.0	90.0	90.0
AhFEsPl dBL/f Bp sFR	0.82			0.82	0.21	0.21
)/hBp sFR	0.62			0.72	0.89	0.4
f RSPRiBDl isc	7.6			8.4	47.9	40.3
QEl El BDl isc	0.0			0.0	0.0	0.0
WRsiBDl isc	7.6			8.4	47.9	40.3
GOy	A			A	T	D
Att dRshr BDl isc	7.6			8.4	46.8	
Att dRshr BGOy	A			A	D	
QEl El BGl SLPl B40Pl BW5	2			220	237	209
QEl El BGl SLPl B 4Pl BW5	207			949	#991	268
ISPl oSsiBGnkBDmeFBW5	884			6241	4 8	
WEoSBascBGl SLPl BW5						
asel B st shrnFB)t r 5	9676			9028	699	916
yRso)sFRSB st Bpl dEhFS	0			0	0	0
yt niibshkB st Bpl dEhFS	0			0	0	0
yFRosLl B st Bpl dEhFS	0			0	0	0
pl dEhl dB/hBp sFR	0.62			0.70	0.7	0.48

ISPl oel hFRSBy E((soc

Ad sBWct l : OPl o

f chil BGl SLPl :B220

AhFEsPl dB chil BGl SLPl :B220

OWel PBDB0%5Bpl V d Shl dBFRB r sel B:TaWBSSdB:N aWGBy RsdFBRWBu d l S

CsFEosiB chil :B4

f RSPRiBWct l :BAhFEsPl d-f RRodnSsPl d

Msxn(E(B/hBp sFRB0.89

ISPl oel hFRSBy nLSsiBDl isc:B23.8 ISPl oel hFRSBGOy :Ba

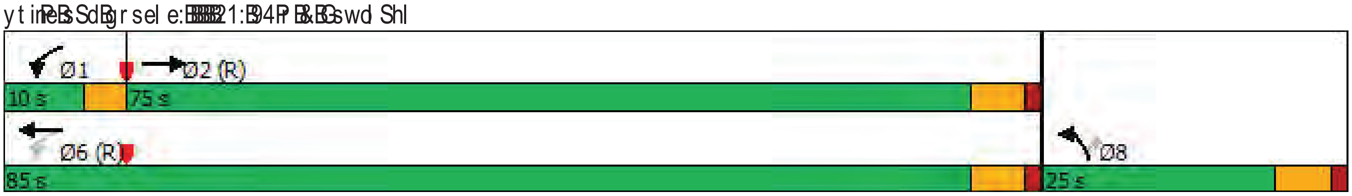
ISPl oel hFRSB st shrnPBUFnzsFRSB4.2% If UBG)l iBRWBy l o)ml l BD

ASsicereBgl oFRdB(nSB24

#BBBB 4Pl B l chl SFnl B)RE(l B xhl l deBst shrnP,BqEl El B(scBl BRSLl o

BBBBBQEl El Ber RwSBeB(sxn(E(BsVPl dBWRBchil e.

yt inPBSSdBgr sel e:BBBBB21:B4Pl B&BGswd Shl



GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBFRSVuLEosPRSe												
WosWmBnRiE(lBv)tr5	268	462	6	46	43	99	663	2024	92	71	313	93
FEPEd BnRiE(lBv)tr5	268	462	6	46	43	99	663	2024	92	71	313	93
IdlsiBFiRwBv)trti5	2 00	9000	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	20	22	20	22	22	29	20	22	29	20	22	29
yPRosLlBGSLPBW5	270		930	270		0	924		40	900		40
yPRosLlBGsSle	2		2	2		0	2		0	2		0
WstldBGSLPBW5	94			94			94			94		
GsSlBuJPuLBFshPRo	2.00	0. 4	2.00	2.00	0. 4	0. 4	2.00	0. 4	0. 4	2.00	0. 4	0. 4
FdP			0.140		0. 82			0. 7			0. 2	
FiRgdRPhPd	0. 40			0. 40			0. 40			0. 40		
ysRd.BFiRwBvtdR5	241	6366	2680	2834	6699	0	2421	6663	0	241	6913	0
FiRgld(mPd	0.074			0.688			0.281			0.922		
ysRd.BFiRwBvtld(5	20	6366	2680	7 9	6699	0	913	6663	0	646	6913	0
pruLrPBWEdGsBRSBpld			Yle			Yle			Yle			Yle
ysRd.BFiRwBvpWOp5			948		97			9			3	
GrSkBytlldBv(tr5		30			30			30			30	
GrSkBDmeRShlBW5		6 18			867			2060			9009	
Wos)liBW(lBe5		71.0			29.4			28.7			63.2	
glskBHREdBFshPRo	0.19	0. 2	0.13	0.81	0.1	0.11	0.16	0.1	0.84	0.12	0.1	0.78
Hls)cBnlrmileB%5	7%	8%	20%	0%	9%	9%	22%	3%	23%	7%	3%	94%
Adj.BFiRwBv)tr5	278	413	384	71	2089	970	309	2230	91	13	433	67
yrsdldBGsSlBWosWmB%5												
GsSlBudREtBFiRwBv)tr5	278	413	384	71	2669	0	309	2271	0	13	410	0
TSPdBaiRnkldBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP
MldrsSBNmdPvW5		22			22			20			20	
GrSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.0	0. 1	2.0	2.03	2.03	2.00	2.0	2.03	2.00	2.0	2.03	2.00
WEdGrSLBytlldBv(tr5	24			24			24			24		
CE(bldBRVBDlPhPRdeB	2	2	2	2	2		2	2		2	2	
DlPhPRdeBW(tisPB	GlVP		pruLrP	GlVP			GlVP			GlVP		
GlsdrSLBDlPhPRdeBW5	67	947	67	67	947		67	947		67	947	
WosmrSLBDlPhPRdeBW5	0	940	0	0	940		0	940		0	940	
DlPhPRde2BgRemPRSW5	0	940	0	0	940		0	940		0	940	
DlPhPRde2BymzlW5	67	7	67	67	7		67	7		67	7	
DlPhPRde2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRde2BrsSSli												
DlPhPRde2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRde2BQEiElBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRde2BDliscBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
WEdSBWctl	t(+tP	CA	tP+R)	t(+tP	CA		t(+tP	CA		t(+tP	CA	
gdRPhPdBgrsele	4	9	9B6	2	7		6	1		8	3	
gld(mPdBgrsele	9			7			1			3		
DlPhPRdeBgrsel	4	9	9B6	2	7		6	1		8	3	
ywmPrBgrsel												
MrSr(E(BSmPsiBe5	6.0	24.0		6.0	24.0		6.0	24.0		9.0	24.0	

GsSl BudcREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MrSn(E(Byt inPBe5	7.4	92.0		7.4	42.0		7.4	92.0		7.4	92.0	
WRPsiBy t inPBe5	26.0	74.0		26.0	74.0		68.0	3 .0		26.0	94.0	
WRPsiBy t inPB%5	.6%	37.3%		.6%	37.3%		97.3%	64.0%		.6%	28. %	
Msxn(E(Bud l SBe5	.4	4 .0		.4	4 .0		66.4	36.0		1.4	2 .0	
Yl iiRwBWi(l Be5	6.4	3.4		6.4	3.4		6.4	3.4		3.4	3.4	
Aii-pl dBWi(l Be5	0.0	2.4		0.0	2.4		0.0	2.4		0.0	2.4	
GReRBWi(l BAdjEeRBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
WRPsiBGReRBWi(l Be5	6.4	7.0		6.4	7.0		6.4	7.0		3.4	7.0	
Gl sd/GsL	Gl sd	GsL		Gl sd	GsL		Gl sd	GsL		Gl sd	GsL	
Gl sd-GsLBOt Pi(nzl ?												
ml r nhil BTxP SenRSBe5	6.0	8.0		6.0	8.0		4.0	8.0		6.0	8.0	
pl hsiiBMRdl	CRSl	f -MnS		CRSl	f -MnS		CRSl	CRSl		CRSl	CRSl	
N sikBWi(l Be5					8.0							
Fiser BDRSPBN sikBe5					61.0							
gl dl ePns SB siieB#/r o5					0							
AhPBTWhPBud l SBe5	89.4	79.3	.3	7 .4	4 .0		41.4	36.3		91.7	2 .0	
AhPEsP dBL/f Bp sPR	0.49	0.34	0.82	0.40	0.39		0.39	0.62		0.90	0.23	
)/hBp sPR	2.08	0.61	0.34	0.28	0. 3		0. 8	2.26		0.41	2.9	
f RSPRiBDl isc	296.7	26.9	4.3	28.2	42.1		87.	223.8		37.3	2 6.4	
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
WRPsiBDl isc	296.7	26.9	4.3	28.2	42.1		87.	223.8		37.3	2 6.4	
GOy	F	a	A	a	D		T	F		D	F	
At t dRshr BDl isc		94.6			40.2			204.0			283.	
At t dRshr BGOy		f			D			F			F	
QEl El BGl SLP B40P BW5	~226	236	247	9	4 7		624	~746		38	~646	
QEl El BGl SLP B 4P BW5	(#992	(284	(967	38	#868		#346	#881		84	#37	
ISP cSsiBGnSkBDneRBW5		6 08			747			40			2 99	
WEcSBasc BGl SLP BW5	270		930	270			924			900		
asel B st shncB)t r 5	247	2462	2038	399	2324		326	2063		231	33	
y Rso) sPRSB st Bp l dEhPS	0	0	0	0	0		0	0		0	0	
y t nibshkB st Bp l dEhPS	0	0	0	0	0		0	0		0	0	
y PRcsLl B st Bp l dEhPS	0	0	0	0	0		0	0		0	0	
pl dEhl dB)/hBp sPR	2.08	0.61	0.34	0.27	0. 3		0. 8	2.26		0.48	2.9	

ISP cel hPRSBy E((scc

Ad sBWct l : OPl o

f chil BGl SLP :B230

AhPEsP dB chil BGl SLP :B230

OWel P:B74B37%5,Bp l V d Shl dBPRB r sel B9:TaWGBsSdB7:N aWG,By RsdPBRWBud l S

CsPEcsiB chil :B264

f RSPRiBWct l :BAhPEsP d-f RRcdnSsP d

Msxn(E(B)/hBp sPR:B2.9

ISP cel hPRSBy nLSsiBDl isc:B81.7 ISP cel hPRSBGOy :BT

ISP cel hPRSB st shncBUPnzsPRSB 0.1% If UBGl)l iBRWBy l o)nhl BT

ASsicenBgl onRdB(nS5B24

~BBBBnRiE(l B xhl l deBst shnc,Bq El El BeBP l Rd PnsiicBSVSnP .

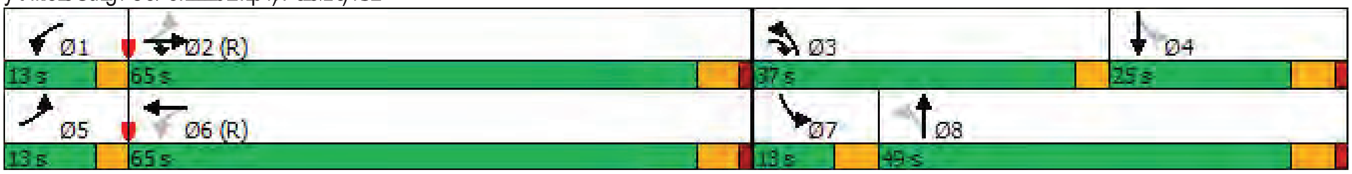
BBBBQEl El Ber RwSBeB(sxn(E(BsVP dBwRBchil e.

#BBBB 4P B l chl SPl B)RiE(l B xhl l deBst shnc,Bq El El B(scB l BRSLl o.

BBBBQEl El Ber RwSBeB(sxn(E(BsVP dBwRBchil e.

(BBBmRiE(I BRcB 4P B I ch I SPh I BqE I E I BeB(I P d dBcBEt eP s(BenLSsi.

ytimPBSdBgrsel e:BBBB2:Bp r) I dB&Bo)nSL



GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lB)tr5	260	2080	210	260	2360	60	604	690	294	64	2 4	4
FEPEd BnRiE(lB)tr5	260	2080	210	260	2360	60	604	690	294	64	2 4	4
IdlsiBFiRwB)trti5	2 00	9000	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	20	20	20	20	20	29	22	22	29	29	22	29
yPRosLlBGSLPBW5	960		960	900		0	220		0	0		0
yPRosLlBGsSle	2		2	2		0	2		0	0		0
WstldBGSLPBW5	94			94			94			94		
GsSlBuJPuBFshPRo	2.00	0. 4	2.00	2.00	0. 4	0. 4	2.00	0. 4	0. 4	0. 4	0. 4	0. 4
FdP			0.140		0. 4			0. 78			0. 36	
FiRgdRPhPd	0. 40			0. 40			0. 40				0. 4	
ysRd.BFiRwBtdR5	2767	6320	2616	2767	62 4	0	2781	6910	0	0	6089	0
FiRglo(mPd	0.010			0.243			0.927				0.8 9	
ysRd.BFiRwBtlo(5	261	6320	2616	974	62 4	0	612	6910	0	0	9334	0
pruLrPBWEdGSBRSBpld			Yle			Yle			Yle			Yle
ysRd.BFiRwBpWOp5			243		3			94			87	
GSkBytlldB(tr5		64			64			60			60	
GSkBDmeRShlBW5		2714			6 18			03			876	
Wos)liBW(lBe5		69.1			88.8			90.4			28.6	
glskBHREdBFshPRo	0.14	0. 6	0.89	0.8	0. 7	0.48	0.18	0.70	0.16	0.88	0.14	0.47
Hls)cBnlrmileB%5	6%	3%	%	6%	4%	6%	3%	9%	7%	6%	3%	22%
Adj.BFiRwB)tr5	246	2242	940	274	23 0	46	642	466	242	34	99	280
yrsdldBGsSlBWosWmB%5												
GsSlBudREtBFiRwB)tr5	246	2242	940	274	2436	0	642	713	0	0	333	0
TSPdBaiPnkldBSPoelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP
MldnsSBNmdPvW5		20			20			22			22	
GSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.0	2.09	2.0	2.0	2.0	2.00	2.03	2.03	2.00	2.00	2.03	2.00
WEdSSLBytlldB(tr5	24			24			24			24		
CE(bldBRBDlPhPRoeB	2	2	2	2	2		2	9		2	9	
DlPhPRdBW(tisPB	GlVP		pruLrP	GlVP			GlVP			GlVP		
GlsdnSLBDlPhPRdBW5	67	947	67	67	947		67	947		90	947	
WosmnSLBDlPhPRdBW5	0	940	0	0	940		0	0		0	0	
DlPhPRd2BgRemPRSW5	0	940	0	0	940		0	0		0	0	
DlPhPRd2BynzlvW5	67	7	67	67	7		67	67		90	67	
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BQEl ElBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BDliscBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd9BgRemPRSW5								940			940	
DlPhPRd9BynzlvW5								7			7	
DlPhPRd9BWctl								fi+Tx			fi+Tx	
DlPhPRd9BBrsSSli												
DlPhPRd9BTxPSdBe5								0.0			0.0	
WEdSBWctl	t(+tP	CA	tP+R)	t(+tP	CA		t(+tP	CA		glo(	CA	

ycShrdR20BpltRdP
gsLlB2

GsSl Bu dREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
gdRPhPdBgr sel e	4	9	9B6	2	7		6	1			3	
gl d(mPdBgr sel e	9			7			1			3		
Dl PhPRdBgr sel	4	9	9B6	2	7		6	1		3	3	
ywmPr Bgr sel												
MrSn(E(BSmsiBe5	6.0	24.0		6.0	24.0		6.0	1.0		1.0	1.0	
MrSn(E(By timBe5	7.4	67.0		7.4	64.0		7.4	67.0		92.0	92.0	
WRRsiBy timBe5	20.0	19.0		24.0	18.0		99.0	36.0		92.0	92.0	
WRRsiBy timB%5	8.2%	41.7%		20.8%	79.2%		24.8%	60.8%		24.0%	24.0%	
Msxn(E(Bu dl SBe5	7.4	87.0		22.4	12.0		21.4	68.0		24.0	24.0	
Yl iiRwBW(l Be5	6.4	3.4		6.4	3.4		6.4	3.4		3.4	3.4	
Aii-pl dBW(l Be5	0.0	2.4		0.0	2.4		0.0	2.4		2.4	2.4	
GReBW(l BAdjEeBe5	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
WRRsiBGReBW(l Be5	6.4	7.0		6.4	7.0		6.4	7.0			7.0	
Gl sd/GsL	Gl sd	GsL		Gl sd	GsL		Gl sd			GsL	GsL	
Gl sd-GsLBDt R(nzl ?												
ml r mil EBxPSenRSBe5	6.0	8.0		6.0	8.0		6.0	8.0		8.0	8.0	
pl hsiiBMRdl	CRSI	f -MnS		CRSI	f -MnS		CRSI	CRSI		CRSI	CRSI	
N sikBW(l Be5		8.0			8.0			8.0		8.0	8.0	
Fiser BDRSRBN sikBe5		96.0			99.0			96.0		96.0	96.0	
gl dl ePmsSBsiieB#/r d5		0			0			0		0	0	
AhRBTWhRBu dl SBe5	14.2	87.2	.9	2.	8 .		30.7	61.2			24.0	
AhREsPdBL/f BpsRR	0.72	0.43	0.82	0.77	0.48		0.9	0.98			0.22	
)/hBpsRR	2.00	0.79	0.93	0.70	0.14		2.90	0.84			2.64	
f RSRRIBDl isc	.7	28.7	9.9	2 .8	28.9		241.3	42.9			923.0	
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
WRRsiBDl isc	.7	28.7	9.9	2 .8	28.9		241.3	42.9			923.0	
GOy	F	a	A	a	a		F	D			F	
Att dRshr BDl isc		96.9			28.3			18.7			923.0	
Att dRshr BGOy		f			a			F			F	
QEl El BGl SLRPB40RPBW5	18	921	24	32	977		~633	9 3			~933	
QEl El BGl SLRPB 4RPBW5	(#269	(934	(2	(46	(9 3		#42	921			#691	
ISRPdGsiBGGSkBDmeRBW5		2704			6 08			193			716	
WEdSBascBGl SLRPBW5	960		960	900			220					
asel B st shmRBW)t r 5	246	2173	2021	918	2140		9 9	22			69	
yRo)sRRSB st BpldEhRS	0	0	0	0	0		0	0			0	
yt nibshkB st BpldEhRS	0	0	0	0	0		0	0			0	
yRRosLI B st BpldEhRS	0	0	0	0	0		0	0			0	
pldEhldB/hBpsRR	2.00	0.79	0.94	0.48	0.16		2.90	0.84			2.64	

ISRPcelhRRSBy E((scc			
Ad sBWctl :	ORPlo		
f chil BGl SLRP:B230			
AhREsPdB chil BGl SLRP:B230			
OWel P:B296BW11%5,BplVd Shl dBRRBr sel B9:TaWGBsSdB7:NaWG,BySdBRRBu dl S			
CsREosiB chil :B220			
f RSRRIBWctl :BAhREsPd-f RRodnSsPd			
Msxn(E(B/hBpsRR:B2.64			
ISRPcelhRRSBynLSsiBDl isc:B46.0		ISRPcelhRRSBGOy:BD	
ISRPcelhRRSB st shmRBUPhnzsRRSB 9.3%		If UBGl)liBRWBylo)mlBF	

ASsicemeBgl omRdB(nS5B24

~BBBBmRiE(l B xhl l deBnst shmP,BqEl El BeBP l Rd Fhsiic BSVSmP .

BBBBBQEl El Ber RwSBeB(sxn(E(Bs VP dBRwRBchil e.

#BBB 4PB l chl SFhl B) RiE(l B xhl l deBnst shmP,BqEl El B(scBl BRSLl a

BBBBBQEl El Ber RwSBeB(sxn(E(Bs VP dBRwRBchil e.

(BBBBmRiE(l BVRdB 4PB l chl SFhl BqEl El BeB(l P d dBbcBEt eRl s(BenLSsi.

y t inPBs SdBgr sel e:BBBBB9:B94P B&Bo) nSL

GsSlBudREt	yTG	yTp	CTG	CTW	yNW	yNp
GsSlBRSVuLEosRRSe						
WosWmBnRE(lB)tr5	44	7	286	2118	271	229
FEREd BnRE(lB)tr5	44	7	286	2118	271	229
IdlsiBFiRwB)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNmdPBW5	20	20	22	22	22	22
yPRosLlBGSLPBW5	294	294	940			900
yPRosLlBGsSle	2	0	9			2
WstldBGSLPBW5	94		94			
GsSlBJRuBFshPRo	0. 8	2.00	0. 8	0. 2	0. 2	2.00
FdP		0.140				0.140
FiRgdRPhPd	0. 40		0. 40			
ysRd.BFiRwBtdR5	9802	2988	9 21	3118	3 66	2619
FiRgld(mPd	0. 40		0. 40			
ysRd.BFiRwBtld(5	9802	2988	9 21	3118	3 66	2619
pnLrPBWEdGSBRSBpld		Yle				Yle
ysRd.BFiRwBpWOp5		264				3
GSkBytlldB(tr5	94			40	40	
GSkBDmRsShlBW5	776			2 18	2740	
Wos)liBW(lBe5	21.2			98.2	99.4	
glskBHREdBFshPRo	0.4	0.42	0.40	0. 3	0. 6	0.87
Hls)cBnlrmileB%5	92%	21%	27%	1%	8%	26%
Adj.BFiRwB)tr5	6	264	637	9008	2127	238
yrsdldBGsSlBWosWmB%5						
GsSlBudREtBFiRwB)tr5	6	264	637	9008	2127	238
TSPdBaiRnkldBSPdelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
Mldns SBNmdPvW5	90			93	93	
GSkBDWdlPW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwRBwscBGlVBWEdSBGsSl						
Hlsdwsc BFshPRo	2.0	2.0	2.03	0. 1	0. 1	2.03
WEdSnSLBytlldB(tr5	24		24			
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2
DlPhPRdBW(tisPB	GlVP	pnLrP	GlVP			pnLrP
GlsdnSLBDlPhPRdBW5	67	67	67	947	947	67
WosmnSLBDlPhPRdBW5	0	0	0	940	940	0
DlPhPRd2BgRemPRSW5	0	0	0	940	940	0
DlPhPRd2BynzlW5	67	67	67	7	7	67
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BBrsSSli						
DlPhPRd2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BQEiElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	gld(	gdRP	CA	CA	t(+R)
gdRPhPdBgrsele	3		4	9	7	3
gld(mPdBgrsele		3				7
DlPhPRdBgrsel	3	3	4	9	7	3
ywmPrBgrsel						
MnSn(EBSmsiBe5	1.0	1.0	6.0	24.0	24.0	1.0

GsSl Bu oREt	yTG	yTp	CTG	CTW	yNW	yNp
MrSn(E(Byt imBe5	24.0	24.0	1.0	99.0	99.0	24.0
WRRsiBy t imBe5	28.0	28.0	28.0	296.0	207.0	28.0
WRRsiBy t imB%5	29.2%	29.2%	29.2%	18. %	84.8%	29.2%
Msxn(E(Bu d l SBe5	20.0	20.0	29.0	227.0	.0	20.0
Yl iiRwBW(l Be5	4.0	4.0	3.0	4.0	4.0	4.0
Aii-pl dBW(l Be5	9.0	9.0	2.0	9.0	9.0	9.0
GReRBW(l BAdjEeRBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReRBW(l Be5	8.0	8.0	4.0	8.0	8.0	8.0
Gl sd/GsL			Gl sd		GsL	
Gl sd-GsLBOt R(nzl ?						
ml r mil BTxP SeRSBe5	4.0	4.0	3.0	8.0	8.0	4.0
pl hsiiBMRdl	CRSl	CRSl	CRSl	f -MnS	f -MnS	CRSl
AhRBTWhRBu d l SBe5	.1	.1	28.8	227.9	6.4	220.6
AhREsP dBL/f Bp sRR	0.08	0.08	0.26	0.16	0.78	0.8
)/hBp sRR	0.3	0.76	0. 3	0.3	0.44	0.26
f RSRRiBDl isc	89.0	96.6	87.1	0.	28.3	6.4
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	89.0	96.6	87.1	0.	28.3	6.4
GOy	T	f	T	A	a	A
At t oRshr BDl isc	36.9			29.2	27.3	
At t oRshr BGOy	D			a	a	
QEl El BGl SLP B40P BW5	39	0	~920	9	391	27
QEl El BGl SLP B 4P BW5	37	0	#222	(9	386	(99
ISP oSsiBGSkBDneRBW5	416			2 08	2480	
WEoSBascBGl SLP BW5	294	294	940			900
asel B st shnRB)tr5	2 9	927	671	3047	6311	20 2
yRso)sRRSB st Bp l dEhRS	0	0	0	0	0	0
yt nibshkB st Bp l dEhRS	0	0	0	0	0	0
yRRosLl B st Bp l dEhRS	0	0	0	0	0	0
pl dEhl dB/hBp sRR	0.31	0.76	0. 3	0.3	0.49	0.26

ISP oel hRRSBy E((soc

Ad sBWct l : OPl o

f chil BGl SLP :B230

AhREsP dB chil BGl SLP :B230

OWel PB32B9 %5,Bpl Vd Shl dBRBr sel B9:CTWBSdB7:yNW,ByRsdRBRBu d l S

CsREosiB chil :B70

f RSRRiBWct l :BAhREsP d-f RRodrSsP d

Msxn(E(B/hBp sRRB0. 3

ISP oel hRRSBy nLSsiBDl isc:B24.4 ISP oel hRRSBGOy :Ba

ISP oel hRRSB st shnRBUFnzsRRSB41.3% If UBG)l iBRWyl o)nl Ba

ASsiceneBgl oRdB(nSB24

~BBBmRE(l B xhl l deBst shnR,BQEl El BeBPl Rd RnsiicBSVSnP.

BBBBQEl El Ber RwSBeB sxn(E(BsVP oBRwRBchil e.

#BBB 4P Bl chl SRl ByRE(l B xhl l deBst shnR,BQEl El B(scBl BRSLl o.

BBBBQEl El Ber RwSBeB sxn(E(BsVP oBRwRBchil e.

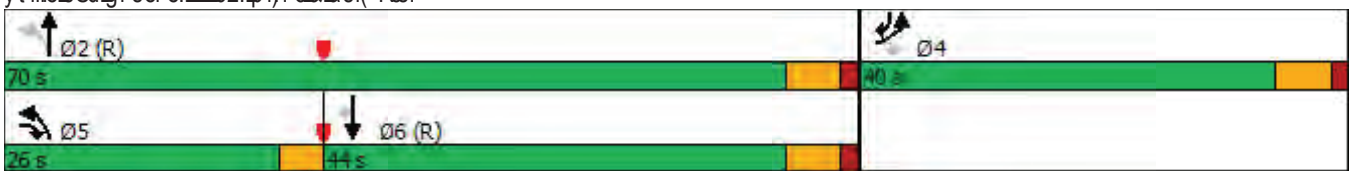
(BBBmRE(l BRoB 4P Bl chl SRl BQEl El BeB(l P d dBocBEteRl s(BenLSsi.


Ø2 (R)
123 s
Ø4
17 s
Ø5
17 s
Ø6 (R)
106 s

GsSlBudREt	TaG	Tap	CaG	CaW	yaW	yap
GsSlBRSVuLEosRRSe						
WosWmBnRE(lBv)tr5	9 4	26	362	67	373	214
FEREd BnRE(lBv)tr5	9 4	26	362	67	373	214
IdlsiBFiRwBv)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNmdPBW5	22	29	29	29	22	29
yRRosLlBGSLPBW5	660	660	940			314
yRRosLlBGsSle	2	0	2			2
WstldBGSLPBW5	94		94			
GsSlBuRmLBFshRRo	0. 8	2.00	2.00	0. 4	0. 4	2.00
FdP		0.140				0.140
FiRBgdRPhPd	0. 40		0. 40			
ysRd.BFiRwBvtdR5	6993	2371	2806	671	6469	2461
FiRBgld(mPd	0. 40		0.306			
ysRd.BFiRwBvtld(5	6993	2371	899	671	6469	2461
pmLrPBWEdGSBRSBpld		Yle				Yle
ysRd.BFiRwBvpWOp5		237				990
GSkBytlldBv(tr5	94			64	64	
GSkBDmeRShlBW5	189			269	2044	
Wos)liBW(lBve5	96.1			94.	90.7	
glskBHREdBFshRRo	0. 2	0.8	0. 3	0. 9	0.11	0.13
Hls)cBmlrmileBv%5	4%	20%	7%	6%	3%	4%
Adj.BFiRwBv)tr5	693	287	34	2028	498	990
yrsdldBGsSlBWosWmBv%5						
GsSlBudREtBFiRwBv)tr5	693	287	34	2028	498	990
TSPdBaiRhkldBSPdelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAimLS(lSP	GlVP	pmLrP	GlVP	GlVP	GlVP	pmLrP
MldmsSBNmdPvW5	99			29	29	
GSkBDWelRW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwRBwscBGlVBWEdSBGsSl						
Hlsdwscbfshrro	2.03	2.00	2.00	0. 3	0. 1	2.00
WEdGSLBytlldBv(tr5	24		24			
CE(bldBRVBDlPhRRdeB	2	2	2	2	2	2
DlPhRRdeBW(tisPB	GlVP	pmLrP	GlVP			pmLrP
GlsdnSLBDlPhRRdeBW5	67	67	67	947	947	67
WosmnSLBDlPhRRdeBW5	0	0	0	940	940	0
DlPhRRdeB2BgRemRRSW5	0	0	0	940	940	0
DlPhRRdeB2BynzlW5	67	67	67	7	7	67
DlPhRRdeB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhRRdeB2BBrsSSli						
DlPhRRdeB2BTxPSdBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRdeB2BQEiElBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRdeB2BDliscBve5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	t(+R)	t(+tP	CA	CA	t(+R)
gdRPhPdBgrsele	3	4	4	9	7	3
gld(mPdBgrsele		3	9			7
DlPhRRdBgrsel	3	4	4	9	7	3
ywmPmrBgrsel						
MrSr(E(BSmRsiBve5	20.0	20.0	20.0	60.0	60.0	20.0

GsSI BudcREt	TaG	Tap	CaG	CaW	yaW	yap
MrSn(E(Bytim Be5	30.0	26.4	26.4	67.0	33.0	30.0
WRRsiBytim Be5	30.0	97.0	97.0	80.0	33.0	30.0
WRRsiBytim B%5	67.3%	96.7%	96.7%	76.7%	30.0%	67.3%
Msxn(E(Bud l SBe5	63.0	99.4	99.4	73.0	61.0	63.0
Yl iiRwBW(l Be5	3.4	6.4	6.4	3.4	3.4	3.4
Aii-pl dBW(l Be5	2.4	0.0	0.0	2.4	2.4	2.4
GReBW(l BAdjEeBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReBW(l Be5	7.0	6.4	6.4	7.0	7.0	7.0
Gl sd/GsL		Gl sd	Gl sd		GsL	
Gl sd-GsLBOt P(nzl ?						
ml r mil ETxP SenRSBe5	6.0	4.0	4.0	8.0	8.0	6.0
MrSn(E(Bust Be5	0.9	0.9	0.9	3.4	3.4	0.9
W(l Bal VRd Bpl dEhl Be5	0.0	0.0	0.0	64.0	64.0	0.0
W(l BWRBpl dEhl Be5	0.0	0.0	0.0	94.0	94.0	0.0
pl hsiiBMRdl	CRSI	CRSI	CRSI	f -MnS	f -MnS	CRSI
N sikBW(l Be5	20.0				20.0	20.0
Fiser BDRSPBN sikBe5	93.0				91.0	93.0
gl dl ePmsSB siieB#/r o5	0				0	0
AhPBTWhRBud l SBe5	27.1	36.6	16.8	12.9	48.9	10.0
AhPEsP dBL/f Bpsf R	0.24	0.6	0.87	0.83	0.49	0.86
)/hBpsf R	0.77	0.97	0.76	0.68	0.9	0.2
f RSRRIBDl isc	40.9	4.2	1.	7.0	28.6	2.6
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	40.9	4.2	1.	7.0	28.6	2.6
GOy	D	A	A	A	a	A
At t oRshr BDl isc	63.6			7.	29.7	
At t oRshr BGOy	f			A	a	
QEl El BGl SLP B40P BW5	229	26	18	224	206	0
QEl El BGl SLP B 4P BW5	242	62	272	288	212	92
ISP oSsiBGlSkBDreBW5	8 9			293	84	
WEoSBascBGl SLP BW5	660	660	940			314
asel B st shmRBy)t r 5	7	822	877	9893	2167	2613
yRo)sf RSB st Bpl dEhf S	0	0	0	0	0	0
yt mibshkB st Bpl dEhf S	0	0	0	0	0	0
yf RosLl B st Bpl dEhf S	0	0	0	0	0	0
pl dEhl dB/hBpsf R	0.66	0.94	0.70	0.68	0.9	0.27

ISP œl hf RSBy E((soc			
Ad sBW tl :	OP lo		
f chil BGl SLP :B220			
AhPEsP dB chil BGl SLP :B220			
OWel P:BDB0%5Bpl V d Shl dBf RBr sel B9:CaWGBsSdB7:yaW,BySsdPBRBudl S			
CsPEosiB chil :B200			
f RSRRIBW tl :BAhPEsP d-f RRodnSsP d			
Msxn(E(B/hBpsf R:B0.77			
ISP œl hf RSBynLSsiBDl isc:B26.4		ISP œl hf RSBBOy:Ba	
ISP œl hf RSB st shmRBLJPhnzsf RSBB0.7%		If UBGl)l iBRWBy l o)mnl B	
ASsicemeBgl onRdBy(nG5B24			


Ø2 (R)
70 s
Ø4
40 s
Ø5
26 s
Ø6 (R)
44 s

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	34	4	94	30	4	204	34	9260	90	0	96 0	64
FEPEd BnRE(lB)tr5	34	4	94	30	4	204	34	9260	90	0	96 0	64
IdlsiBFiRwB)trti5	2 00	2 00	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNmdPBW5	29	29	29	22	22	29	20	22	22	29	22	22
yPRosLIBGSLPBW5	290		290	0		0	260		260	600		0
yPRosLIBGsSIe	2		0	2		2	2		2	2		0
WstldBGSLPBW5	94			94			94			94		
GsSlBJPuLBFshPRo	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0. 2	2.00	2.00	0. 2	0. 2
FdP		0.118				0.140			0.140		0. 8	
FiPBgdRPPhPd	0. 40			0. 40			0. 40			0. 40		
ysPd.BFiRwBtdR5	2378	23 1	0	2441	2 66	2344	2906	3 66	234	2460	3130	0
FiPBgld(mPPd	0.734			0.862			0. 40			0. 40		
ysPd.BFiRwBtld(5	7	23 1	0	22	2 66	2344	2906	3 66	234	2460	3130	0
pnLrPBWEdGSBRSBpld			Yle			Yle			Yle			Yle
ysPd.BFiRwBpWOp5		60				292			292		3	
GSkBytlldB(tr5		94			94			30			30	
GSkBDmPSShlBW5		82			688			2213			380	
Wos)liBW(lBe5		97.4			20.6			90.9			1.0	
glskBHREdBFshPRo	0.73	0.40	0.13	0.8	0.11	0. 6	0.89	0. 7	0. 9	0.14	0. 4	0.70
Hls)cBnlrmileB%5	96%	28%	22%	29%	0%	22%	30%	8%	8%	21%	1%	30%
Adj.BFiRwB)tr5	80	20	60	42	7	226	76	992	99	207	9427	41
yrsdldBGsSlBWosWmB%5												
GsSlBudREtBFiRwB)tr5	80	30	0	42	7	226	76	992	99	207	9483	0
TSPdaiPnkldBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5		29			29			93			93	
GSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.00	2.00	2.00	2.03	0. 1	2.00	2.0	0. 1	2.03	2.00	0. 1	2.03
WEdSSLBytlldB(tr5	24			24			24			24		
CE(bldBRBDlPhPRceB	2	2		2	2	2	2	2	2	2	2	
DlPhPRcBW(tisPB	GlVP	WrdE		GlVP	WrdE	pnLrP	GlVP		pnLrP	GlVP		
GlsdnSLBDlPhPRcBW5	67	67		67	67	67	67	947	67	67	947	
WosmnSLBDlPhPRcBW5	0	0		0	0	0	0	940	0	0	940	
DlPhPRcd2BgPemPRSW5	0	0		0	0	0	0	940	0	0	940	
DlPhPRcd2BynzlW5	67	67		67	67	67	67	7	67	67	7	
DlPhPRcd2BWctl	fi+Tx	fi+Tx		fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	
DlPhPRcd2BBrsSSli												
DlPhPRcd2BTxPSdBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRcd2BQEiElBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRcd2BDliscBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WEdSBWctl	t(+tP	CA		t(+tP	CA	glo(	gdRP	CA	glo(	gdRP	CA	
gdRPhPdBgrsele	8	3		6	1		4	9		2	7	
glo(mPPdBgrsele	3			1		1			9			
DlPhPRcBgrsel	8	3		6	1	1	4	9	9	2	7	
ywmPrBgrsel												
MnSn(EBSmPsiBe5	6.0	4.0		6.0	4.0	4.0	6.0	24.0	24.0	6.0	24.0	

GsSl Bu oREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MrSn(E(Byt imBe5	.4	27.0		.4	32.0	32.0	.4	38.0	38.0	.4	91.0	
WRsiBy t imBe5	28.0	27.0		28.0	27.0	27.0	24.0	18.0	18.0	90.0	9.0	
WRsiBy t imB%5	29.2%	22.3%		29.2%	22.3%	22.3%	20.8%	79.2%	79.2%	23.6%	74.8%	
Msxn(E(Bu d l SBe5	26.4	20.0		26.4	20.0	20.0	20.4	12.0	12.0	24.4	17.0	
Yl iiRwBW(l Be5	6.4	3.4		6.4	3.4	3.4	6.4	3.4	3.4	6.4	3.4	
Aii-pl dBW(l Be5	0.0	2.4		0.0	2.4	2.4	2.0	2.4	2.4	2.0	2.4	
GReBW(l BAdjEeBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WRsiBGReBW(l Be5	6.4	7.0		6.4	7.0	7.0	3.4	7.0	7.0	3.4	7.0	
Gl sd/GsL	Gl sd	GsL		Gl sd	GsL	GsL	Gl sd	GsL	GsL	Gl sd	GsL	
Gl sd-GsLBOt P(nzl ?												
ml r mil BTxP SenRSBe5	6.0	3.0		6.0	3.0	3.0	6.0	8.0	8.0	6.0	8.0	
pl hsiiBMRdl	CRSl	CRSl		CRSl	CRSl	CRSl	CRSl	f -MnS	f -MnS	CRSl	f -MnS	
N sikBW(l Be5					8.0	8.0		.0	.0		8.0	
Fiser BDRSBN sikBe5					91.0	91.0		69.0	69.0		24.0	
gl dl ePosSB siieB#/r o5					0	0		0	0		0	
AhPT WhBu d l SBe5	92.0	.0		21.3	8.8	8.8	20.	1 .7	1 .7	26.	4.0	
AhEsP dBL/f Bp sPR	0.24	0.07		0.26	0.07	0.07	0.01	0.73	0.73	0.20	0.71	
)/hBp sPR	0.61	0.69		0.91	0.07	0.4	0.78	0.80	0.09	0.80	0.81	
f RSPRiBDl isc	44.6	66.8		49.2	79.1	92.6	70.0	26.0	0.0	46.4	92.9	
QEl El BDl isc	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WRsiBDl isc	44.6	66.8		49.2	79.1	92.6	70.0	26.0	0.0	46.4	92.9	
GOy	T	f		D	T	f	T	a	A	D	f	
At t oRshr BDl isc		38.3			69.0			23.9			99.4	
At t oRshr BGOy		D			f			a			f	
QEl El BG SLP B40P BW5	47			30	4	0	41	960	0	200	382	
QEl El BG SLP B 4P BW5	80	24		71	90	44	(44	(902	(0	(11	(646	
ISP oSsiBGskBDreBW5		1 2			9 8			2203			6 0	
WEoSBasciBG SLP BW5	290						260		260	600		
asel B st shrPB)t r 5	907	268		992	261	927		6241	88	286	6913	
yRo)sPRSB st Bp l dEhPS	0	0		0	0	0	0	0	0	0	0	
yt nibshkB st Bp l dEhPS	0	0		0	0	0	0	0	0	0	0	
yPosLl B st Bp l dEhPS	0	0		0	0	0	0	0	0	0	0	
pl dEhl dB)/hBp sPR	0.63	0.9		0.96	0.03	0.49	0.73	0.80	0.09	0.72	0.81	

ISP oel hPRSBy E((soc

Ad sBWct l : OPl o

f chil BG SLP :B230

AhEsP dB chil BG SLP :B230

OWel P:B290B17%5Bp l V d Shl dBRBr sel B:CaWBSdB:yaWBy RsoPRWBu d l S

CsPEosiB chil :B230

f RSPRiBWct l :BAhEsP d-f RRodnSsP d

Msxn(E(B)/hBp sPRB0.81

ISP oel hPRSBy nLSsiBDl isc:B2 .8 ISP oel hPRSBGOy :Ba

ISP oel hPRSB st shrPBUPmzsPRSB0. % If UBG)l iBRWy l o)ml B

ASsicereBgl oRdB(nSB24

(BBBmRE(l BRoB 4P Bl chl SPl BqEl El BeB(l P d dBocBEt ePd s(BeLSsi.

yt imPeB SdBgrsel e:BBBB63:BMsSSrl n(B&BUSnP d

GsSIBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSIBFRSWLEosPRSe						
WosWmBnRE(lB)tr5	2426	29	23	9070	212	91
FEPEd BnRE(lB)tr5	2426	29	23	9070	212	91
IdlsiBFiRwB)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSIBNmdPBW5	29	29	29	29	23	29
GsSIBUPnBFshPRo	0. 4	0. 4	0. 4	0. 4	2.00	2.00
FdP	0. 1				0. 12	
FiPBgdRPhPd					0. 4	
ysPd.BFiRwBtdR5	64	0	0	6367	21 0	0
FiPBgl(nPPd				0. 97	0. 4	
ysPd.BFiRwBtl(5	64	0	0	6219	21 0	0
pnLrPBWEoSBRSBpld		Yle				Yle
ysPd.BFiRwBpWOp5	6				4	
GSkBytlldB(tr5	64			64	90	
GSkBDmePShlBW5	606			2714	4 7	
Wos)liBW(lBe5	4.			69.1	90.6	
glskBHREoBFshPRo	0. 4	0.40	0.11	0. 4	0.84	0.80
Hls)cBnlrnhileB%5	0%	8%	23%	4%	2%	0%
Adj.BFiRwB)tr5	24 6	93	27	9271	932	30
yrsdldBGsSIBWosWmB%5						
GsSIBudREtBFiRwB)tr5	2728	0	0	9213	912	0
TSPdBaiRhkldBSPoelhPRS	CR	CR	CR	CR	CR	CR
GsSIBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5	20			20	23	
GSkBDWelPW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwvRBwscBGlVBWEoSBGsSl						
HlsdwscBFshPRo	2.00	2.00	2.00	2.00	0. 9	2.00
WEoSSLBytlldB(tr5			24		24	
CE(bldBRBDlPhPRoeB	2		2	2	2	
DlPhPRdBW(tisPB			GlVP		GlVP	
GlsdnSLBDlPhPRdBW5	947		90	947	67	
WosmnSLBDlPhPRdBW5	940		0	940	0	
DlPhPRd2BgRemPRSW5	940		0	940	0	
DlPhPRd2Bynzl vW5	7		90	7	67	
DlPhPRd2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli						
DlPhPRd2BExPSdBe5	0.0		0.0	0.0	0.0	
DlPhPRd2BQEl Ele5	0.0		0.0	0.0	0.0	
DlPhPRd2BDliscBe5	0.0		0.0	0.0	0.0	
WEoSBWctl	CA		gl(	CA	gdRP	
gdRPhPdBgrsele	9			7	1	
gl(nPPdBgrsele			7			
DlPhPRdBgrsel	9		7	7	1	
ywnPnrBgrsel						
MnSn(E(BSnPsiBe5	24.0		24.0	24.0	1.0	
MnSn(E(BytinBe5	94.0		92.0	92.0	97.0	
WRPsiBytinBe5	223.0		223.0	223.0	97.0	
WRPsiBytinB%5	12.3%		12.3%	12.3%	21.7%	

GsSI BucREt	TaW	Tap	NaG	NaW	CaG	Cap
Msxn(E(Bud I SBe5	201.0		201.0	201.0	90.0	
YI iiRwBW(I Be5	3.4		3.4	3.4	3.4	
Aii-pI dBW(I Be5	2.4		2.4	2.4	2.4	
GRePBW(I BAdjEePBe5	0.0			0.0	0.0	
WRPsiBGRePBW(I Be5	7.0			7.0	7.0	
GI sd/GsL						
GI sd-GsLBOt PR(nzI ?						
mI r mil BTxP SenRSBe5	8.0		8.0	8.0	4.0	
MnSn(E(Bu st Be5	3.4		3.4	3.4	0.9	
W(I BaI VRd Bp I dEhI Be5	60.0		60.0	60.0	0.0	
W(I BWRBp I dEhI Be5	94.0		94.0	94.0	0.0	
pI hsiiBMRdI	f -MnS		f -MnS	f -MnS	CRSI	
N sikBW(I Be5	8.0				8.0	
Fiser BDRSPBN sikBe5	29.0				96.0	
gI dI ePnsSB siieB#/r o5	0				0	
AhPBTWhPBud I SBe5	207.2			207.2	92.	
AhPEsP dBL/f Bp sPR	0.87			0.87	0.27	
)/hBp sPR	0.4			0. 2	0. 3	
f RSPRiBDI isc	1.3			26.0	4.4	
QEI EI BDI isc	0.0			0.0	0.0	
WRPsiBDI isc	1.3			26.0	4.4	
GOy	A			a	F	
At t oRshr BDI isc	1.3			26.0	4.4	
At t oRshr BGOy	A			a	F	
QEI EI BGI SLP B40P BWP5	981			393	~971	
QEI EI BGI SLP B 4P BWP5	694			(366	#664	
ISP oSsiBGSkBDnePBWP5	996			2704	427	
WEoSBasc BGI SLP BWP5						
asel B st shnPB)t r 5	9888			9343	600	
yRso)sPRSB st Bp I dEhPS	0			0	0	
yt mibshkB st Bp I dEhPS	0			0	0	
yPRosLI B st Bp I dEhPS	0			0	0	
pI dEhI dB/hBp sPR	0.41			0.1	0. 3	

ISP oel hPRSBy E((soc	
Ad sBWt I : OPI o	
f chil BGI SLP :B230	
AhPEsP dB chil BGI SLP :B230	
OWel P:B201B88%5,Bp I V d ShI dBPRBr sel BD:TaWBSdB7:N aWG,By RsoPRBud I S	
CsPEosiB chil :B0	
f RSPRiBWt I :BAhPEsP d-f RRodnSsP d	
Msxn(E(B/hBp sPRB0. 3	
ISP oel hPRSBynLSsiBDI isc:B27.1	ISP oel hPRSBGOy :Ba
ISP oel hPRSB st shnPBUPnzsPRSB11.4%	If UBG)I iBRWy I o)mI BT
ASsicerBgI oRdB(nSB24	
~BBBnRE(I B xhI I deBst shnP,BqEI EI BeBP I Rd PnsiicBSVSnP.	
BBBBQEI EI Ber RwSBeB sxn(E(BsVP dBwRBchil e.	
#BBB 4P B I chI SPnI B)RE(I B xhI I deBst shnP,BqEI EI B(scBDI BRSLI o	
BBBBQEI EI Ber RwSBeB sxn(E(BsVP dBwRBchil e.	

(mRiE(l BRcB 4rPB l ch l SPn l BqE l E l BeB(l Pd dBcBEteRl s(BenLSsi.

yt ineBsSdBgr sel e:2:BJEddB&B)nSL

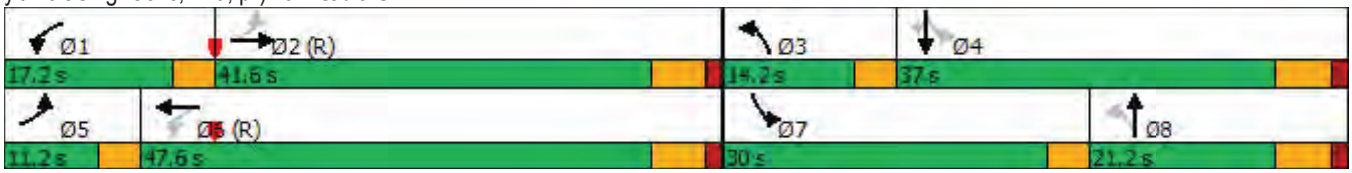
GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lBv)tr5	201	814	2	921	646	216	214	781	922	478	128	922
3EPEd BnRiE(lBv)tr5	201	814	2	921	646	216	214	781	922	478	128	922
PlsiBBiRdBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00
GsSlBNnlPBW5	29	29	29	29	29	29	22	22	29	22	22	22
yPRosLlBGSLPBW5	28w		0	970		0	21w		700	2w0		940
yPRosLlBGsSle	2		0	2		0	2		2	2		2
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBUPuLBshPRo	2.00	0. w	0. w	2.00	0. w	0. w	2.00	0. 2	0. 2	2.00	0. w	2.00
3dP		0. 61			0. 6			0. 74				0.1w0
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BBiRdBvtdR5	2618	77w7	0	2880	749	0	26 4	44 1	0	26 4	746w	2729
3iPBglo(nPPl	0.2			0.209			0.967			0.924		
ysP.BBiRdBvtlo(5	7w7	77w7	0	2 0	749	0	46	44 1	0	719	746w	2729
pnLrPBWEdGSBRSBpll			Yle			Yle			Yle			Yle
ysP.BBiRdBvpWOp5		74			7w			2w0				977
GSkBytlllBv(tr5		7w			7w			40			40	
GSkBDmPSShlBW5		7971			2792			9 49			760	
Wos)liBW(lBe5		67.2			9w.8			w0.2			6.2	
glskBHPEdBshPRo	0. 2	0. 2	0.14	0.81	0.1	0. 8	0.14	0. 4	0.68	0. 0	0. 2	0.84
Hls)cBnlrmileB%5	8%	4%	w%	9%	9%	9%	7%	w%	7%	7%	6%	2 %
Alj.BBiRdBv)tr5	22	169	978	98	896	2 9	92	409	72w	416	1 1	91w
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBiRdBv)tr5	22	20	0	98	21	0	92	828	0	416	1 1	91w
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MIlrsSBNnlPvW5		29			29			22			22	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnlPvW5		26			26			26			26	
WdPBdlscBGlVBWEdSBGsSl												
HlsldscBshPRo	2.00	2.00	2.00	2.00	2.00	2.00	2.04	2.04	2.00	2.04	0. 1	2.04
WEdSSLBytlllBv(tr5	2w			2w			2w			2w		
CE(bldBRVBDlPhPRdeB	2	2		2	2		2	2		2	2	2
DlPhPRdBW(tisPB	GlVP			GlVP			GlVP			GlVP		pnLrP
GlslnSLBDlPhPRdBW5	76	9w6		76	9w6		76	9w6		76	9w6	76
WosmSLBDlPhPRdBW5	0	9w0		0	9w0		0	9w0		0	9w0	0
DlPhPRd2BgPemPRSW5	0	9w0		0	9w0		0	9w0		0	9w0	0
DlPhPRd2BynzlW5	76	6		76	6		76	6		76	6	76
DlPhPRd2BWctl	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSlBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
DlPhPRd2BQEiElBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WEdSBWctl	t(+tP	CA		t(+tP	CA		t(+tP	CA		t(+tP	CA	glo(
gdRPhPlBgrsele	w	9		2	6		7	1		8	4	
glo(nPPlBgrsele	9			6			1			4		4
DlPhPRdBgrsel	w	9		2	6		7	1		8	4	4
ydnPnrBgrsel												
MnSn(E(BSnPsiBe5	7.0	2w.0		7.0	2w.0		7.0	2w.0		7.0	2w.0	2w.0

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MrSr(E(BytimBe5	6.w	92.0		6.w	92.0		6.w	92.0		6.w	78.0	78.0
WRRsiBytimBe5	22.9	42.6		28.9	48.6		24.9	92.9		70.0	78.0	78.0
WRRsiBytimBP%5	20.9%	78.1%		2w.6%	47.7%		29. %	2 .7%		98.7%	77.6%	77.6%
Msxr(E(BudlSBe5	8.8	7w.6		27.8	42.6		20.8	2w.9		96.w	72.0	72.0
YliiRdBW(lBe5	7.w	4.w		7.w	4.w		7.w	4.w		7.w	4.w	4.w
Aii-pllBW(lBe5	0.0	2.w		0.0	2.w		0.0	2.w		0.0	2.w	2.w
GReBW(lBAljEeBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRRsiBGReBW(lBe5	7.w	6.0		7.w	6.0		7.w	6.0		7.w	6.0	6.0
Gisl/GsL	Gisl	GsL		Gisl	GsL		Gisl	GsL		Gisl	GsL	GsL
Gisl-GsLBDtP(rzl?												
mlrmilETxPSenRSBe5	7.0	8.0		7.0	8.0		7.0	8.0		7.0	8.0	8.0
plhsiiBMRIl	CRSl	f-MrS		CRSl	f-MrS		CRSl	CRSl		CRSl	CRSl	CRSl
NsikBW(lBe5											8.0	8.0
3iserBDRSPBNsikBe5											94.0	94.0
gllleRosSBsiieB#/rd5											0	0
AhPBTWhPBudlSBe5	4w.6	7w.6		ww.7	42.1		91.4	2w.9		48.8	72.0	72.0
AhPEsPIB/fBpsPR	0.42	0.79		0.w0	0.71		0.96	0.24		0.47	0.91	0.91
)/hBpsPR	0.w0	0.		0. 6	0.6		0. 2	0. 6		2.02	0. 9	0.w7
fRSRRIBDlisc	21.w	w9.7		80.	70.		66.	62.4		87.w	w7.1	22.7
QEl EiBDlisc	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRRsiBDlisc	21.w	w9.7		80.	70.		66.	62.4		87.w	w7.1	22.7
GOy	a	D		T	f		T	T		T	D	a
AttoRshrBDlisc		4 .0			40.9			69.8			w9.7	
AttoRshrBGOy		D			D			T			D	
QEl EiBGlSLPBwOPBW5	78	402		247	987		1	24		:9 7	797	98
QEl EiBGlSLPBwPBW5	(4	#w40		#979	749		#908	#979		#w29	#444	w7
FSPoSsiBGSkBDreBW5		72w1			2942			9169			910	
WEoSBascBGlSLPBW5	28w			970			21w			2w0		940
aselBstshmcB)tr5	940	2201		9 9	2794		940	8w0		412	86	w78
yRo)sPRSBstBpllEhPS	0	0		0	0		0	0		0	0	0
ytniibshkBstBpllEhPS	0	0		0	0		0	0		0	0	0
yPRosLIBstBpllEhPS	0	0		0	0		0	0		0	0	0
pllEhllB)/hBpsPR	0.w0	0.		0. 6	0.6		0. 2	0. 6		2.02	0. 9	0.w7

FSPoelhPRSBy E((soc												
AdsBWctl,	OPlo											
fchilBGlSLP,B220												
AhPEsPIBchilBGlSLP,B220												
OWelP,B40Bw76%5BpIVdShlIBPRBrselB),TaWGBsSlB6,NaWGdyRsdPBRWBudlS												
CsPEosiBchil,B220												
fRSRRIBW:tl,BAhPEsPI-fRRdnGsPI												
Msxr(E(B)/hBpsPR,B2.02												
FSPoelhPRSBymLSsiBDlisc,Bw0.6					FSPoelhPRSBGOy,BD							
FSPoelhPRSBstshmcBUPmzsPRSB7.w%					PfUBG)liBRWBylo)mlB3							
ASsicemBglonRIBv(nS52w												
:BBBmRIE(lBxhlleBstshmcdpBEiBeBPlRdPmsiicBSWSnP.												
BBBBQEiEiBerRdSBeB(sxr(EBsWPdBRdRBchile.												
#BBBBwPBlchlSPmlB)RIE(lBxhlleBstshmcdpBEiEiB(scBblBRSLlo												
BBBBQEiEiBerRdSBeB(sxr(EBsWPdBRdRBchile.												

(EBBnRE(l BRcB wP B l chl SMl BxEl El BeB l Pd l BcBEte Pls(BnLSsi.

yt imeBSl Bgr sel e, BBBB, Bpn) l cB-BGsdd Shl



GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lBv)tr5	67w	81w	7 w	84w	610	10	ww	2290	0w	24w	216w	840
3EPEdBnRiE(lBv)tr5	67w	81w	7 w	84w	610	10	ww	2290	0w	24w	216w	840
PlsiBBiRdBv)trti5	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNnPBW5	29	29	24	29	29	29	29	29	29	29	29	27
yPRosLIBGSLPBW5	78w		770	940		77w	710		46w	7w0		4w0
yPRosLIBGsSle	9		2	9		2	9		9	9		9
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBUPuLBshPRo	0. 8	0. 2	2.00	0. 8	0. 2	2.00	0. 8	0. 2	0.11	0. 8	0. 2	0.11
3cP			0.1w0			0.1w0			0.1w0			0.1w0
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BBiRdBvtcR5	7217	w207	2w66	7298	w900	2w94	9 21	418w	94 7	7949	418w	96 w
3iPBglo(mPl	0. w0			0. w0			0. w0			0. w0		
ysP.BBiRdBvtlo(5	7217	w207	2w66	7298	w900	2w94	9 21	418w	94 7	7949	418w	96 w
pnLrPBWEcGSBRSBpll			CR			CR			CR			CR
ysP.BBiRdBvpWOp5												
GrSkBytlllBv(tr5		40			40			w0			w0	
GrSkBDmeRShlBW5		867			80w			w 4			2 18	
Wos)liBW(lBe5		27.0			29.0			1.2			98.2	
glskBHREcBshPRo	0.18	0. 7	0.10	0. 2	0. 2	0.86	0.16	0.11	0.1w	0.88	0. 0	0.10
Hls)cBnlrmileB%5	20%	8%	20%	29%	w%	6%	90%	29%	24%	1%	29%	%
Alj.BBiRdBv)tr5	870	144	4 4	12	848	20w	64	2987	206w	211	9089	9w
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBBiRdBv)tr5	870	144	4 4	12	848	20w	64	2987	206w	211	9089	9w
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MllrsSBNnPrW5		94			94			94			94	
GrSkBDWelPW5		0			0			0			0	
fdReedsikBNnPrW5		26			26			26			26	
WdPRdlscBGlVBWEcSBGsSl												
HlsldscBBshPRo	2.00	0. 4	0. 9	2.00	0. 4	2.00	2.00	0. 4	2.00	2.00	0. 4	0. 6
WEcGrSLBytlllBv(tr5	2w			2w			2w			2w		
CE(bldBRVBDlPhPRceB	2	2	2	2	2	2	2	2	2	2	2	2
DlPhPRdBW(tisPrB	GlVP		pnLrP	GlVP		pnLrP	GlVP		pnLrP	GlVP		pnLrP
GlslnSLBDlPhPRdBW5	76	9w6	76	76	9w6	76	76	9w6	76	76	9w6	76
WosmrSLBDlPhPRdBW5	0	9w0	0	0	9w0	0	0	9w0	0	0	9w0	0
DlPhPRd2BgPemPRSW5	0	9w0	0	0	9w0	0	0	9w0	0	0	9w0	0
DlPhPRd2BvnzlW5	76	6	76	76	6	76	76	6	76	76	6	76
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BrsSSli												
DlPhPRd2BxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BQElBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WEcSBWctl	gcRP	CA	t(+R)	gcRP	CA	t(+R)	gcRP	CA	t(+R)	gcRP	CA	t(+R)
gcRPhPlBgrsele	8	4	w	7	1	2	w	9	7	2	6	8
glo(mPlBgrsele			4			1			9			6
DlPhPRdBgrsel	8	4	w	7	1	2	w	9	7	2	6	8
ydmPrBgrsel												
MrSr(E(BSmPsiBe5	4.0	2w.0	4.0	4.0	2w.0	4.0	4.0	2w.0	4.0	4.0	2w.0	4.0

GsSl Bu cRERt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
MrSn(E(Bytim Be5	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0
WRRsiBytimBe5	7w.0	96.0	21.0	7w.0	96.0	2 .0	21.0	60.0	7w.0	2 .0	62.0	7w.0
WRRsiBytimB%5	9w.0%	21.6%	29. %	9w.0%	21.6%	27.6%	29. %	49. %	9w.0%	27.6%	47.6%	9w.0%
Msxn(E(Bud l SBe5	9 .0	2 .0	29.0	9 .0	2 .0	27.0	29.0	w7.0	9 .0	27.0	w4.0	9 .0
Yl iiRd BW(l Be5	4.0	w.0	4.0	4.0	w.0	4.0	4.0	w.0	4.0	4.0	w.0	4.0
Aii-pl l BW(l Be5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
GReRBW(l BAl jEeRBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReRBW(l Be5	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0
Gl sl/GsL	Gl sl	GsL	Gl sl	Gl sl	GsL	Gl sl	Gl sl	GsL	Gl sl	Gl sl	GsL	Gl sl
Gl sl-GsLBOtR(rzl ?												
ml r mil BTxPSenRSBe5	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0
MrSn(E(Bust Be5	0.9	7.0	0.9	0.9	7.0	0.9	0.9	4.0	0.9	0.9	4.0	0.9
W(l Bal VRd Bpl l EhlBe5	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0
W(l BWRBpl l EhlBe5	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0
pl hsiiBMRl l	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	f -MrS	CRSl	CRSl	f -MrS	CRSl
AhRBTWhRBud l SBe5	9 .0	2 .0	71.0	9 .0	2 .0	71.2	29.0	w7.	1 .	29.2	w4.0	0.0
AhREsPl BL/f BpsRR	0.92	0.24	0.98	0.92	0.24	0.98	0.0	0.71	0.64	0.0	0.7	0.64
)/hBpsRR	2.22	2.99	2.26	2.98	2.06	0.9w	0.96	0.61	0.68	0.68	2.20	0.w7
f RSPRiBDl isc	221.8	262.2	240.	286.9	208.w	42.w	67.8	4 .1	22.7	89.1	81.w	92.9
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	221.8	262.2	240.	286.9	208.w	42.w	67.8	4 .1	22.7	89.1	81.w	92.9
GOy	3	3	3	3	3	D	T	D	a	T	T	f
Attd Rshr BDl isc		242.7			278.0			77.2			62.6	
Attd Rshr BGOy		3			3			f			T	
QEl El BGl SLPBw0PBW5	: 71	: 744	: w79	: 419	: 989	84	70	408	996	10	: 8 4	447
QEl El BGl SLPB wPBW5	#411	#476	#694	#622	#767	20w	(w2	(717	(279	(w	#181	767
FSPcSsiBGSkBDreRBW5		617			69w			w24			2 08	
WEcSBa scBGl SLPBW5	78w		770	940		77w	710		46w	7w0		4w0
asel Bst shrRB)tr5	6w	6 9	49w	648	80w	494	9w0	2188	2602	702	2110	2879
yRo)sRRSBst Bpl l EhRS	0	0	0	0	0	0	0	0	0	0	0	0
yt mibshkBst Bpl l EhRS	0	0	0	0	0	0	0	0	0	0	0	0
yRosLl Bst Bpl l EhRS	0	0	0	0	0	0	0	0	0	0	0	0
pl l Ehl l B/hBpsRR	2.22	2.99	2.26	2.98	2.06	0.9w	0.96	0.61	0.68	0.69	2.20	0.w7

FSPcel hRRSBy E((scc

Ad sBWctl , OPl o

f chil BGl SLP,B240

AhREsPl Bchil BGl SLP,B240

OWel P,B299B18%5Bpl Vd Shl l BRBrsel B,CTWBSSl B,yN WBy RscRBWBud l S

CsREcsiBchil ,Bw0

f RSPRiBWctl ,BAhREsPl -f RRd nSsPl

Msxn(E(B/hBpsRR,B2.98

FSPcel hRRSBy LSsiBDl isc,Bw.4 | FSPcel hRRSBGOy ,B3

FSPcel hRRSBst shrRBURnzsRRSBw.1% | Ff UBG)l iBRWy l o)ml B3

ASsiceeBpl oRl B(nS5B2w

: BBBmRE(l Bxhl l eBst shrRpBEl El BeBPl Rd RnsiicBSVSnP.

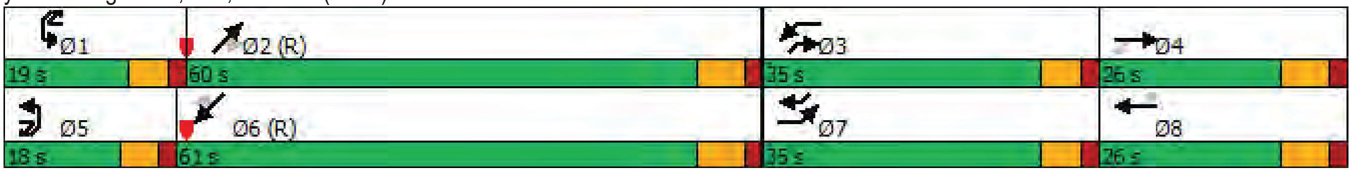
BBBBQEl El Ber Rd SBeB(sxn(E(BsVPdBd RBchil e.

#BBBwPBl chl SRl B)RE(l Bxhl l eBst shrRpBEl El B(scBl BRSLl o.

BBBBQEl El Ber Rd SBeB(sxn(E(BsVPdBd RBchil e.

(BBBBmRiE(l BRoB wrP B l chl SPnl BxE El BeB(l Pd l BcBEt eRl s(BenLSsi.

yt inPBsSl Bgr sel e,BBBBY,BMsSSrl n(B-BFo)nSL



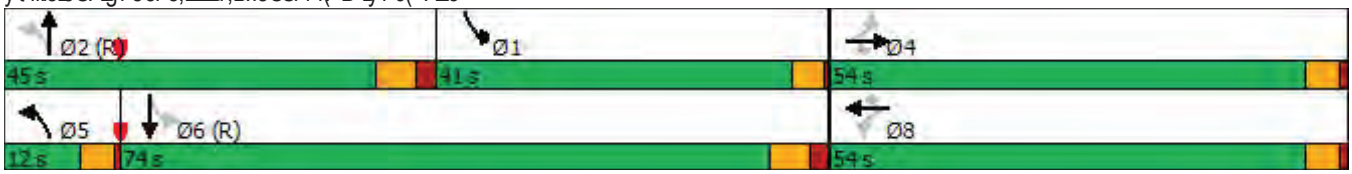
GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	40	4w	700	w0w	80	160	80	20w0	7ww	2900	21w0	9w
3EPEd BnRE(lB)tr5	40	4w	700	w0w	80	160	80	20w0	7ww	2900	21w0	9w
PlsiBiRdB)trti5	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00	2 00	2 00	2 00
GsSlBNnPBW5	22	29	22	29	29	29	22	22	29	29	22	29
yPRosLIBGSLPBW5	22w		22w	0		0	24w		24w	w00		0
yPRosLIBGsSle	2		2	2		2	2		0	9		0
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBuPnLBshPRo	2.00	2.00	2.00	2.00	0. w	0. w	2.00	0. 2	0. 2	0. 8	0. 2	0. 2
3dP			0.1w0		0.189	0.1w0		0. 69			0. 1	
3iPBgdRPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBtdR5	2ww1	2167	2487	2880	2w47	2w04	2w28	4176	0	7477	46w8	0
3iPBgl(nPl	0.240			0.89w			0.272			0.292		
ysP.BiRdBtl(5	970	2167	2487	27w0	2w47	2w04	90	4176	0	478	46w8	0
pnLrPBWEdGSBRSBpll			Yle			Yle			Yle			Yle
ysP.BiRdBpWOp5			270		970	4 6		60			9	
GSkBytlllB(tr5		70			70			40			40	
GSkBDnePSShlBW5		28w7			41			2ww2			2214	
Wos)liBW(lBe5		7 .1			22.2			96.4			90.9	
glskBHPEdBshPRo	0.66	0. 9	0.16	0. 9	0. 9	0. 9	0.12	0. 2	0. 9	0. 9	0. 6	0.17
Hls)cBnlrmileB%5	29%	9%	6%	9%	9%	9%	2w%	6%	9%	9%	8%	78%
Alj.BiRdB)tr5	62	4	74	w4	86	7w	16	22w4	716	2704	2 98	70
yrsdlBGsSlBWosWmB%5						48%						
GsSlBudREtBiRdB)tr5	62	4	74	w4	w2w	4 6	16	2w40	0	2704	2 w8	0
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MIlrsSBNnPrW5		29			29			94			94	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnPrW5		26			26			26			26	
WdPBdlscBGlVBWEdSBGsSl												
HlsldscBshPRo	2.04	2.00	2.04	2.00	2.00	2.00	2.04	0. 1	2.00	2.00	2.04	2.00
WEdSSLBytlllB(tr5	2w			2w			2w			2w		
CE(bldBRBDlPhPRdeB	2	9	2	2	9	2	2	2		2	2	
DlPhPRdBW(tisPB	GlVP	WfdE	pnLrP	GlVP	WfdE	pnLrP	GlVP			GlVP		
GlslnSLBDlPhPRdBW5	76	200	76	90	200	90	76	9w6		90	9w6	
WosmSLBDlPhPRdBW5	0	0	0	0	0	0	0	9w0		0	9w0	
DlPhPRd2BgRemPRSW5	0	0	0	0	0	0	0	9w0		0	9w0	
DlPhPRd2BynzlW5	76	6	76	90	6	90	76	6		90	6	
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BQEElBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BDliscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd9BgRemPRSW5		4			4							
DlPhPRd9BynzlW5		6			6							
DlPhPRd9BWctl		fi+Tx			fi+Tx							
DlPhPRd9BBrsSSli												
DlPhPRd9BTxPSlBe5		0.0			0.0							
WEdSBWctl	gl(	CA	gl(	gl(	CA	gl(	t(+tP	CA		t(+tP	CA	

GsSl Bu dRE t	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
gdRPhPl Bgr sel e		4			1		w	9		2	6	
gl d(mPl Bgr sel e	4		4	1		1	9			6		
Dl PhPRdBgr sel	4	4	4	1	1	1	w	9		2	6	
yd mPr Bgr sel												
MrSr(E(BSmsiBe5	1.0	1.0	1.0	2.0	2.0	2.0	7.0	90.0		w.0	90.0	
MrSr(E(Byt imBe5	24.w	24.w	24.w	41.0	41.0	41.0	8.0	96.w		.w	96.w	
WRRsiByt imBe5	w4.0	w4.0	w4.0	w4.0	w4.0	w4.0	29.0	4w.0		42.0	84.0	
WRRsiByt imB%5	71.6%	71.6%	71.6%	71.6%	71.6%	71.6%	1.6%	79.2%		9 .7%	w9. %	
Msxr(E(Bu d l SBe5	4 .w	4 .w	4 .w	4 .w	4 .w	4 .w	1.0	71.w		78.0	68.w	
Yl iiRd BW(l Be5	7.w	7.w	7.w	7.w	7.w	7.w	7.w	4.w		7.w	4.w	
Aii-pl l BW(l Be5	2.0	2.0	2.0	2.0	2.0	2.0	0.w	9.0		0.w	9.0	
GReBW(l BAl jEeBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
WRRsiBGReBW(l Be5	4.w	4.w	4.w	4.w	4.w	4.w	4.0	6.w		4.0	6.w	
Gl sl /GsL							Gl sl	Gl sl		GsL	GsL	
Gl sl -GsLBDt R(nzl ?								Yl e		Yl e		
ml r mil EBxP SenRSBe5	w.0	w.0	w.0	7.0	7.0	7.0	7.0	8.0		7.0	8.0	
MrSr(E(Bu st Be5	0.9	0.9	0.9	7.0	7.0	7.0	0.9	4.0		7.0	4.0	
W(l Bal VRd Bpl l Ehl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9w.0		0.0	9w.0	
W(l BWRBpl l Ehl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9w.0		0.0	9w.0	
pl hsiiBMRl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	f -MrS		CRSl	f -MrS	
N sikBW(l Be5				8.0	8.0	8.0						
3iser BDRSPBN sikBe5				22.0	22.0	22.0						
gl l ePosSBsiieB#/r d5				0	0	0						
AhPBTWhPBu d l SBe5	4 .w	4 .w	4 .w	4 .w	4 .w	4 .w	42.0	71.w		80.2	68.6	
AhPEsPl BL/f Bp sPR	0.7w	0.7w	0.7w	0.7w	0.7w	0.7w	0.9	0.91		0.w0	0.41	
)/hBp sPR	0.8w	0.08	0.w1	2.2w	0.84	0.w1	0.64	2.29		2.9	0.18	
f RSRPRIBDl isc	2.7	70.6	96.8	270.6	91.6	w.6	w .	20 .9		267.	2 .0	
QEl El BDl isc	0.0	0.0	0.0	0.8	9.4	0.7	0.0	0.0		0.0	0.0	
WRRsiBDl isc	2.7	70.6	96.8	272.7	72.0	6.0	w .	20 .9		267.	2 .0	
GOy	3	f	f	3	f	A	T	3		3	a	
At t dRshr BDl isc		7w.8			w1.7			206.6			86.	
At t dRshr BGOy		D			T			3			T	
QEl El BGl SLPBW0PBW5	4	70	269	: w16	94	0	w	: w86		: 8w1	400	
QEl El BGl SLPBwPBW5	#10	60	94w	#12w	408	16	7	#68w		#162	418	
FSPdSsiBGSkBDreBW5		2687			40			2482			2204	
WEdSBascBGl SLPBW5	22w		22w				24w			w00		
asel Bl st shmRBy)t r 5	12	6w1	604	488	6 4	1w9	27w	2787		2020	99w0	
yRo)sPRSBl st Bpl l EhPS	0	0	0	76	1w	86	0	0		0	0	
yt niibshkBl st Bpl l EhPS	0	0	0	0	0	0	0	0		0	0	
yPRosLI Bl st Bpl l EhPS	0	0	0	0	0	0	0	0		0	0	
pl l Ehl l B/hBp sPR	0.8w	0.08	0.w1	2.94	0.1w	0.64	0.64	2.29		2.9	0.18	

FSPœl hPRSBy E((scc	
Ad sBW:t l ,	OPl o
f chil BGl SLP, B240	
AhPEsPl Bl chil BGl SLP, B240	
OWel P,Bl B6%5Bp l Vd Shl l BPRBr sel B9,CaWGBsSl B6,yaWGBy RsdPBRWBu d l S	
CsPEosiBl chil , B29w	
f RSRPRIBW:t l , BAhPEsPl -f RRd nSsPl	

Msxn(E(B)/hBpsmR,B2.9	
FSP œel hmRSBynLSsiBDlisc,BB8.0	FSP œel hmRSBBOy,BT
FSP œel hmRSBst shmcBUFmzsmRSB201.9%	Ff UBG)liBRVBylo)mlBu
ASsicemeBglonRlBv(nS52w	
: BBBmRE(lBxhlleBstshmcpBEl ElBeBPlRdFmsiicBSVSmP.	
BBBQEl ElBerRdSBeB(sxn(E(BsVPdBRBchile.	
#BBBwPBlchlSmlB)RE(lBxhlleBstshmcpBEl EB(scBblBRSLlo	
BBBQEl ElBerRdSBeB(sxn(E(BsVPdBRBchile.	

ytimeBSlBgrsele,BBBB,BMsSSrln(B-Bylc(REo



GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBRSVuLEosRRSe						
WosWmBnRE(lB)tr5	219w	720	20	2w80	220	2w
3EREd BnRE(lB)tr5	219w	720	20	2w80	220	2w
Fl siBiRdB)trti5	9000	2 00	2 00	9000	2 00	2 00
GsSl BNnlPBW5	29	29	29	29	29	27
yPRosLlBGSLPBW5		760	78w		9 w	9 w
yPRosLlBGsSle		2	9		2	2
WstldBGSLPBW5			9w		9w	
GsSlBUFuLBshPRo	0. w	2.00	0. 8	0. w	0. 8	2.00
3dP		0.1w0				0.1w0
3iPRgdRPhPl			0. w0		0. w0	
ysP.BiRdBtdR5	762	2461	9w78	7w1w	702	29 4
3iPRgld(nPl			0. w0		0. w0	
ysP.BiRdBtld(5	762	2461	9w78	7w1w	702	29 4
pnLrPBWEosSBRSBpll		Yle				Yle
ysP.BiRdBpWOp5		744				4w
GSkBytlllB(tr5	ww			ww	70	
GSkBDmRShlBW5	207			0	2286	
Wos)liBW(lBe5	29.			29.7	96.8	
glskBHREdBshPRo	0. 9	0. 0	0.42	0.11	0.14	0.77
Hls)cBnlrmileB%5	w%	20%	71%	6%	26%	9 %
Alj.BiRdB)tr5	2 14	744	94	2814	272	4w
yrsdlBGsSlBWosWmB%5						
GsSlBudREtBiRdB)tr5	2 14	744	94	2814	272	4w
TSPdaiRnklBSPcelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
Mllrs SBNnlPvW5	94			94	94	
GSkBDWelPW5	0			0	0	
fdReedsikBNnlPvW5	26			26	26	
WdRBdlscBGlVBWEosSBGsSl						
Hlsldsc BshPRo	0. 4	2.00	2.00	0. 4	2.00	0. 6
WEdSSLBytlllB(tr5			2w		2w	
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2
DlPhPRdBW(tisPB		pnLrP	GlVP		GlVP	pnLrP
GlslnSLBDlPhPRdBW5	9w6	76	76	9w6	76	76
WosmnSLBDlPhPRdBW5	9w0	0	0	9w0	0	0
DlPhPRd2BgRemRSW5	9w0	0	0	9w0	0	0
DlPhPRd2BynzlW5	6	76	76	6	76	76
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BrsSSli						
DlPhPRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BQEl Be5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	CA	t(+R)	gdRP	CA	gdRP	gld(
gdRPhPlBgrsele	9	1	2		1	
gld(nPlBgrsele		9		6		1
DlPhPRdBgrsel	9	1	2	6	1	1
ydnPnrBgrsel						
MnSn(E(BSnnsiBe5	9w.0	20.0	w.0	9w.0	20.0	20.0

Movement	TaW	Tap	NaG	NaW	CaG	Cap
Min Split (s)	72.w	26.0	.w	72.w	26.0	26.0
Min Split (%)	14.w	26.0	.w	4.0	26.0	26.0
Max Split (s)	86.1%	24.w%	1.6%	1w.w%	24.w%	24.w%
Max Split (%)	81.0	20.0	w.0	18.w	20.0	20.0
Yellow Time (s)	4.w	4.w	7.w	4.w	4.w	4.w
All-Red Time (s)	9.0	2.w	2.0	9.0	2.w	2.w
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.w	6.0	4.w	6.w	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	8.0	w.0	7.0	8.0	w.0	w.0
Minimum Gap (s)	4.0	0.9	0.9	4.0	0.9	0.9
Time Before Reduce (s)	9w.0	0.0	0.0	9w.0	0.0	0.0
Time To Reduce (s)	90.0	0.0	0.0	90.0	0.0	0.0
Recall Mode	Min	Ped	Ped	Min	Ped	Ped
Walk Time (s)	60.8	19.0	w.9	67.1	20.7	20.7
Flash Dont Walk (s)	0.80	0. 4	0.06	0.87	0.29	0.29
Pedestrian Calls (#/hr)	0.8	0.9w	0.26	0.61	0.78	0.97
Act Effct Green (s)	29.0	0.6	41.4	8.7	49.1	28.2
Actuated g/C Ratio	0.0	0.0	0.0	0.0	0.0	0.0
v/c Ratio	29.0	0.6	41.4	8.7	49.1	28.2
Control Delay	a	A	D	A	D	a
Queue Delay	20.7			8.1	76.9	
Total Delay	a			A	D	
LOS	96w	0	6	924	79	0
Approach Delay	w29		20	94	89	0
Approach LOS	w			20	20 6	
Queue Length 50th (ft)		760	78w		9 w	9 w
Queue Length 95th (ft)	7909	2409	2w0	7749	7w1	2 7
Internal Link Dist (ft)	0	0	0	0	0	0
Turn Bay Length (ft)	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0
Starvation Cap Reductn	0.69	0.9w	0.26	0.w7	0.78	0.97

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 118.2
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.8
Intersection Capacity Utilization 66.8%
Analysis Period (min) 15

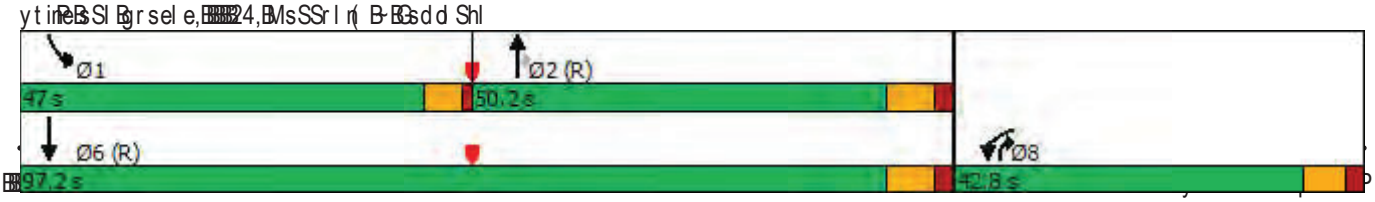
Splits and Phases: 1: Irving & Seymour

GsSlBudREt	NaG	Nap	CaW	Cap	yaG	yaW
GsSlBRSVuLEosRRSe						
WosWmBnRiE(lB)tr5	620	4w0	297w	690	160	9760
3EREdBnRiE(lB)tr5	620	4w0	297w	690	160	9760
RlsiB3iRdB)trti5	2 00	2 00	9000	2 00	2 00	9000
GsSlBNnlPBW5	20	20	22	29	22	22
yRRosLlBGSLPBW5	0	98w		7w0	4 w	
yRRosLlBGsSle	9	2		2	9	
WstldBGSLPBW5	9w				9w	
GsSlBJRuLB3shRRo	0. 8	2.00	0. 2	2.00	0. 8	0. 2
3dP		0.1w0		0.1w0		
3iRBgdRPhPl	0. w0				0. w0	
ysP.B3iRdBtdR5	70w4	2499	4 77	2w71	7916	4 8
3iRBglq(nRPl	0. w0				0. w0	
ysP.B3iRdBtlq(5	70w4	2499	4 77	2w71	7916	4 8
pnLrPBWEdGSBRSBpll		Yle		Yle		
ysP.B3iRdBpWOp5		478		2		
GrSkBytlllB(tr5	7w		w0			w0
GrSkBDnerSShlBW5	1ww		26w0			88
Wos)liBW(lBe5	26.8		99.w			20.6
glskBHREdB3shRRo	0.11	0.1	0. 0	0. 2	0. 6	0. w
Hls)cBnlrnileB%5	8%	6%	8%	w%	7%	6%
Alj.B3iRdB)tr5	6 7	w06	2789	612	1 6	9414
yrsdlBGsSlBWosWmB%5						
GsSlBudREtB3iRdB)tr5	6 7	w06	2789	612	1 6	9414
TSRPdBaiRnklIBSRPcelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	pnLrP	GlVP	GlVP
MIlrsSBNnlPrW5	90		99			99
GrSkBDWelRW5	0		0			0
fdReedsikBNnlPrW5	26		26			26
WdRBdlscBGlVBWEdSBGsSl						
HlsldscB3shRRo	2.0	2.0	0. 1	2.00	2.04	0. 1
WEdGrSLBytlllB(tr5	2w				2w	
CE(bldBRWBDlPhRRceB	2	2	2	2	2	2
DlPhRRdBW(tisPB	GlVP	pnLrP		pnLrP	GlVP	
GlslnSLBDlPhRRdBW5	76	76	9w6	76	76	9w6
WosmnSLBDlPhRRdBW5	0	0	9w0	0	0	9w0
DlPhRRd2BgRemRRSW5	0	0	9w0	0	0	9w0
DlPhRRd2BynzlW5	76	76	6	76	76	6
DlPhRRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhRRd2BBrsSSli						
DlPhRRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRd2BQEiElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdGBWctl	gdRP	3dl	CA	t(+R)	gdRP	CA
gdRPhPlBgrsele	1		9	1	2	6
glq(nRPlBgrsele		3dl		9		
DlPhRRdBgrsel	1		9	1	2	6
ydnRnrBgrsel						
MrSr(E(BBSnRsiBe5	1.0		2w.0	1.0	4.0	2w.0

GsSl Bu dREt	N aG	N ap	CaW	Cap	yaG	yaW
MrSn(E(By t imBe5	24.w		99.0	24.w	.0	99.0
WRRsiBy t imBe5	49.1		w0.9	49.1	48.0	8.9
WRRsiBy t imB%5	70.6%		7w. %	70.6%	77.6%	6 .4%
Msxn(E(Bu d l SBe5	76.7		47.9	76.7	49.0	0.9
Yl iiRd BW(l Be5	4.w		w.0	4.w	4.0	w.0
Aii-p l l BW(l Be5	9.0		9.0	9.0	2.0	9.0
GReBW(l BAl jEeBe5	0.0		0.0	0.0	0.0	0.0
WRRsiBGReBW(l Be5	6.w		8.0	6.w	w.0	8.0
Gl sl /GsL			GsL		Gl sl	
Gl sl -GsLBDt R(nzl ?						
m r mil E xP Se RSBe5	w.0		8.0	w.0	4.0	8.0
p l hsiiBMRI l	CRSl		f -MrS	CRSl	CRSl	f -MrS
AhPBT WhRBu d l SBe5	76.7	240.0	44.0	18.7	42.9	0.9
AhPEsP l BL/f Bp sPR	0.96	2.00	0.72	0.69	0.9	0.64
)/hBp sPR	0.11	0.76	0.11	0.80	0. 7	0.88
f RSPRPRBDl isc	67.0	0.8	79.1	72.9	64.0	2 .1
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	67.0	0.8	79.1	72.9	64.0	2 .1
GOy	T	A	f	f	T	a
At t dRshr BDl isc	76.8		79.9			72.w
At t dRshr BGOy	D		f			f
QEl El BGl SLP BwOP BW5	727	0	470	67w	40w	ww9
QEl El BGl SLP B wP BW5	#711	0	w0	864	#w94	622
FSP dGsiBGlSkBDreBW5	88w		2w80			6
WEdSBascBGl SLP BW5		98w		7w0	4 w	
asel B st shmPBY)t r 5	8 2	2499	2ww2	66	1w	7908
yRo)sPRSB st Bp l l EhPS	0	0	0	0	0	0
yt nibshkB st Bp l l EhPS	0	0	0	0	0	0
yPRosLI B st Bp l l EhPS	0	0	0	0	0	0
p l l Ehl l B/hBp sPR	0.11	0.76	0.11	0.80	0. 2	0.88

FSP el hPRSBy E((soc			
Ad sBVctl ,	OPl o		
f chil BGl SLP ,B240			
AhPEsP l B chil BGl SLP ,B240			
OVel P,B12Bw1%5Bp l Vd Shl l BPRBr sel B9,CaWBsSl B6,yaWBy Rd BRVBu d l S			
CsPEosiB chil ,B 0			
f RSPRPRBVctl ,BAhPEsP l -f PRd nSsP l			
Msxn(E(B/hBp sPR,B0. 7			
FSP el hPRSBy nLSsiBDl isc,B79.8		FSP el hPRSBGOy,B	
FSP el hPRSB st shmPBJPnzsPRSB10.0%		Ff UBGl)l iBRVBy l o)mnl BD	
ASsicenBg l onRl B(nS32w			
#BBBwP B l chl SPml B,RtE(l B xhl l eBst shmPdBEl El B(scBl BRSLl o			
BBBQEl El BerRd SBeB(sxn(E(BsVP dBd RBchil e.			

yt imBsSl Bgr sel e,BBB24,BMsSSr l n(B-BGsdd Shl



gsLl B27

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBfRSVuLEosPRSe						
WosWmBnRiE(lBv)tr5	20 0	7w0	22w	120	2 w	20w
3EPEdBnRiE(lBv)tr5	20 0	7w0	22w	120	2 w	20w
PIsiBBiRdBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNnPBW5	22	29	29	29	29	29
GsSlBUPuBshPRo	0. w	0. w	0. w	0. w	2.00	2.00
3dP	0. w4					0.1w0
3iPBgdRPhPl				0. 9	0. w0	
ysP.BiRdBtdR5	7949	0	0	7749	2807	24 w
3iPBgl(nPPl				0.4 7	0. w0	
ysP.BiRdBtl(5	7949	0	0	2662	2807	24 w
pnLrPBWEoSBRSBpll		Yle				CR
ysP.BiRdBpWOp5	271					
GSkBytlllB(tr5	7w			7w	70	
GSkBDmePShlBW5	1ww			7971	688	
Wos)liBW(lBe5	26.8			67.2	2w.4	
glskBHREdBshPRo	0. 4	0.61	0.80	0. w	0.17	0.89
Hls)cBnlrnhileB%5	7%	9%	1%	8%	6%	1%
Alj.BiRdBv)tr5	2260	w2w	264	1w7	97w	246
yrsdlBGsSlBWosWmB%5						
GsSlBudREtBiRdBv)tr5	268w	0	0	2028	97w	246
TSPdaiRhklBSPcelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MllnsSBNnPvW5	29			29	29	
GSkBDWelPW5	0			0	0	
fdReedsikBNnPvW5	26			26	26	
WdRBdlscBGlVBWEoSBGsSl						
HlsldscBshPRo	2.04	2.00	2.00	2.00	2.00	2.00
WEoSLBytlllB(tr5			2w		2w	
CE(bldBRVBDlPhPRceB	2		2	2	2	2
DlPhPRdBW(tisPB			GlVP		GlVP	pnLrP
GlslSLBDlPhPRdBW5	9w6		90	9w6	76	76
WosmSLBDlPhPRdBW5	9w0		0	9w0	0	0
DlPhPRdB2BgRemPRSW5	9w0		0	9w0	0	0
DlPhPRdB2BynzlW5	6		90	6	76	76
DlPhPRdB2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRdB2BBrsSSli						
DlPhPRdB2BTxPSlBe5	0.0		0.0	0.0	0.0	0.0
DlPhPRdB2BQEl ElBe5	0.0		0.0	0.0	0.0	0.0
DlPhPRdB2BDliscBe5	0.0		0.0	0.0	0.0	0.0
WEoSBWctl	CA		t(+tP	CA	gdRP	gl(
gdRPhPlBgrsele	9		2	6	1	
gl(nPPlBgrsele			6			1
DlPhPRdBgrsel	9		2	6	1	1
ydnPhrBgrsel						
MrSn(E(BSnsiBe5	2w.0		7.0	2w.0	w.0	w.0
MrSn(E(BytinBe5	92.0		6.w	92.0	22.0	22.0
WRRsiBytinBe5	8 .w		6.w	16.0	94.0	94.0
WRRsiBytinB%5	89.7%		w. %	81.9%	92.1%	92.1%

GsSl Bu dREt	TaW	Tap	NaG	NaW	CaG	Cap
Msxr(E(Bu d l SBe5	87.w		7.0	10.0	21.0	21.0
Yl iiRd BW(l Be5	4.w		7.w	4.w	4.w	4.w
Aii-p l l BW(l Be5	2.w		0.0	2.w	2.w	2.w
GReBW(l BAl jEeBe5	0.0			0.0	0.0	0.0
WRRsiBGReBW(l Be5	6.0			6.0	6.0	6.0
Gl sl /GsL	GsL		Gl sl			
Gl sl -GsLBDt P(nzl ?						
ml r mil ET xP SenRSBe5	8.0		7.0	8.0	w.0	w.0
p l hsiiBMRI l	f -MnS		CRSI	f -MnS	CRSI	CRSI
AhPBTWhPBu d l SBe5	8 .1			8 .1	21.9	21.9
AhPEsP l BL/f Bp sPR	0.87			0.87	0.28	0.28
)/hBp sPR	0.80			2.9wl i	0.17	0.w
f RSPRBDl isc	.6			27.9	6 .8	w7.9
QEl El BDl isc	0.9			0.0	0.0	0.0
WRRsiBDl isc	.1			27.9	6 .8	w7.9
GOy	A			a	T	D
At t dRshr BDl isc	.1			27.9	67.4	
At t dRshr BGOy	A			a	T	
QEl El BGl SLP BwOP BW5	987			8	267	8
QEl El BGl SLP B wP BW5	74w			(7 7	#9w	291
FSP dSsiBGSkBDreBW5	88w			72wl	w 8	
WEdSBascBGl SLP BW5						
asel B st shmRBy)t r 5	9711			2929	916	9w2
yRo)sPRSB st Bp l l EhPS	24			0	0	0
yt niibshkB st Bp l l EhPS	0			0	0	0
yPRosLI B st Bp l l EhPS	0			0	0	0
p l l Ehl l B/hBp sPR	0.8w			0.14	0.19	0.wl

FSP œl hPRSBy E((scc			
Ad sBVctl ,	OPl o		
f chil BGl SLP ,B220			
AhPEsP l B chil BGl SLP ,B220			
OVel P,B1Bv10%5Bp l Vd Shl l BRRBr sel B9,TaWBsSl B6,N aWGBy RsdPRVBu d l S			
CsPEosiB chil ,BBw			
f RSPRBVctl ,BAhPEsP l -f PRd nSsP l			
Msxr(E(B/hBp sPR,B0.14			
FSP œl hPRSBy nLSsiBDl isc,B28.6		FSP œl hPRSBGOy ,Ba	
FSP œl hPRSB st shmRBUPhnzsPRSB 9.1%		Ff UBGl)l iBRVBy l o)mlEB	
ASsicemeBgl onRl B(nS32w			
#BBBBwP B l chl SPml B)PLE(l BxhI l l eBst shmRdBXEl El B(scBbl BRSLl o.			
BBBBQEl El BerRdSBeB(sxr(E(BsVP dBRdRBchil e.			
(BBBBnPLE(l BRRdBwP B l chl SPml BXEl El BeB(l P dl BbcEEteRds(BenLSsi.			
l iBBBBDl VshPRBGl VBBssSl .Bp l hRl l Bdm P B2BP RELr BssSl BseBsBl VBBsSl .			

yt imeBsSl Bgr sel e,BBBB21,BwP B-BGsdd Shl

ycShr dRB20Bp l t RdP
gsLI B2w

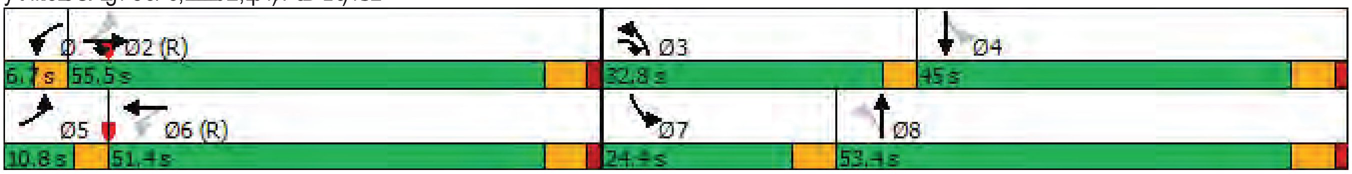
GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lB)tr5	290	20 4	w0w	48	617	69	72w	640	48	2w4	180	99
3EPEd BnRiE(lB)tr5	290	20 4	w0w	48	617	69	72w	640	48	2w4	180	99
PlsiBiRdB)trti5	2 00	9000	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNnPBW5	20	22	20	22	22	29	20	22	29	20	22	29
yPRosLlBGSLPBW5	260		940	260		0	92w		w0	900		w0
yPRosLlBGsSle	2		2	2		0	2		0	2		0
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBuPnLBshPRo	2.00	0. w	2.00	2.00	0. w	0. w	2.00	0. w	0. w	2.00	0. w	0. w
3dP			0.1w0		0. 18			0. 11			0. w	
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBtdRP5	2w1	7477	2780	284w	7788	0	2w21	79 0	0	2w1	7728	0
3iPBgl d(nPPl	0.247			0.011			0.0 4			0.9 1		
ysP.BiRdBtl d(5	97	7477	2780	269	7788	0	2w0	79 0	0	4	7728	0
pnLrPBWEdGSBRSBpll			Yl e			Yl e			Yl e			Yl e
ysP.BiRdBpWOp5			w2		8			8			9	
GSkBytlllB(tr5		40			40			40			40	
GSkBDnePSShlBW5		7 18			876			2070			9009	
Wos)liBW(lBe5		61.0			29.w			28.6			74.2	
glskBHPEdBshPRo	0.19	0. 2	0.14	0.81	0.1	0.11	0.17	0.1	0.8w	0.12	0.1	0.68
Hls)cBnlrmileB%5	6%	8%	20%	0%	9%	9%	22%	4%	24%	6%	4%	9w%
Alj.BiRdB)tr5	246	2909	602	60	868	80	710	82	67	2 0	81	77
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBiRdB)tr5	246	2909	602	60	178	0	710	819	0	2 0	2022	0
TSPdaiPnkllBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MllnsSBNnPvW5		22			22			20			20	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnPvW5		26			26			26			26	
WdPBdlscBGlVBWEdSBGsSl												
HlsldscBshPRo	2.0	0. 1	2.0	2.04	2.04	2.00	2.0	2.04	2.00	2.0	2.04	2.00
WEdSSLBytlllB(tr5	2w			2w			2w			2w		
CE(bldBRBDlPhPRdeB	2	2	2	2	2		2	2		2	2	
DlPhPRdBW(tisPB	GlVP		pnLrP	GlVP			GlVP			GlVP		
GlslnSLBDlPhPRdBW5	76	9w6	76	76	9w6		76	9w6		76	9w6	
WosmSLBDlPhPRdBW5	0	9w0	0	0	9w0		0	9w0		0	9w0	
DlPhPRd2BgPemPRSW5	0	9w0	0	0	9w0		0	9w0		0	9w0	
DlPhPRd2BynzlW5	76	6	76	76	6		76	6		76	6	
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BrsSSli												
DlPhPRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BQEl Elle5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
WEdSBWctl	t(+tP	CA	tP+R)	t(+tP	CA		t(+tP	CA		t(+tP	CA	
gdRPhPlBgrsele	w	9	9B7	2	6		7	1		8	4	
gld(nPPlBgrsele	9			6			1			4		
DlPhPRdBgrsel	w	9	9B7	2	6		7	1		8	4	
ydnPnrBgrsel												
MnSn(E(BSnPsiBe5	7.0	2w.0		7.0	2w.0		7.0	2w.0		9.0	2w.0	

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MrSr(E(BytimBe5	6.w	92.0		6.w	w2.0		6.w	92.0		6.w	92.0	
WRRsiBytimBe5	20.1	ww.w		6.8	w2.4		79.1	w7.4		94.4	4w.0	
WRRsiBytimB%5	8.8%	7 .6%		4.1%	76.8%		97.4%	71.2%		28.4%	79.2%	
Msxr(E(BudlSBe5	8.7	4 .w		7.9	4w.4		9 .7	48.4		2 .	7 .0	
YliiRdBW(lBe5	7.w	4.w		7.w	4.w		7.w	4.w		4.w	4.w	
Aii-pllBW(lBe5	0.0	2.w		0.0	2.w		0.0	2.w		0.0	2.w	
GReBW(lBAljEeBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
WRRsiBGReBW(lBe5	7.w	6.0		7.w	6.0		7.w	6.0		4.w	6.0	
Gisl/GsL	Gisl	GsL		Gisl	GsL		Gisl	GsL		Gisl	GsL	
Gisl-GsLBDtP(nzl?												
mlrmilEBTxPPSenRSBe5	7.0	8.0		7.0	8.0		w.0	8.0		7.0	8.0	
plhsiiBMRIl	CRSl	f-MnS		CRSl	f-MnS		CRSl	CRSl		CRSl	CRSl	
NsikBW(lBe5					8.0							
3iserBDRSPBNsikBe5					71.0							
gllleRnsSBsiieBW#/rd5					0							
AhPBTWhPBudlSBe5	w1.8	w0.1	17.6	w2.2	4w.4		84.7	w9.6		ww.9	7 .0	
AhPEsPIBL/fBpsPR	0.49	0.76	0.60	0.76	0.79		0.w7	0.71		0.7	0.91	
)/hBpsPR	0.16	0. 6	0.89	0.67	0.86		2.04	0.67		0.62	2.0	
fRSPRRIBDIisc	42.0	70.4	20.w	w8.4	48.w		1.6	71.1		91.	204.	
QEIEIBDIisc	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
WRRsiBDIisc	42.0	70.4	20.w	w8.4	48.w		1.6	71.1		91.	204.	
GOy	D	f	a	T	D		3	D		f	3	
AttoRshrBDIisc		9w.2			41.2			w1.7			9.	
AttoRshrBGOy		f			D			T			3	
QEIEIBGISLPBwPBW5	44	4w4	9w0	77	7w8		:796	702		2	:w4w	
QEIEIBGISLPBwPBW5	(4w	(422	(900	#w8	470		#469	7 0		297	#689	
FSPoSsiBGSkBDreBW5		7 08			6w6			w0			2 99	
WEoSBasciBGISLPBW5	260		940	260			92w			900		
aselBstshmRBytr5	280	2946	17	w	20		76w	2942		780	9w	
yRso)sPRSBstBpllEhPS	0	0	0	0	0		0	0		0	0	
ytniibshkBstBpllEhPS	0	0	0	0	0		0	0		0	0	
yPRosLIBstBpllEhPS	0	0	0	0	0		0	0		0	0	
pllEhllB)/hBpsPR	0.16	0. 6	0.89	0.67	0.86		2.04	0.67		0.w2	2.0	

FSPœlhPRSBy E((socc												
AdsBWctl, OPlo												
fchilBGISLP,B240												
AhPEsPIBchilBGISLP,B240												
OWelP,B41Bw74%5BpIVdShlIBPRBrselB),TaWGBsSlB6,NaWGdyRsdPBRWBudlS												
CsPEosiBchil,B27w												
fRSPRRIBW:tl,BAhPEsPI-fRRdnGsPI												
Msxr(E(B)/hBpsPR,B2.0												
FSPœlhPRSBymLSsiBDIisc,Bw9.2						FSPœlhPRSBGOy,BD						
FSPœlhPRSBstshmcBUPhrzsPRSB0. %						FfUBG)liBRWyIo)mlBT						
ASsicemBgIonRIBy(nS52w												
:BBBmRE(lBxhlleBstshmcpBEIBeBPIRdPmsiicBSWSmP.												
BBBQEIEIBerRdSBeB(sxr(E(BsWPdBRdRBchile.												
#BBBwPBIchlSPmlB)RE(lBxhlleBstshmcpBEIEIB(scBblBRSLlo												
BBBQEIEIBerRdSBeB(sxr(E(BsWPdBRdRBchile.												

[illegible]

[illegible]


Ø2 (R)
Ø3
Ø4
6.7 s
55.5 s
32.8 s
45 s
Ø5
Ø6 (R)
Ø7
Ø8
10.8 s
51.4 s
24.4 s
53.4 s

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	160	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	160	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.986			0.957			0.977	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3170	0	1678	3238	0	0	3208	0
Flt Permitted	0.095			0.067			0.195				0.666	
Satd. Flow (perm)	164	3410	1383	115	3170	0	344	3238	0	0	2167	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149		10			51			15	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1441	222	228	1089	114	305	417	169	201	400	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1441	222	228	1203	0	305	586	0	0	708	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	13.0	61.8		17.2	66.0		12.0	61.0		49.0	49.0	
Total Split (%)	9.3%	44.1%		12.3%	47.1%		8.6%	43.6%		35.0%	35.0%	
Maximum Green (s)	9.5	55.8		13.7	60.0		8.5	55.0		43.0	43.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	67.8	55.8	67.8	75.5	60.0		57.5	55.0			43.0	
Actuated g/C Ratio	0.48	0.40	0.48	0.54	0.43		0.41	0.39			0.31	
v/c Ratio	0.85	1.06	0.30	1.09	0.88		1.37	0.45			1.05	
Control Delay	53.4	70.8	4.7	127.3	31.4		223.1	29.7			93.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	53.4	70.8	4.7	127.3	31.4		223.1	29.7			93.7	
LOS	D	E	A	F	C		F	C			F	
Approach Delay		61.2			46.6			95.9			93.7	
Approach LOS		E			D			F			F	
Queue Length 50th (ft)	77	~750	12	~187	264		~289	187			~363	
Queue Length 95th (ft)	m#106	m#876	m29	m#253	m289		#471	141			#446	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	179	1359	746	210	1364		222	1303			675	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.85	1.06	0.30	1.09	0.88		1.37	0.45			1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 110 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.37			
Intersection Signal Delay: 68.0		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

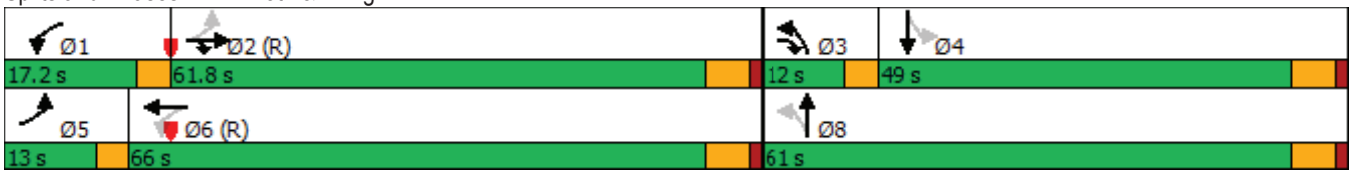
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



GsSlBucREt	yTG	yTp	CTG	CTW	yNW	yNp
GsSlBRSVuLEosPRSe						
WosWmBnRiE(lBv)tr5	202	w	20w	2w	9614	8w
3EPEd BnRiE(lBv)tr5	202	w	20w	2w	9614	8w
PlsiBiRdBv)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNnPBW5	20	20	22	22	22	22
yPRosLIBGSLPBW5	29w	29w	9w0			900
yPRosLIBGsSle	2	0	9			2
WstldBGSLPBW5	9w		9w			
GsSlBuPuLBshPRo	0. 8	2.00	0. 8	0. 2	0. 2	2.00
3cP		0.1w0				0.1w0
3iPRgcRPhPl	0. w0		0. w0			
ysP.BiRdBtcR5	9802	2988	9 21	4118	4 77	2719
3iPRglc(nPl	0. w0		0. w0			
ysP.BiRdBtlc(5	9802	2988	9 21	4118	4 77	2719
pnLrPBWEcGSBRSBpll		Yle				Yle
ysP.BiRdBpWOp5		278				w9
GSkBytlllBv(tr5	9w			w0	w0	
GSkBDmPSShlBW5	667			2 18	26w0	
Wos)liBW(lBe5	21.2			98.2	99.w	
glskBHPEcBshPRo	0.w	0.w2	0.w0	0. 4	0. 7	0.86
Hls)cBnlrmileB%5	92%	21%	26%	1%	8%	27%
Alj.BiRdBv)tr5	282	216	920	2802	9116	
yrsdlBGsSlBWosWmB%5						
GsSlBucREtBiRdBv)tr5	282	216	920	2802	9116	
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
Mllrs SBNnPvW5	90			94	94	
GSkBDWelPW5	0			0	0	
fdReedsikBNnPvW5	26			26	26	
WdRBdlscBGlVBWEcSBGsSl						
HlsldscBshPRo	2.0	2.0	2.04	0. 1	0. 1	2.04
WEcGSLBytlllBv(tr5	2w		2w			
CE(bldBRVBDlPhPRceB	2	2	2	2	2	2
DlPhPRcBW(tisPB	GlVP	pnLrP	GlVP			pnLrP
GlslnSLBDlPhPRcBW5	76	76	76	9w6	9w6	76
WosmnSLBDlPhPRcBW5	0	0	0	9w0	9w0	0
DlPhPRcB2BgRemPRSW5	0	0	0	9w0	9w0	0
DlPhPRcB2BynzlW5	76	76	76	6	6	76
DlPhPRcB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRcB2BBrsSSli						
DlPhPRcB2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRcB2BQEiElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRcB2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEcSBWctl	gcRP	glc(	gcRP	CA	CA	t(+R)
gcRPhPlBgrsele	4		w	9	6	4
glc(nPlBgrsele		4				6
DlPhPRcBgrsel	4	4	w	9	6	4
ydnPnrBgrsel						
MnSn(E(BSnnsiBe5	1.0	1.0	7.0	2w.0	2w.0	1.0

GsSI Bud REt	yTG	yTp	CTG	CTW	yNW	yNp
MrSn(E(Bytim Be5	2w.0	2w.0	1.0	99.0	99.0	2w.0
WRRsiBytim Be5	97.0	97.0	21.0	228.0	.0	97.0
WRRsiBytim B%5	26.4%	26.4%	29. %	17.6%	80.8%	26.4%
Msxn(E(Bud I SBe5	26.0	26.0	27.0	220.0	9.0	26.0
YI iiRd BW(I Be5	w.0	w.0	4.0	w.0	w.0	w.0
Aii-pI I BW(I Be5	9.0	9.0	2.0	9.0	9.0	9.0
GRe BW(I BAI jEe Be5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGRe BW(I Be5	8.0	8.0	w.0	8.0	8.0	8.0
GI sI /GsL			GI sI		GsL	
GI sI -GsLBDt P(nzI ?						
mI r mil ETxP SenRSBe5	w.0	w.0	4.0	8.0	8.0	w.0
pI hsiiBMRI I	CRSI	CRSI	CRSI	f -MnS	f -MnS	CRSI
AhPBT WhPBud I SBe5	24.1	24.1	27.9	222.9	7.0	224.1
AhPEsPI BL/f Bps PR	0.22	0.22	0.0	0.8	0.66	0.19
)/hBps PR	0.60	0.89	0.88	0.44	0.11	0.0
f RSPRRBDI isc	61.8	74.w	62.9	24.2	21.0	0.
QEI EI BDI isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDI isc	61.8	74.w	62.9	24.2	21.0	0.
GOy	T	f	T	a	a	A
Att dRshr BDI isc	w0.			2 .7	28.4	
Att dRshr BGOy	D			a	a	
QEI EI BGI SLP BwOP BW5	88	49		767	162	7
QEI EI BGI SLP BwP BW5	84	27	61	(782	98	(w
FSP dSsiBGkSkBDreBW5	w17			2 08	2w80	
WEdSBascBGI SLP BW5	29w	29w	9w0			900
asel B st shmPBy)t r 5	701	968	988	7110	7986	22w7
yPs)sPRSB st Bpl I EhPS	0	0	0	0	0	0
yt nibshkB st Bpl I EhPS	0	0	0	0	0	0
yPRosLI B st Bpl I EhPS	0	0	0	0	0	0
pI I EhI I B/hBps PR	0.w6	0.80	0.86	0.44	0.11	0.0

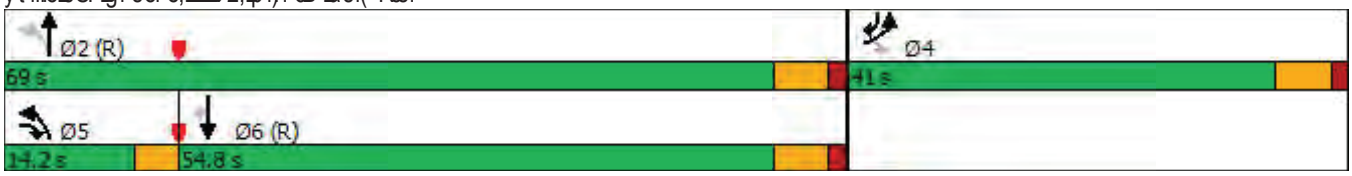
FSP el hPRSBy E((scc			
Ad sBVctI ,	OPI o		
f chil BGI SLP ,B240			
AhPEsPI B chil BGI SLP ,B240			
OVel P,BwwBy7 %5Bp l Vd Shl I BPRBr sel B9,CTWBsSI B6,yN WdBy Rd BRVBud I S			
CsPEosiB chil ,B 0			
f RSPRRBVctI ,BAhPEsPI -f RRd nSsPI			
Msxn(E(B/hBps PR,B0.11			
FSP el hPRSBy nLSsiBDI isc,B90.4		FSP el hPRSBGOy ,B	
FSP el hPRSB st shmPBJPnzsPRSB58.6%		Ff UBG)I iBRVBy I o)mI B	
ASsicemBg I onRI BV(nS52w			
(BBBmRIE(I BVRcB wP B I chI SPnI BXEI EI BeB(I P d I BcBEt ePd s(BenLSsi.			

yt imPBsSI Bgr sel e,BBBBBw,BMsSSr I n(B-BMRSPPel

GsSlBudcREt	TaG	Tap	CaG	CaW	yaW	yap
GsSlBfRSVuLEcsPRRSe						
WosWmBmRiE(lBv)tr5	747	219	48	w16	w	w17
3EPEd BmRiE(lBv)tr5	747	219	48	w16	w	w17
PflsiB3iRdBv)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNmPBW5	22	29	29	29	22	29
yPRosLlBGSLPBW5	770	770	9w0			41w
yPRosLlBGsSle	2	0	2			2
WstldBGSLPBW5	9w		9w			
GsSlBuJPuL3shPRo	0. 8	2.00	2.00	0. w	0. w	2.00
3dP		0.1w0				0.1w0
3iPRgdRPhPl	0. w0		0. w0			
ysP.B3iRdBvtdR5	7994	2461	2807	761	7w79	2w71
3iPRglq(mPl	0. w0		0.28w			
ysP.B3iRdBvtlq(5	7994	2461	724	761	7w79	2w71
pnLrPBWEcGSBRSBpll		Yle				Yle
ysP.B3iRdBvpWOp5		7w				6 4
GrSkBytlllBv(tr5	9w			7w	7w	
GrSkBDmePrShlBW5	189			279	20ww	
Wos)liBW(lBe5	97.1			9w.	90.6	
glskBHPREdB3shPRo	0. 2	0.8	0. 4	0. 9	0.11	0.14
Hls)cBnlrmileB%5	w%	20%	6%	7%	4%	w%
Alj.B3iRdBv)tr5	788	970	w0	678	2272	6 4
yrsdlBGsSlBWosWmB%5						
GsSlBudcREtB3iRdBv)tr5	788	970	w0	678	2272	6 4
TSPdaiPnkllBSPcelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MllrsSBNmPrW5	99			29	29	
GrSkBDWelPW5	0			0	0	
fdReedsikBNmPrW5	26			26	26	
WdPRdlscBGlVBWEcSBGsSl						
HlsldscB3shPRo	2.04	2.00	2.00	0. 4	0. 1	2.00
WEcGrSLBytlllBv(tr5	2w		2w			
CE(bldBRVBDlPhPRceB	2	2	2	2	2	2
DlPhPRcBW(tisPB	GlVP	pnLrP	GlVP			pnLrP
GlslnSLBDlPhPRcBW5	76	76	76	9w6	9w6	76
WosmnSLBDlPhPRcBW5	0	0	0	9w0	9w0	0
DlPhPRcB2BgPemPRSW5	0	0	0	9w0	9w0	0
DlPhPRcB2BymzlW5	76	76	76	6	6	76
DlPhPRcB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRcB2BBrsSSli						
DlPhPRcB2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRcB2BQEiElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRcB2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEcGBWctl	gcRP	t(+R)	t(+tP	CA	CA	t(+R)
gcRPhPlBgrsele	4	w	w	9	6	4
glq(mPlBgrsele		4	9			6
DlPhPRcBgrsel	4	w	w	9	6	4
ydmPrBgrsel						
MrSr(E(BSmsiBe5	20.0	20.0	20.0	70.0	70.0	20.0

GsSI BucREt	TaG	Tap	CaG	CaW	yaW	yap
MrSn(E(Bytim Be5	40.0	27.w	27.w	76.0	44.0	40.0
WRsiBytim Be5	42.0	24.9	24.9	6 .0	w4.1	42.0
WRsiBytim B%5	78.7%	29. %	29. %	69.8%	4 .1%	78.7%
Msxn(E(Bud l SBe5	7w.0	20.8	20.8	67.0	41.1	7w.0
Yl iiRd BW(l Be5	4.w	7.w	7.w	4.w	4.w	4.w
Aii-pl l BW(l Be5	2.w	0.0	0.0	2.w	2.w	2.w
GReFBW(l BAl jEeFBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRsiBGReFBW(l Be5	6.0	7.w	7.w	6.0	6.0	6.0
Gl sl /GsL		Gl sl	Gl sl		GsL	
Gl sl -GsLBOtP(nzl ?						
ml r mil BTxPSenRSBe5	7.0	w.0	w.0	8.0	8.0	7.0
MrSn(E(Bust Be5	0.9	0.9	0.9	4.w	4.w	0.9
W(l Bal VRd Bpl l Ehl Be5	0.0	0.0	0.0	7w.0	7w.0	0.0
W(l BWRBpl l Ehl Be5	0.0	0.0	0.0	9w.0	9w.0	0.0
pl hsiiBMRl l	CRSl	CRSl	CRSl	f -MnS	f -MnS	CRSl
N sikBW(l Be5	20.0				20.0	20.0
3iser BDRSPBN sikBe5	94.0				91.0	94.0
gl l l ePosSB siieB#/r c5	0				0	0
AhPBTWhPBud l SBe5	90.6	76.1	8 .	88.4	67.8	0.7
AhPEsPl BL/f Bpl sPR	0.2	0.77	0.87	0.80	0.w1	0.19
)/hBpl sPR	0.69	0.4w	0.24	0.9w	0.ww	0.w0
f RSPRiBDl isc	4w.9	96.2	6.2	6.6	26.4	2.w
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRsiBDl isc	4w.9	96.2	6.2	6.6	26.4	2.w
GOy	D	f	A	A	a	A
AttcRshr BDl isc	71.0			6.6	20.8	
AttcRshr BGOy	D			A	a	
QEl El BGl SLPBw0PBW5	296	206		8w	94w	0
QEl El BGl SLPBwPBW5	264	274	94	292	74w	20
FSPcSsiBGSkBDreFBW5	8 9			294	8w	
WEcSBascBGl SLPBW5	770	770	9w0			41w
asel B st shrPB)tr5	209w	w92	767	9w 4	904w	24 w
yRso)sPRSB st Bpl l EhPS	0	0	0	0	0	0
ytmibshkB st Bpl l EhPS	0	0	0	0	0	0
yPRcsLl B st Bpl l EhPS	0	0	0	0	0	0
pl l Ehl l B)/hBpl sPR	0.78	0.44	0.24	0.9w	0.ww	0.46

FSPcel hPRSBy E((scc	
Ad sBWctl ,	OPl o
f chil BGl SLP,B220	
AhPEsPl B chil BGl SLP,B220	
OWel P,BDB0%5Bpl Vd Shl l BPRBr sel B,CaWGBSI B,yaWBy Rsc PRBud l S	
CsPEcsiB chil ,B200	
f RSPRiBWctl ,BAhPEsPl -f RRd nSsPl	
Msxn(E(B)/hBpl sPR,B0.69	
FSPcel hPRSBy nLSsiBDl isc,B2w.2	FSPcel hPRSBGOy ,Ba
FSPcel hPRSB st shrPBUPnzsPRSBw8.6%	Ff UBGl)l iBRWBy l o)ml l Ba
ASsicereBgl oRl B(nS5B2w	


Ø2 (R)
69 s
Ø4
41 s
Ø5
14.2 s
Ø6 (R)
54.8 s

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	220	w	80	4w	w	0	90	2 08	20	ww	9847	90
3EPEd BnRE(lB)tr5	220	w	80	4w	w	0	90	2 08	20	ww	9847	90
PlsiBiRdB)trti5	2 00	2 00	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNnPBW5	29	29	29	22	22	29	20	22	22	29	22	22
yPRosLlBGSLPBW5	290		290	0		0	270		270	700		0
yPRosLlBGsSle	2		0	2		2	2		2	2		0
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBuPnLBshPRo	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0. 2	2.00	2.00	0. 2	0. 2
3dP		0.166				0.1w0			0.1w0		0. 1	
3iPRgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBtdRP5	2468	2484	0	2ww1	2 77	24ww	2907	4 77	24w	2w70	4162	0
3iPRglo(nPPl	0.686			0.6 8			0. w0			0. w0		
ysP.BiRdBtlo(5	2044	2484	0	2247	2 77	24ww	2907	4 77	24w	2w70	4162	0
pnLrPBWEdGSBRSBpll			Yle			Yle			Yle			Yle
ysP.BiRdBpWOp5		17				8			16		9	
GSkBytlllB(tr5		9w			9w			40			40	
GSkBDnePShlBW5		82			788			2214			480	
Wos)liBW(lBe5		96.w			20.7			90.9			1.0	
glskBHREdBshPRo	0.64	0.w0	0.14	0.8	0.11	0. 7	0.89	0. 6	0. 9	0.1w	0. w	0.60
Hls)cBnlrmileB%5	97%	28%	22%	29%	0%	22%	40%	8%	8%	21%	1%	40%
Alj.BiRdB)tr5	289	20	17	w8	6	8	91	2 16	22	6w	9118	77
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBiRdB)tr5	289	7	0	w8	6	8	91	2 16	22	6w	9 90	0
TSPdaiPnkllBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MllnsSBNnPvW5		29			29			94			94	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnPvW5		26			26			26			26	
WdRBdlscBGlWBWEdSBGsSl												
HlsldscBshPRo	2.00	2.00	2.00	2.04	0. 1	2.00	2.0	0. 1	2.04	2.00	0. 1	2.04
WEdSSLBytlllB(tr5	2w			2w			2w			2w		
CE(bldBRBDlPhPRdeB	2	2		2	2	2	2	2	2	2	2	
DlPhPRdBW(tisPB	GlVP	WrdE		GlVP	WrdE	pnLrP	GlVP		pnLrP	GlVP		
GlslnSLBDlPhPRdBW5	76	76		76	76	76	76	9w6	76	76	9w6	
WosmSLBDlPhPRdBW5	0	0		0	0	0	0	9w0	0	0	9w0	
DlPhPRd2BgPemPRSW5	0	0		0	0	0	0	9w0	0	0	9w0	
DlPhPRd2BynzlW5	76	76		76	76	76	76	6	76	76	6	
DlPhPRd2BWctl	f i+Tx	f i+Tx		f i+Tx	f i+Tx	f i+Tx	f i+Tx	f i+Tx	f i+Tx	f i+Tx	f i+Tx	
DlPhPRd2BrsSSli												
DlPhPRd2BTxPSlBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRd2BQElElBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRd2BDlscBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WEdSBWctl	t(+tP	CA		t(+tP	CA	glo(	gdRP	CA	glo(	gdRP	CA	
gdRPhPlBgrsele	8	4		7	1		w	9		2	6	
glo(nPPlBgrsele	4			1		1			9			
DlPhPRdBgrsel	8	4		7	1	1	w	9	9	2	6	
ydnPnrBgrsel												
MnSn(E(BSnPsiBe5	7.0	w.0		7.0	w.0	w.0	7.0	2w.0	2w.0	7.0	2w.0	

GsSI BudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MnSn(E(BytimBe5	.w	26.0		.w	42.0	42.0	.w	48.0	48.0	.w	91.0	
WRRsiBytimBe5	.w	40.		.6	42.0	42.0	.w	8w.8	8w.8	27.1	10.0	
WRRsiBytimB%5	6.1%	9 .9%		6. %	9 .7%	9 .7%	6.1%	w4.2%	w4.2%	. %	w8.2%	
Msxn(E(BudISBe5	6.0	74.		6.2	7w.0	7w.0	w.0	6 .8	6 .8	.7	84.0	
YIiiRdBW(IBe5	7.w	4.w		7.w	4.w	4.w	7.w	4.w	4.w	7.w	4.w	
Aii-pIIBW(IBe5	0.0	2.w		0.0	2.w	2.w	2.0	2.w	2.w	2.0	2.w	
GReBW(IBAIjEeBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WRRsiBGReBW(IBe5	7.w	6.0		7.w	6.0	6.0	4.w	6.0	6.0	4.w	6.0	
GIsI/GsL	GIsI	GsL		GIsI	GsL	GsL	GIsI	GsL	GsL	GIsI	GsL	
GIsI-GsLBDtP(nzI ?												
mIrmilETxPPSenRSBe5	7.0	4.0		7.0	4.0	4.0	7.0	8.0	8.0	7.0	8.0	
plhsiiBMRII	CRSI	CRSI		CRSI	CRSI	CRSI	CRSI	f -MnS	f -MnS	CRSI	f -MnS	
NsikBW(IBe5					8.0	8.0		.0	.0		8.0	
3iserBDRSPBNsikBe5					91.0	91.0		79.0	79.0		2w.0	
gIIIePosSBsiieBW#/rd5					0	0		0	0		0	
AhPBTWhPBudISBe5	21.0	20.8		28.w	1.	1.	.7	w.1	w.1	22.6	8.	
AhPEsPIBL/fBpsPPR	0.27	0.01		0.29	0.06	0.06	0.08	0.61	0.61	0.01	0.80	
)/hBpsPPR	2.27	0.4		0.76	0.0w	0.w7	0.7w	0.w	0.02	0.w9	0.16	
fRSPRRIBDIisc	264.w	94.w		w1.4	60.0	92.1	89.6	7.6	0.0	w8.6	20.7	
QEIEIBDIisc	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WRRsiBDIisc	264.w	94.w		w1.4	60.0	92.1	89.6	7.6	0.0	w8.6	20.7	
GOy	3	f		T	T	f	T	A	A	T	a	
AttoRshrBDIisc		22w.4			76.7			4.6			22.4	
AttoRshrBGOy		3			D			A			a	
QEIEIBGISLPPBwOPPBW5	: 2 9			48	w	0	98	14	0	w	722	
QEIEIBGISLPPBwPPBW5	2w4	7		86	2	w6	(72	(2w9	(0	(w2	(9w6	
FSPPoSsiBGSkBDrePBW5		1 2			9 8			2204			7 0	
WEcSBascBGISLPPBW5	290						270		270	700		
aselBstshmcBB)tr5	2w9	49		260	417	476	10	7788	209w	272	77	
yRso)sPPRSBstBpIIEhPS	0	0		0	0	0	0	0	0	0	0	
ytniibshkBstBpIIEhPS	0	0		0	0	0	0	0	0	0	0	
yPRosLIBstBpIIEhPS	0	0		0	0	0	0	0	0	0	0	
pIIEhIIB)/hBpsPPR	2.27	0.99		0.76	0.02	0.99	0.7w	0.w	0.02	0.w0	0.16	

FSPPoelhPPRSBy E((soc			
AdsBWctI,	OPPIo		
fchilBGISLPP,B240			
AhPEsPIBchilBGISLPP,B240			
OWelP,B291Bv 2%5BpIVdShIIBPPBrselB9,CaWBsSIB6,yaWBySBcPPRWBudIS			
CsPEcsiBchil,B2w0			
fRSPRRIBW ctI,BAhPEsPI-fRRdnSsPPI			
Msxn(E(B)/hBpsPPR,B2.27			
FSPPoelhPPRSBynLSsiBDIisc,B24.6		FSPPoelhPPRSBGOy,Ba	
FSPPoelhPPRSBstshmcBUPmzsPPRSBB7.w%		FfUBG)IiBRWBylo)mlBD	
ASsicemeBglonRIB(nS52w			
: BBBmRE(IBxhIIeBstshmcpBEIEIBeBPIRdPmsiicBSWSmP.			
BBBBQEIEIBerRdSBeB(sxn(E(BsWPdBRPBchile.			
(BBBmRE(IBRcBwPBIchISPWIBxEIEIBeB(IPdIBocBEteRds(BenLSsi.			


Ø1
13.8 s
Ø2 (R)
75.7 s
Ø3
9.6 s
Ø4
40.9 s
Ø5
9.5 s
Ø6 (R)
80 s
Ø7
9.5 s
Ø8
41 s

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBfRSVuLEosPRSe						
VosVmBnRiE(lBv)tr5	9299	96	w4	2717	w9	269
3EPEdBnRiE(lBv)tr5	9299	96	w4	2717	w9	269
PlsiB3iRdBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNnPBW5	29	29	29	29	24	29
GsSlBUPn.B3shPRo	0. w	0. w	0. w	0. w	2.00	2.00
3dP	0. 8				0.1 6	
3iPBgdRPhPl				0. 1	0. 1	
ysP.B3iRdBtdR5	7w 7	0	0	742	28 9	0
3iPBglo(nPPl				0.w88	0. 1	
ysP.B3iRdBtlo(5	7w 7	0	0	2 88	28 9	0
pnLrPBWEoSBRSBpll		Yle				Yle
ysP.B3iRdBpVOp5	w				90	
GSkBytlllBv(tr5	7w			7w	90	
GSkBDmeRShlBW5	707			261w	w 6	
Vos)liBW(lBe5	w.			79.1	90.7	
glskBHREdB3shPRo	0. w	0.w0	0.11	0. w	0.8w	0.80
Hls)cBnlrnhileB%5	0%	8%	24%	w%	2%	0%
Alj.B3iRdBv)tr5	9974	w9	62	24w6	6	972
yrsdlBGsSlBVosVmB%5						
GsSlBudREtB3iRdBv)tr5	9916	0	0	2w28	700	0
TSPdaiRhklBSPcelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MllnsSBNnPvW5	20			20	24	
GSkBDWelRW5	0			0	0	
fdReedsikBNnPvW5	26			26	26	
WdRBdlscBGlVBWEoSBGsSl						
HlsldscB3shPRo	2.00	2.00	2.00	2.00	0. 9	2.00
WEoSLBytlllBv(tr5			2w		2w	
CE(bldBRVBDlPhPRceB	2		2	2	2	
DlPhPRdBW(tisPB			GlVP		GlVP	
GlslSLBDlPhPRdBW5	9w6		90	9w6	76	
VosmSLBDlPhPRdBW5	9w0		0	9w0	0	
DlPhPRd2BgRemPRSW5	9w0		0	9w0	0	
DlPhPRd2BynzlW5	6		90	6	76	
DlPhPRd2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	
DlPhPRd2BrsSSli						
DlPhPRd2BTxPSlBe5	0.0		0.0	0.0	0.0	
DlPhPRd2BQEl Elle5	0.0		0.0	0.0	0.0	
DlPhPRd2BDlscBe5	0.0		0.0	0.0	0.0	
WEoSBWctl	CA		glo(	CA	gdRP	
gdRPhPlBgrsele	9			6	1	
glo(nPPlBgrsele			6			
DlPhPRdBgrsel	9		6	6	1	
ydnPhrBgrsel						
MnSn(E(BSnnsBe5	2w.0		2w.0	2w.0	1.0	
MnSn(E(BytinBe5	9w.0		92.0	92.0	96.0	
WRRsiBytinBe5	227.0		227.0	227.0	98.0	
WRRsiBytinB%5	10.8%		10.8%	10.8%	2 .7%	

GsSIBudREt	TaW	Tap	NaG	NaW	CaG	Cap
Msxn(E(Bud I SBe5	208.0		208.0	208.0	92.0	
YI iiRdBW(I Be5	4.w		4.w	4.w	4.w	
Aii-pI IBW(I Be5	2.w		2.w	2.w	2.w	
GReBW(I BAI jEeBe5	0.0			0.0	0.0	
WRRsiBGReBW(I Be5	6.0			6.0	6.0	
GIsI/GsL						
GIsI-GsLBDtP(nzI ?						
mI r mil ETxPSenRSBe5	8.0		8.0	8.0	w.0	
MrSn(E(Bust Be5	4.w		4.w	4.w	0.9	
W(I BaI VRd Bp I I EhI Be5	70.0		70.0	70.0	0.0	
W(I BWRBp I I EhI Be5	9w.0		9w.0	9w.0	0.0	
pI hsiiBMRI I	f -MrS		f -MrS	f -MrS	CRSI	
NsikBW(I Be5	8.0				8.0	
3iser BDRSPBNsikBe5	29.0				97.0	
gI I ePosSB siieBW#/r d5	0				0	
AhPBTWhPBud I SBe5	208.0			208.0	92.0	
AhPEsPI BL/f Bp sPR	0.86			0.86	0.2w	
)/hBp sPR	0.17			2.70I i	2.0w	
f RSPRRIBDI isc	24.9			46.1	290.0	
QEI EI BDI isc	0.0			0.0	0.0	
WRRsiBDI isc	24.9			46.1	290.0	
GOy	a			D	3	
At t dRshr BDI isc	24.9			46.1	290.0	
At t dRshr BGOy	a			D	3	
QEI EI BG SLPBW0PBW5	690			: 4w1	: 912	
QEI EI BG SLPBwPBW5	898			(#w8	#744	
FSPdSsiBGSkBDreBW5	997			260w	w26	
WEdSBascBG SLPBW5						
aseI B st shmcB)t r 5	9848			2w20	91w	
yRs0)sPRSB st Bp I I EhPS	0			0	0	
yt niibshkB st Bp I I EhPS	0			0	0	
yPRosLI B st Bp I I EhPS	0			0	0	
p I I EhI I B)/hBp sPR	0.17			2.00	2.0w	

FSPœI hPRSBy E((soc				
Ad sBVctI ,	OPI o			
f chil BG SLP, B240				
AhPEsPI B chil BG SLP, B240				
OVeI P,B6Bw4%5Bp I Vd ShI I BPRBr seI B9,TaWBsSI B6,N aWGBy RdBRVBud I S				
CsPEosiB chil , B270				
f RSPRRIBVctI , BAhPEsPI -f PRd nSsPI				
Msxn(E(B)/hBp sPR, B2.0w				
FSPœI hPRSBynLSsiBDI isc, B74.0			FSPœI hPRSBG0y , B	
FSPœI hPRSB st shmcB2BUPhnzsPRSB200.w%			Ff UBG)I iBRVBy I o)mI Bu	
ASsicemBg I onRI B(nS52w				
: BBBmRE(I B xhI I eBst shmcBxEI EI BeBP I Rd PhsiicBSVSnP.				
BBBQEI EI BerRdSBeB(sxn(E(BsVPdBRdRBchil e.				
#BBBwPB I chI SPhI B)RE(I B xhI I eBst shmcBxEI EI B(scBbI BRSLI o.				
BBBQEI EI BerRdSBeB(sxn(E(BsVPdBRdRBchil e.				

(BBBBmRiE(I BVRcB wPB I chI SPnI BxEI EI BeB(I PdI BcBtePI s(BenLSsi.

I iBBBBDI \shPRBG VBGsSI .BpI hRI I BdPB2BPRELrBsSI BeBsBI VBsSI .

yt inPBsSI Bgr seI e,BBBB42,BJEI I B-BF)nSL

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	909	40	267	241	477	674	9 6	06	233	263	638	82
FEPEd BnRE(lB)tr5	909	40	267	241	477	674	9 6	06	233	263	638	82
IdlsiBFiRwB)trti5	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00
GsSlBNmdPBW5	29	29	29	29	29	29	22	22	29	22	22	22
yPRosLlBGlSLPBW5	284		0	960		0	214		600	240		930
yPRosLlBGsSle	2		0	2		0	2		2	2		2
WstldBGlSLPBW5	94			94			94			94		
GsSlBuJPuBFshPRo	2.00	0. 4	0. 4	2.00	0. 4	0. 4	2.00	0. 2	0. 2	2.00	0. 4	2.00
FdP		0. 77			0. 33			0. 86				0.140
FiPBgdRPPhPd	0. 40			0. 40			0. 40			0. 40		
ysPd.BFiRwBtdRP5	2718	6637	0	2880	6632	0	27 3	3776	0	27 3	6374	2629
FiPBgl(mPPd	0.202			0.987			0.362			0.263		
ysPd.BFiRwBtl(5	28	6637	0	423	6632	0	87	3776	0	96	6374	2629
pruLrPBWEdGSBRSBpld			Yle			Yle			Yle			Yle
ysPd.BFiRwBpWOp5		61			228			34				
GrSkBytlldB(tr5		64			64			30			30	
GrSkBDmeRShlBW5		6961			2692			9 39			670	
Wos)liBW(lBe5		76.2			94.8			40.2			7.2	
glskBHREdBFshPRo	0. 2	0. 2	0.13	0.81	0.1	0. 8	0.13	0. 3	0.78	0. 0	0. 2	0.83
Hls)cBnlrmileB%5	8%	3%	4%	9%	9%	9%	6%	4%	6%	6%	7%	2 %
Adj.BFiRwB)tr5	999	44	279	906	767	687	63	72	924	23	612	7
yrsdldBGsSlBWosWmB%5												
GsSlBudREtBFiRwB)tr5	999	892	0	906	2029	0	63	2287	0	23	612	7
TSPPdBaiRnkldBSPPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP
MldrsSBNmdPvW5		29			29			22			22	
GrSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscb BFshPRo	2.00	2.00	2.00	2.00	2.00	2.00	2.03	2.03	2.00	2.03	0. 1	2.03
WEdSrSLBytlldB(tr5	24			24			24			24		
CE(bldBRVBDlPPhPRdeB	2	2		2	2		2	2		2	2	2
DlPPhPRdBW(tisPPB	GlVP			GlVP			GlVP			GlVP		pruLrP
GlsdrSLBDlPPhPRdBW5	67	947		67	947		67	947		67	947	67
WosmrSLBDlPPhPRdBW5	0	940		0	940		0	940		0	940	0
DlPPhPRd2BgRemPRSW5	0	940		0	940		0	940		0	940	0
DlPPhPRd2BymzlW5	67	7		67	7		67	7		67	7	67
DlPPhPRd2BWctl	f i+Tx	f i+Tx		f i+Tx	f i+Tx		f i+Tx	f i+Tx		f i+Tx	f i+Tx	f i+Tx
DlPPhPRd2BBrsSSli												
DlPPhPRd2BTxPSdBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
DlPPhPRd2BQEl ElBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
DlPPhPRd2BDliscBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WEdSBWctl	t(+tP	CA		t(+tP	CA		t(+tP	CA		t(+tP	CA	gl(
gdRPPhPdBgrsele	4	9		2	7		6	1		8	3	
gl(mPPdBgrsele	9			7			1			3		3
DlPPhPRdBgrsel	4	9		2	7		6	1		8	3	3
ywmPrBgrsel												
MrSr(E(BSmPsiBe5	6.0	24.0		6.0	24.0		6.0	24.0		6.0	24.0	24.0

GsSl Bu dREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MrSn(E(Bytim Be5	7.4	92.0		7.4	92.0		7.4	92.0		7.4	68.0	68.0
WRRsiBytim Be5	27.0	34.0		26.0	39.0		24.0	68.0		24.0	68.0	68.0
WRRsiBytim B%5	23.4%	30. %		22.1%	61.9%		26.7%	66.7%		26.7%	66.7%	66.7%
Msxn(E(Bu dl SBe5	29.4	6 .0		.4	67.0		22.4	62.0		22.4	62.0	62.0
Yl iiRwBW(l Be5	6.4	3.4		6.4	3.4		6.4	3.4		6.4	3.4	3.4
Aii-pl dBW(l Be5	0.0	2.4		0.0	2.4		0.0	2.4		0.0	2.4	2.4
GRe BW(l BAdjEe Be5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRRsiBGRe BW(l Be5	6.4	7.0		6.4	7.0		6.4	7.0		6.4	7.0	7.0
Gl sd/GsL	Gl sd	GsL		Gl sd	GsL		Gl sd	GsL		Gl sd	GsL	GsL
Gl sd-GsLBDt P(nzl ?												
ml r mil ET xP Se RSBe5	6.0	8.0		6.0	8.0		6.0	8.0		6.0	8.0	8.0
pl hsiiBMRdl	CRSI	f -MnS		CRSI	f -MnS		CRSI	CRSI		CRSI	CRSI	CRSI
N sikBW(l Be5											8.0	8.0
Fiser BDRSP N sikBe5											93.0	93.0
gl dl e Rns SB siie B#/r d5											0	0
AhPBT Wh Bu dl SBe5	43.6	6 .7		31.4	67.8		34.3	62.3		36.0	9 .1	9 .1
AhPEsP dBL/f Bp sPR	0.3	0.67		0.33	0.66		0.32	0.9		0.6	0.98	0.98
)/hBp sPR	0.18	0.4		0.72	0.14		0.16	0.17		0.73	0.32	0.99
f RSPRRBDl isc	70.6	94.7		94.2	61.6		39.	36.7		66.0	63.0	8.2
QEl El BDl isc	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRRsiBDl isc	70.6	94.7		94.2	61.6		39.	36.7		66.0	63.0	8.2
GOy	T	f		f	D		D	D		f	f	A
At t dRshr BDl isc		66.1			67.2			36.4			9 .8	
At t dRshr BGOy		f			D			D			f	
QEl El BGl SLP B4P BW5	204	992		8	624		280	910		76	223	0
QEl El BGl SLP B 4P BW5	#938	908		207	6 8		#948	#632		226	24	92
ISP dSsiBGSkBDre BW5		6241			2932			9179			910	
WEdSBa scBGl SLP BW5	284			960			214			240		930
a el B st shm BB)t r 5	970	2998		664	22 2		392	2673		938	87	330
yRs)s PRSB st Bp l dEh S	0	0		0	0		0	0		0	0	0
yt nibshkB st Bp l dEh S	0	0		0	0		0	0		0	0	0
yPRosLI B st Bp l dEh S	0	0		0	0		0	0		0	0	0
pl dEhl dB)/hBp sPR	0.14	0.4		0.72	0.14		0.16	0.17		0.70	0.6	0.99

ISP el h PRSBy E((soc			
Ad sBVctl :	OPl o		
f chil BGl SLP :B220			
AhPEsP dB chil BGl SLP :B220			
OVel P B0B98%5Bp l Vd Shl dBPRB r sel B):TaWGBsSdB7:NaWG,BySdPBRVBu dl S			
CsPEosiB chil :B 0			
f RSPRRBVctl :BAhPEsP d-f PRodnSsP d			
Msxn(E(B)/hBp sPR B0.18			
ISP el h PRSBynLSsiBDl isc:B68.6		ISP el h PRSBGOy :BD	
ISP el h PRSB st shm B2BUPhnzsPRSB16. %		If UBG)l iBRVBy l o)m l ET	
ASsicemeBg l dRdBV(n5B24			
#BBB 4P B l dh l SPml B)RtE(l B xhl l deBst shm B,Bq El El B(scBl BRSLl o			
BBBQEl El BerRwSBeB(sxn(E(Bs\PdBvRBchil e.			


Ø1
13 s
Ø2 (R)
45 s
Ø3
15 s
Ø4
37 s
Ø5
16 s
Ø6 (R)
42 s
Ø7
15 s
Ø8
37 s

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	804	844	84	900	140	70	44	2464	2070	234	2230	390
FEPEd BnRE(lB)tr5	804	844	84	900	140	70	44	2464	2070	234	2230	390
IdlsiBFiRwB)trti5	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNmdPBW5	29	29	23	29	29	29	29	29	29	29	29	26
yPRosLIBGSLPBW5	684		660	930		664	610		374	640		340
yPRosLIBGsSle	9		2	9		2	9		9	9		9
WstldBGSLPBW5	94			94			94			94		
GsSlBJPuBFshPRo	0. 8	0. 2	2.00	0. 8	0. 2	2.00	0. 8	0. 2	0.11	0. 8	0. 2	0.11
FdP			0.140			0.140			0.140			0.140
FiPBgdRPhPd	0. 40			0. 40			0. 40			0. 40		
ysPd.BFiRwBtdR5	6216	4206	2477	6298	4900	2493	9 21	3184	93 6	6939	3184	97 4
FiPBgld(mPd	0. 40			0. 40			0. 40			0. 40		
ysPd.BFiRwBtld(5	6216	4206	2477	6298	4900	2493	9 21	3184	93 6	6939	3184	97 4
pnLrPBWEdGSBRSBpld			CR			CR			CR			CR
ysPd.BFiRwBpWOp5												
GSkBytlldB(tr5		30			30			40			40	
GSkBDmePShlBW5		876			804			4 3			2 18	
Wos)liBW(lBe5		26.0			29.0			1.2			98.2	
glskBHREdBFshPRo	0.18	0. 6	0.10	0. 2	0. 2	0.87	0.17	0.11	0.14	0.88	0. 0	0.10
Hls)cBnlrmileB%5	20%	8%	20%	29%	4%	7%	90%	29%	23%	1%	29%	%
Adj.BFiRwB)tr5	120	129	3	990	63	8	73	2833	2938	211	2978	494
yrsdldBGsSlBWosWmB%5												
GsSlBudREtBFiRwB)tr5	120	129	3	990	63	8	73	2833	2938	211	2978	494
TSPdBaiPnkldBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5		93			93			93			93	
GSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.00	0. 3	0. 9	2.00	0. 3	2.00	2.00	0. 3	2.00	2.00	0. 3	0. 7
WEdSSLBytlldB(tr5	24			24			24			24		
CE(bldBRBDlPhPRdeB	2	2	2	2	2	2	2	2	2	2	2	2
DlPhPRdBW(tisPB	GlVP		pnLrP	GlVP		pnLrP	GlVP		pnLrP	GlVP		pnLrP
GlsdnSLBDlPhPRdBW5	67	947	67	67	947	67	67	947	67	67	947	67
WosmnSLBDlPhPRdBW5	0	940	0	0	940	0	0	940	0	0	940	0
DlPhPRd2BgPemPRSW5	0	940	0	0	940	0	0	940	0	0	940	0
DlPhPRd2BymzlW5	67	7	67	67	7	67	67	7	67	67	7	67
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BQEl ElBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	CA	t(+R)	gdRP	CA	t(+R)	gdRP	CA	t(+R)	gdRP	CA	t(+R)
gdRPhPdBgrsele	8	3	4	6	1	2	4	9	6	2	7	8
gld(mPdBgrsele			3			1			9			7
DlPhPRdBgrsel	8	3	4	6	1	2	4	9	6	2	7	8
ywmPrBgrsel												
MnSn(E(BSmPsiBe5	3.0	24.0	3.0	3.0	24.0	3.0	3.0	24.0	3.0	3.0	24.0	3.0

GsSl Bu cREt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
MrSn(E(Bytim PBe5	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0
WRRsiBytim PBe5	61.0	6 .0	2 .0	64.0	67.0	2 .0	2 .0	38.0	64.0	2 .0	38.0	61.0
WRRsiBytim PB%5	98.2%	98. %	26.7%	94.0%	94.8%	26.7%	26.7%	66.7%	94.0%	26.7%	66.7%	98.2%
Msxn(E(Bu d l SBe5	69.0	69.0	26.0	9 .0	9 .0	26.0	26.0	30.0	9 .0	26.0	30.0	69.0
Yl iiRwBWn(l Be5	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.0
Aii-pl dBWn(l Be5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
GReFBWn(l BAdjEeFBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReFBWn(l Be5	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0
Gl sd/GsL	Gl sd	GsL	Gl sd	Gl sd	GsL	Gl sd	Gl sd	GsL	Gl sd	Gl sd	GsL	Gl sd
Gl sd-GsLBOt Pn(nzl ?												
ml r mil BTxP SenRSBe5	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0
MrSn(E(Bu st Be5	0.9	6.0	0.9	0.9	6.0	0.9	0.9	3.0	0.9	0.9	3.0	0.9
Wn(l Bal VRd Bpl dEhl Be5	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0
Wn(l BWRBpl dEhl Be5	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0	0.0	94.0	0.0
pl hsiiBMRdl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	f -MnS	CRSl	CRSl	f -MnS	CRSl
AhPBTWhPBu d l SBe5	69.0	69.4	31.0	91.3	9 .0	31.2	1.4	30.	87.3	29.2	33.7	16.7
AhPEsP dBL/f Bp sPR	0.96	0.96	0.63	0.90	0.92	0.63	0.07	0.9	0.44	0.0	0.69	0.70
)/hBp sPR	2.22	0.71	0.21	0.64	0.18	0.24	0.67	2.99	0. 9	0.78	0.19	0.66
f RSPRiBDl isc	221.2	49.8	66.0	3 .3	76.6	69.4	88.9	242.9	98.8	44.	43.4	66.3
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	221.2	49.8	66.0	3 .3	76.6	69.4	88.9	242.9	98.8	44.	43.4	66.3
GOy	F	D	f	D	T	f	T	F	f	T	D	f
At t dRshr BDl isc		19.4			41.1			.9			3 .2	
At t dRshr BGOy		F			T			F			D	
QEl El BG SLP B40P BWP5	~363	940	70	1	603	3	62	~86	360	11	333	990
QEl El BG SLP B 4P BWP5	#469	600	0	29	670	83	(32	#818	66	220	3 8	940
ISP dSsiBGnSkBDreFBWP5		716			794			423			2 08	
WEdSBascBG SLP BWP5	684		660	930		664	610		374	640		340
asel B st shrPB)t r 5	898	2217	418	738	2088	466	980	2394	2680	602	2442	2701
yRso)sPRSB st Bpl dEhPS	0	0	0	0	0	0	0	0	0	0	0	0
yt nibshkB st Bpl dEhPS	0	0	0	0	0	0	0	0	0	0	0	0
yPRcsLl B st Bpl dEhPS	0	0	0	0	0	0	0	0	0	0	0	0
pl dEhl dB)/hBp sPR	2.22	0.71	0.27	0.63	0.18	0.24	0.93	2.99	0. 2	0.79	0.19	0.66

ISP cel hPRSBy E((scc

Ad sBWct l : OPl o

f chil BG SLP :B230

AhPEsP dB chil BG SLP :B230

OWel P:B267By 8%5,Bpl V d Shl dBPRB r sel B9:CTWBsSdB7:yN W,By RscPBRWBu d l S

CsPEcsiB chil :B260

f RSPRiBWct l :BAhPEsP d-f RRcdnSsP d

Msxn(E(B)/hBp sPR:B2.99

ISP cel hPRSBy nLSsiBDl isc:B88.0 ISP cel hPRSBGOy :BT

ISP cel hPRSB st shrPBUPnzsPRSB1 .8% If UBG)l iBRWBy l o)nl BT

ASsicemBg l cnRdB(nS5B24

~BBBBnRiE(l B xhl l deBst shrPc,BqEl El BeBP l Rd PnsiicBSVSnP .

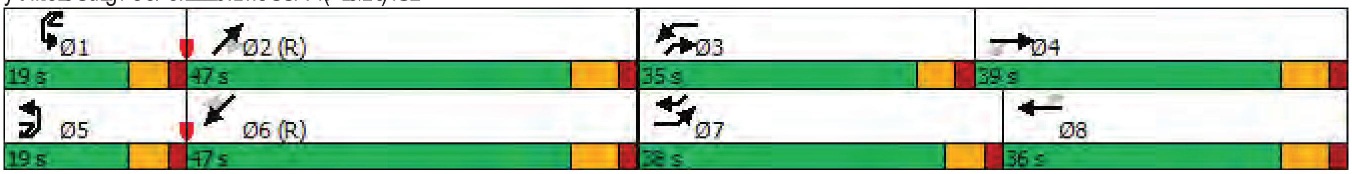
BBBBBQEl El Ber RwSBeB(sxn(E(BsVP dBwRBchil e.

#BBBB 4P Bl chl SPnl B)RiE(l B xhl l deBst shrPc,BqEl El B(scBl BRSLl o.

BBBBBQEl El Ber RwSBeB(sxn(E(BsVP dBwRBchil e.

(BBBBmRiE(l BRcB 4rP B l ch l SPnl BqE l E l BeB(l P d dBbcBEt eRl s(BerLSsi.

y t irRBsSdBgr sel e:BBBBB:BMsSSrl n(B&Bo) nSL



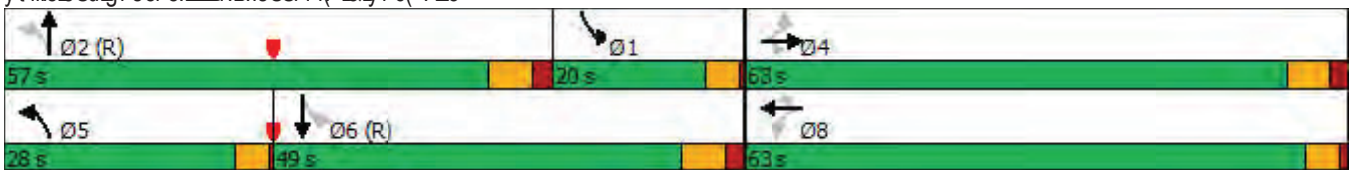
GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	24	74	230	484	294	1 0	940	2800	200	970	2004	74
FEPEd BnRE(lB)tr5	24	74	230	484	294	1 0	940	2800	200	970	2004	74
IdlsiBFiRwB)trti5	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	22	29	22	29	29	29	22	22	29	29	22	29
yPRosLlBGlSLPBW5	224		224	0		0	234		234	600		0
yPRosLlBGsSle	2		2	2		2	2		0	2		0
WstldBGlSLPBW5	94			94			94			94		
GsSlBuJPuBFshPRo	2.00	2.00	2.00	2.00	0. 4	0. 4	2.00	0. 2	0. 2	2.00	0. 2	0. 2
FdP			0.140		0.117	0.140		0. 9			0. 0	
FiPBgdRPhPd	0. 40			0. 40			0. 40			0. 40		
ysPd.BFiRwBtdR5	2441	2176	2386	2880	2471	2403	2428	3 40	0	2880	3442	0
FiPBgl(mPd	0.277			0.822			0.242			0.261		
ysPd.BFiRwBtl(5	989	2176	2386	2693	2471	2403	932	3 40	0	948	3442	0
pnLrPBWEdGSBRSBpld			Yle			Yle			Yle			Yle
ysPd.BFiRwBpWOp5			276		261	937		8				
GSkBytlldB(tr5		60			60			30			30	
GSkBDmPSShlBW5		2846			31			2442			2213	
Wos)liBW(lBe5		6 .1			22.2			97.3			90.9	
glskBHREdBFshPRo	0.77	0. 9	0.17	0. 9	0. 9	0. 9	0.12	0. 2	0. 9	0. 9	0. 7	0.16
Hls)cBnlrmileB%5	29%	9%	7%	9%	9%	9%	24%	7%	9%	9%	8%	68%
Adj.BFiRwB)tr5	96	82	276	794	267	78	60	2171	20	916	2038	81
yrsdldBGsSlBWosWmB%5						33%						
GsSlBudREtBFiRwB)tr5	96	82	276	794	472	439	60	2 88	0	916	2294	0
TSPdaiPnkldBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5		29			29			29			29	
GSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.03	2.00	2.03	2.00	2.00	2.00	2.03	0. 1	2.00	2.00	2.03	2.00
WEdSSLBytlldB(tr5	24			24			24			24		
CE(bldBRBDlPhPRdeB	2	9	2	2	9	2	2	2		2	2	
DlPhPRdBW(tisPB	GlVP	WfdE	pnLrP	GlVP	WfdE	pnLrP	GlVP			GlVP		
GlsdnSLBDlPhPRdBW5	67	200	67	90	200	90	67	947		90	947	
WosmSLBDlPhPRdBW5	0	0	0	0	0	0	0	940		0	940	
DlPhPRd2BgRemPRSW5	0	0	0	0	0	0	0	940		0	940	
DlPhPRd2BynzlvW5	67	7	67	90	7	90	67	7		90	7	
DlPhPRd2BVctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BQEl Ele5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BDliscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd9BgRemPRSW5		3			3							
DlPhPRd9BynzlvW5		7			7							
DlPhPRd9BVctl		fi+Tx			fi+Tx							
DlPhPRd9BBrsSSli												
DlPhPRd9BTxPSdBe5		0.0			0.0							
WEdSBVctl	gl(	CA	gl(	gl(	CA	gl(	t(+tP	CA		t(+tP	CA	

GsSI Bu dRE t	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
gdRPhPdBgr sel e		3			1		4	9		2	7	
gl d(mPdBgr sel e	3		3	1		1	9			7		
DlPhPRdBgr sel	3	3	3	1	1	1	4	9		2	7	
ywmPrBgr sel												
MrSr(E(BSmsiBe5	1.0	1.0	1.0	2.0	2.0	2.0	6.0	90.0		4.0	90.0	
MrSr(E(Bytim Be5	23.4	23.4	23.4	31.0	31.0	31.0	8.0	97.4		.4	97.4	
WRRsiBytim Be5	76.0	76.0	76.0	76.0	76.0	76.0	91.0	48.0		90.0	3 .0	
WRRsiBytim B%5	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	90.0%	30.8%		23.6%	64.0%	
Msxr(E(Bu dl SBe5	47.4	47.4	47.4	41.4	41.4	41.4	93.0	40.4		27.0	39.4	
YliiRwBW(l Be5	3.4	3.4	3.4	6.4	6.4	6.4	6.4	3.4		6.4	3.4	
Aii-pl dBW(l Be5	9.0	9.0	9.0	2.0	2.0	2.0	0.4	9.0		0.4	9.0	
GRe BW(l BAdjEe Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
WRRsiBGRe BW(l Be5	7.4	7.4	7.4	3.4	3.4	3.4	3.0	7.4		3.0	7.4	
Gl sd/GsL							Gl sd	Gl sd		GsL	GsL	
Gl sd-GsLBDt R(nzl ?								Yl e		Yl e		
ml r mil BTxP SenRSBe5	4.0	4.0	4.0	6.0	6.0	6.0	6.0	8.0		6.0	8.0	
MrSr(E(Bu st Be5	0.9	0.9	0.9	6.0	6.0	6.0	0.9	3.0		6.0	3.0	
W(l Ba l VRd Bpl dEhl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.0		0.0	94.0	
W(l BWRBpl dEhl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.0		0.0	94.0	
pl hsiiBMRdl	CRSI	CRSI	CRSI	CRSI	CRSI	CRSI	CRSI	f -MrS		CRSI	f -MrS	
N sikBW(l Be5				8.0	8.0	8.0						
Fiser BDRSRBN sikBe5				22.0	22.0	22.0						
gl dl eRosSBsiieB#/r d5				0	0	0						
AhRBTWhRBu dl SBe5	47.4	47.4	47.4	41.4	41.4	41.4	46.0	40.4		34.0	39.4	
AhRE sPdBL/f Bpsf R	0.30	0.30	0.30	0.39	0.39	0.39	0.61	0.67		0.69	0.60	
)/hBpsf R	0.92	0.0	0.93	2.26	0.87	0.80	2.00	2.20		2.22	0.12	
f RSRRIBDl isc	66.7	97.3	3.7	228.3	66.8	96.2	2.0	8.4		227.2	96.0	
QEl El BDl isc	0.0	0.0	0.0	2.2	20.9	9.8	0.0	0.0		0.0	0.0	
WRRsiBDl isc	66.7	97.3	3.7	221.3	36.	94.1	2.0	8.4		227.2	96.0	
GOy	f	f	A	F	D	f	F	F		F	f	
At dRshr BDl isc		26.9			74.9			7.7			32.8	
At dRshr BGOy		a			T			F			D	
QEl El BGl SLPB40PBW5	23	30	0	~741	643	968	964	~83		~936	220	
QEl El BGl SLPB 4PBW5	98	86	61	#1 7	499	6 0	#641	#133		#640	990	
ISPdGsiBGSkBDreBW5		2786			30			2382			2203	
WEdSBascBGl SLPBW5	224		224				234			600		
asel Bl st shmRBytr 5	20	842	7 2	446	864	882	60	28 0		944	2618	
yRo)sPRSBl st Bpl dEhPS	0	0	0	7	23	262	0	0		0	0	
yt nibshkBl st Bpl dEhPS	0	0	0	0	0	0	0	0		0	0	
yPRosLIBl st Bpl dEhPS	0	0	0	0	0	0	0	0		0	0	
pl dEhl dB/hBpsf R	0.92	0.0	0.93	2.9	0. 7	0.14	2.00	2.20		2.22	0.12	

ISPœl hPRSBy E((scc	
Ad sBWctl :	OPl o
f chil BGl SLP:B230	
AhRE sPdBl chil BGl SLP:B230	
OWel P:B9 Bv92%5,Bpl Vd Shl dBRRBr sel B9:CaWGBsSdB7:yaWG,BYRsdBRRWBu dl S	
CsRE osiBl chil :B294	
f RSRRIBWctl :BAhRE sPd-f RRodnSsPd	

Msxn(E(B)/hBpsmRRE2.26
ISPœlhmRRSByLSsiBDlisc:B7 .8 ISPœlhmRRSBBOy:BT
ISPœlhmRRSBstshmcBJRmzsmRRSB 1.8% If UBG)liBRVBylo)mlBF
ASsicemeBglomRdBv(nG5224
~BBBmRE(lBxhlldeBstshmc,BqEIEIBeBPlRdRmsiicBSVSmP.
BBBQEIEIBerRwSBeB(sxn(E(Bs\PdBwRBchile.
#BBB4PBlchlSmlB)RE(lBxhlldeBstshmc,BqEIEIB(scBblBRSLlo
BBBQEIEIBerRwSBeB(sxn(E(Bs\PdBwRBchile.

ytmeBSScdBgrsele:BBBB:BMsSSrln(BxBylc(REo



GsSIBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSIBRSVuLEosPRSe						
WosWmBnRiE(IBv)tr5	23 0	2 0	24	2674	600	4
FEPEd BnRiE(IBv)tr5	23 0	2 0	24	2674	600	4
IdIsiBFiRwBv)trti5	9000	2 00	2 00	9000	2 00	2 00
GsSIBNmdPBW5	29	29	29	29	29	26
yPRosLIBGSLPBW5		670	684		9 4	9 4
yPRosLIBGsSIe		2	9		2	2
WstIdBGSLPBW5			94		94	
GsSIBuJPuLBFshPRo	0. 4	2.00	0. 8	0. 4	0. 8	2.00
FdP		0.140				0.140
FiPRgdRPPhPd			0. 40		0. 40	
ysPd.BFiRwBvtdRP5	672	2371	9468	6414	602	29 3
FiPRgIq(mPPd			0. 40		0. 40	
ysPd.BFiRwBvtIq(5	672	2371	9468	6414	602	29 3
pruLrPBWEdGSBRSBpId		YIe				YIe
ysPd.BFiRwBvpWOp5		922				24
GrSkBytIIdBv(tr5	44			44	60	
GrSkBDmePrShIBW5	206			0	2287	
Wos)IiBW(IBve5	29.			29.6	97.8	
gIskBHPEdBFshPRo	0. 9	0. 0	0.32	0.11	0.13	0.66
HIs)cBmIrmileBv%5	4%	20%	61%	7%	27%	9 %
Adj.BFiRwBv)tr5	2790	922	68	2442	648	24
yrsdIdBGsSIBWosWmBv%5						
GsSIBudREtBFiRwBv)tr5	2790	922	68	2442	648	24
TSPPdBaiPnkIdBSPPcelhPPRS	CR	CR	CR	CR	CR	CR
GsSIBAinLS(ISP	GIVP	pruLrP	GIVP	GIVP	GIVP	pruLrP
MIdrsSBNmdPvW5	93			93	93	
GrSkBDWeIPW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwvRBwscBGIVBWEdSBGsSI						
HIsdwscBFshPRo	0. 3	2.00	2.00	0. 3	2.00	0. 7
WEdGrSLBytIIdBv(tr5			24		24	
CE(bIdBRVBDIPhPRdeB	2	2	2	2	2	2
DIPhPRdBW(tisPPB		pruLrP	GIVP		GIVP	pruLrP
GIsdrSLBDIPhPRdBW5	947	67	67	947	67	67
WosmrSLBDIPhPRdBW5	940	0	0	940	0	0
DIPhPRd2BgRemPRSW5	940	0	0	940	0	0
DIPhPRd2BynzIvW5	7	67	67	7	67	67
DIPhPRd2BWctI	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DIPhPRd2BrsSSIi						
DIPhPRd2BTxPSdBve5	0.0	0.0	0.0	0.0	0.0	0.0
DIPhPRd2BQEIEIBve5	0.0	0.0	0.0	0.0	0.0	0.0
DIPhPRd2BDIiscBve5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctI	CA	t(+R)	gdRP	CA	gdRP	glq(
gdRPPhPdBgrsele	9	1	2		1	
glq(mPPdBgrsele		9		7		1
DIPhPRdBgrsel	9	1	2	7	1	1
ywmPrBgrsel						
MrSr(E(BSmPsiBve5	94.0	20.0	4.0	94.0	20.0	20.0

GsSl Bu dREt	TaW	Tap	NaG	NaW	CaG	Cap
MrSn(E(Byt imBe5	62.4	27.0	.4	62.4	27.0	27.0
WRRsiByt imBe5	44.0	60.0	94.0	10.0	60.0	60.0
WRRsiByt imB%5	40.0%	98.6%	99.8%	89.8%	98.6%	98.6%
Msxn(E(Bu d l SBe5	31.4	93.0	90.4	86.4	93.0	93.0
Yl iiRwBW(l Be5	3.4	3.4	6.4	3.4	3.4	3.4
Aii-pl dBW(l Be5	9.0	2.4	2.0	9.0	2.4	2.4
GReBW(l BAdjEeBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReBW(l Be5	7.4	7.0	3.4	7.4	7.0	7.0
Gl sd/GsL	GsL		Gl sd			
Gl sd-GsLBDt R(nzl ?						
ml r mil ETxP SenRSBe5	8.0	4.0	6.0	8.0	4.0	4.0
MrSn(E(Bu st Be5	3.0	0.9	0.9	3.0	0.9	0.9
W(l Bal VRd Bp l dEhl Be5	94.0	0.0	0.0	94.0	0.0	0.0
W(l BWRBp l dEhl Be5	90.0	0.0	0.0	90.0	0.0	0.0
pl hsiiBMRdl	MnS	CRSl	CRSl	MnS	CRSl	CRSl
AhPBT WhPBu d l SBe5	31.	87.8	7.1	44.7	21.6	21.6
AhPEsP dBL/f Bp sPR	0.47	0.1	0.01	0.73	0.92	0.92
)/hBp sPR	0.8	0.27	0.21	0.78	0.47	0.04
f RSRRBDl isc	90.	0.7	39.8	29.0	63.8	23.9
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	90.	0.7	39.8	29.0	63.8	23.9
GOy	f	A	D	a	f	a
At t dRshr BDl isc	21.4			29.8	66.	
At t dRshr BGOy	a			a	f	
QEl El BGl SLP B40P BW5	300	0	20	970	4	0
QEl El BGl SLP B 4P BW5	#700	22	29	674	262	2
lSP dSsiBGSkDreBW5	4			20	20 7	
WEcSBascBGl SLP BW5		670	684		9 4	9 4
asel B st shmcB)t r 5	9041	2636	70	6087	13	684
yRo)sPRSB st Bp l dEhPS	0	0	0	0	0	0
yt nibshkB st Bp l dEhPS	0	0	0	0	0	0
yPRosLI B st Bp l dEhPS	0	0	0	0	0	0
pl dEhl dB/hBp sPR	0.8	0.27	0.07	0.40	0.39	0.03

lSP el hPRSBy E((soc			
Ad sBVctl :	OPl o		
f chil BGl SLP :B220			
AhPEsP dB chil BGl SLP :B17.7			
CsPEosiB chil :B74			
f RSRRBVctl :BAhPEsP d-UShRRodnSsP d			
Msxn(E(B/hBp sPR B0.8			
lSP el hPRSBynLSsiBDl isc:B28.7		lSP el hPRSBGOy :Ba	
lSP el hPRSB st shmcBUPmzsPRSB41.2%		If UBGl)l iBRBy l o)mlBa	
ASsicemeBgl onRdBV(nS52 4			
#BBB 4P B l chl SPml B)RE(l B xhl l deBst shmc,Bq El El B(scBl BRSLl o			
BBBQEl El BerRwSBeB(sxn(E(Bs\P dBWRBchil e.			

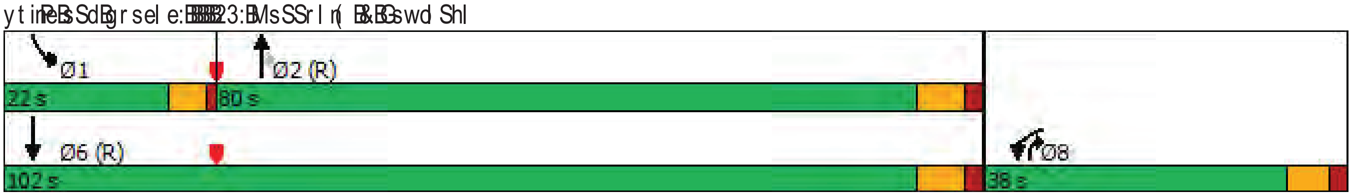
yt imeBsSdBgr sel e:BBB29:By l c(REoB&Bo)nSL

GsSlBudREt	NaG	Nap	CaW	Cap	yaG	yaW
GsSlBRSVuLEosRRSe						
WosWmBnRE(lB)tr5	3 4	864	2880	374	990	2694
FERFEd BnRE(lB)tr5	3 4	864	2880	374	990	2694
IdlsiBFiRwB)trti5	2 00	2 00	9000	2 00	2 00	9000
GsSlBNmdPBW5	20	20	22	29	22	22
yPRosLlBGSLPBW5	0	984		640	3 4	
yPRosLlBGsSle	9	2		2	9	
WstldBGSLPBW5	94				94	
GsSlBuRuLBFshPRo	0. 8	2.00	0. 2	2.00	0. 8	0. 2
FdP		0.140		0.140		
FiRBgdRPhPd	0. 40				0. 40	
ysRd.BFiRwBtdR5	6043	2399	3 66	2461	6917	3 8
FiRBgld(mPd	0. 40				0. 40	
ysRd.BFiRwBtld(5	6043	2399	3 66	2461	6917	3 8
pmLrPBWEdGSBRSBpld		Yle		Yle		
ysRd.BFiRwBpWOp5		36		1		
GSkBytlldB(tr5	64		40			40
GSkBDmRSShlBW5	144		2740			88
Wos)liBW(lBe5	27.8		99.4			20.7
glskBHREdBFshPRo	0.11	0.1	0. 0	0. 2	0. 7	0. 4
Hls)cBmlrmileB%5	8%	7%	8%	4%	6%	7%
Adj.BFiRwB)tr5	476	197	2 78	422	99	26 4
yrsdldBGsSlBWosWmB%5						
GsSlBudREtBFiRwB)tr5	476	197	2 78	422	99	26 4
TSPdBaiRhkldBSPdelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAimLS(lSP	GlVP	pmLrP	GlVP	pmLrP	GlVP	GlVP
MldmsSBNmdPvW5	90		99			99
GSkBDWelPW5	0		0			0
fdReewsikBNmdPvW5	27		27			27
VwRBwscBGlVBWEdSBGsSl						
Hlsdwsc BFshPRo	2.0	2.0	0. 1	2.00	2.03	0. 1
WEdGSLBytlldB(tr5	24				24	
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2
DlPhPRdBW(tisPB	GlVP	pmLrP		pmLrP	GlVP	
GlsdnSLBDlPhPRdBW5	67	67	947	67	67	947
WosmnSLBDlPhPRdBW5	0	0	940	0	0	940
DlPhPRdB2BgRemPRSW5	0	0	940	0	0	940
DlPhPRdB2BynzlvW5	67	67	7	67	67	7
DlPhPRdB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRdB2BBrsSSli						
DlPhPRdB2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRdB2BQEiElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRdB2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	Fdl	CA	t(+R)	gdRP	CA
gdRPhPdBgrsele	1		9	1	2	7
glq(mPdBgrsele		Fdl		9		
DlPhPRdBgrsel	1		9	1	2	7
ywmPrBgrsel						
MrSr(E(BSmsiBe5	1.0		24.0	1.0	3.0	24.0

GsSl Bu cREt	NaG	Nap	CaW	Cap	yaG	yaW
MrSn(E(By t inBe5	23.4		99.0	23.4	.0	99.0
WRsiBy t inBe5	61.0		10.0	61.0	99.0	209.0
WRsiBy t inB%5	98.2%		48.2%	98.2%	24.8%	89. %
Msxn(E(Bu d l SBe5	62.4		86.0	62.4	28.0	4.0
Yl iiRwBW(l Be5	3.4		4.0	3.4	3.0	4.0
Aii-pl dBW(l Be5	9.0		9.0	9.0	2.0	9.0
GReFBW(l BAdjEeFBe5	0.0		0.0	0.0	0.0	0.0
WRsiBGReFBW(l Be5	7.4		8.0	7.4	4.0	8.0
Gl sd/GsL			GsL		Gl sd	
Gl sd-GsLBOt P(nzl ?						
ml r mil BTxP SenRSBe5	4.0		8.0	4.0	3.0	8.0
pl hsiiBMRdl	CRSl		f -MnS	CRSl	CRSl	f -MnS
AhPBTWhBu d l SBe5	60.	230.0	84.3	226.6	24.9	4.7
AhPEsP dBL/f Bp sPR	0.99	2.00	0.43	0.12	0.22	0.71
)/hBp sPR	0.13	0.41	0.83	0.32	0.73	0.32
f RSPRiBDl isc	73.0	2.8	26.3	2.9	71.9	20.6
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRsiBDl isc	73.0	2.8	26.3	2.9	71.9	20.6
GOy	T	A	a	A	T	a
At t dRshr BDl isc	98.0		20.			21.4
At t dRshr BGOy	f		a			a
QEl El BGl SLP B40P BW5	946	0	270	21	203	2 9
QEl El BGl SLP B 4P BW5	623	0	963	92	231	990
ISP dSsiBGSkBDneFBW5	884		2480			7
WEdSBa scBGl SLP BW5		984		640	3 4	
asel B st shnPB)t r 5	718	2399	9744	2978	6	66
yRo)sPRSB st Bp l dEhPS	0	0	0	0	0	0
yt nibshkB st Bp l dEhPS	0	0	0	0	0	0
yPRsLl B st Bp l dEhPS	0	0	0	0	0	0
pl dEhl dB/hBp sPR	0.19	0.41	0.83	0.30	0.48	0.32

ISP del hPRSBy E((scc	
Ad sBWt l : OPl o	
f chil BGl SLP :B230	
AhPEsP dB chil BGl SLP :B230	
OWl P B0B9 %5Bpl Vd Shl dBPRB r sel B:CaWBSdB:yaWBy RsdPRBu d l S	
CsPEsiB chil :B0	
f RSPRiBWt l :BAhPEsP d-f RRdrSsP d	
Msxn(E(B/hBp sPR:B0.13	
ISP del hPRSBy nLSsiBDl isc:B28.9	ISP del hPRSBGOy :Ba
ISP del hPRSB st shnP BUPnzsPRSB71.6%	If UBGl)l iBRBy l o)ml B
ASsicenBgl oRdB(nSB24	

y t inPBSdBgr sel e:BBB23:BMsSSr l n(B&BGswd Shl



GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBRSVuLEosPRSe						
WosWmBnRiE(lBv)tr5	4 4	80	44	2080	214	224
FEPEd BnRiE(lBv)tr5	4 4	80	44	2080	214	224
IdlsiBFiRwBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	22	29	29	29	29	29
GsSlBuJRuBFshPRo	0. 4	0. 4	0. 4	0. 4	2.00	2.00
FdP	0. 8					0.140
FiRBgdRPhPd				0. 8	0. 40	
ysRd.BFiRwBvtdR5	6692	0	0	6679	2806	23 4
FiRBgl(mPPd				0.194	0. 40	
ysRd.BFiRwBvtl(5	6692	0	0	9819	2806	23 4
pnLrPBWEoSBRSBpld		Yle				CR
ysRd.BFiRwBvpWOp5	69					
GrSkBytlldBv(tr5	64			64	60	
GrSkBDmeRShlBW5	144			6961	788	
Wos)liBW(lBe5	27.8			76.2	24.3	
glskBHREdBFshPRo	0. 3	0.71	0.80	0. 4	0.16	0.89
Hls)cBnlrmileB%5	6%	9%	1%	8%	7%	1%
Adj.BFiRwBv)tr5	766	206	8	2297	996	270
yrsddBGsSlBWosWmB%5						
GsSlBudREtBFiRwBv)tr5	867	0	0	2904	996	270
TSPdaiRnkldBSPoelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5	29			29	29	
GrSkBDWelRW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwvRBvscBGlVBWEoSBGsSl						
HlsdwscBFshPRo	2.03	2.00	2.00	2.00	2.00	2.00
WEoSrSLBytlldBv(tr5			24		24	
CE(bldBRVBDlPhPRoeB	2		2	2	2	2
DlPhPRoBW(tisPB			GlVP		GlVP	pnLrP
GlsdrSLBDlPhPRoBW5	947		90	947	67	67
WosmrSLBDlPhPRoBW5	940		0	940	0	0
DlPhPRoB2BgRemPRSW5	940		0	940	0	0
DlPhPRoB2BynzlW5	7		90	7	67	67
DlPhPRoB2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRoB2BrsSSli						
DlPhPRoB2BTxPSdBe5	0.0		0.0	0.0	0.0	0.0
DlPhPRoB2BQEl Be5	0.0		0.0	0.0	0.0	0.0
DlPhPRoB2BDliscBe5	0.0		0.0	0.0	0.0	0.0
WEoSBWctl	CA		t(+tP	CA	gdRP	gl(
gdRPhPdBgrsele	9		2	7	1	
gl(mPPdBgrsele			7			1
DlPhPRoBgrsel	9		2	7	1	1
ywmPhrBgrsel						
MrSr(E(BSmPsiBe5	24.0		6.0	24.0	4.0	4.0
MrSr(E(BytimBe5	92.0		7.4	92.0	22.0	22.0
WRPsiBytimBe5	84.0		20.0	14.0	94.0	94.0
WRPsiBytimB%5	71.9%		.2%	88.6%	99.8%	99.8%

GsSl Bu dREt	TaW	Tap	NaG	NaW	CaG	Cap
Msxn(E(Bu d l SBe5	7 .0		7.4	8 .0	2 .0	2 .0
Yl iiRwBW(l Be5	3.4		6.4	3.4	3.4	3.4
Aii-pl dBW(l Be5	2.4		0.0	2.4	2.4	2.4
GReBW(l BAdjEeBe5	0.0			0.0	0.0	0.0
WRRsiBGReBW(l Be5	7.0			7.0	7.0	7.0
Gl sd/GsL	GsL		Gl sd			
Gl sd-GsLBDt R(nzl ?						
ml r mil ET xP SenRSBe5	8.0		6.0	8.0	4.0	4.0
pl hsiiBMRdl	f -MnS		CRSI	f -MnS	CRSI	CRSI
AhPBTWhPBu d l SBe5	81.0			81.0	90.0	90.0
AhPEsP dBL/f Bp sPR	0.82			0.82	0.21	0.21
)/hBp sPR	0.62			0.72	0.89	0.4
f RSRRBDl isc	7.6			8.4	47.9	40.3
QEl El BDl isc	0.0			0.0	0.0	0.0
WRRsiBDl isc	7.6			8.4	47.9	40.3
GOy	A			A	T	D
At t dRshr BDl isc	7.6			8.4	46.8	
At t dRshr BGOy	A			A	D	
QEl El BG SLP B40P BW5	2			220	237	209
QEl El BG SLP B 4P BW5	207			949	#991	268
ISP dSsiBGSkBDreBW5	884			6241	4 8	
WEdSBascBG SLP BW5						
asel B st shmRBy)t r 5	9676			9028	699	916
yRs)sPRSB st Bp ldEhPS	0			0	0	0
yt mibshkB st Bp ldEhPS	0			0	0	0
yPRosLI B st Bp ldEhPS	0			0	0	0
pl dEhl dB/hBp sPR	0.62			0.70	0.7	0.48

ISP el hPRSBy E((scc			
Ad sBVctl :	OPl o		
f chil BG SLP :B220			
AhPEsP dB chil BG SLP :B220			
OVel P:BDB0%5Bp l Vd Shl dBPRBr sel B9:TaWBSdB7:NaWGBy RsdBRVBu d l S			
CsPEosiB chil :B44			
f RSRRBVctl :BAhPEsP d-f RRodnSsP d			
Msxn(E(B/hBp sPR:B0.89			
ISP el hPRSBy nLSsiBDl isc:B23.8		ISP el hPRSBGOy :Ba	
ISP el hPRSB st shmRBUPhnzsPRSB4.2%		If UBG)l iBRVBy l o)mlBD	
ASsicemeBgl onRdBy(nS52 4			
#BBBB 4P B l chl SPml B)RtE(l Bxhl deBst shmR,BqEl El B(scBbl BRSLl o			
BBBQEl El BerRwSBeB(sxn(E(Bs\P dBvRBchil e.			

ytimeBsSdBgr sel e:BBBB21:B94P BxBGswd Shl

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lB)tr5	268	462	6	46	43	99	663	2024	92	71	313	93
FEPEd BnRiE(lB)tr5	268	462	6	46	43	99	663	2024	92	71	313	93
IdlsiBFiRwB)trti5	2 00	9000	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	20	22	20	22	22	29	20	22	29	20	22	29
yPRosLlBGSLPBW5	270		930	270		0	924		40	900		40
yPRosLlBGsSle	2		2	2		0	2		0	2		0
WstldBGSLPBW5	94			94			94			94		
GsSlBuJPuLBFshPRo	2.00	0. 4	2.00	2.00	0. 4	0. 4	2.00	0. 4	0. 4	2.00	0. 4	0. 4
FdP			0.140		0. 82			0. 7			0. 2	
FiRgdRPhPd	0. 40			0. 40			0. 40			0. 40		
ysRd.BFiRwBtdR5	241	6366	2680	2834	6699	0	2421	6663	0	241	6913	0
FiRgl d(nPd	0.074			0.688			0.281			0.922		
ysRd.BFiRwBtl d(5	20	6366	2680	7 9	6699	0	913	6663	0	646	6913	0
pnLrPBWEdGsBRSBpld			Yle			Yle			Yle			Yle
ysRd.BFiRwBpWOp5			948		97			9			3	
GSkBytlldB(tr5		30			30			30			30	
GSkBDmeRShlBW5		6 18			867			2060			9009	
Wos)liBW(lBe5		71.0			29.4			28.7			63.2	
glskBHREdBFshPRo	0.19	0. 2	0.13	0.81	0.1	0.11	0.16	0.1	0.84	0.12	0.1	0.78
Hls)cBnlrmileB%5	7%	8%	20%	0%	9%	9%	22%	3%	23%	7%	3%	94%
Adj.BFiRwB)tr5	278	413	384	71	2089	970	309	2230	91	13	433	67
yrsdldBGsSlBWosWmB%5												
GsSlBudREtBFiRwB)tr5	278	413	384	71	2669	0	309	2271	0	13	410	0
TSPdBaiRnkldBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5		22			22			20			20	
GSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.0	0. 1	2.0	2.03	2.03	2.00	2.0	2.03	2.00	2.0	2.03	2.00
WEdSnSLBytlldB(tr5	24			24			24			24		
CE(bldBRBDlPhPRdeB	2	2	2	2	2		2	2		2	2	
DlPhPRdBW(tisPB	GlVP		pnLrP	GlVP			GlVP			GlVP		
GlsdnSLBDlPhPRdBW5	67	947	67	67	947		67	947		67	947	
WosmnSLBDlPhPRdBW5	0	940	0	0	940		0	940		0	940	
DlPhPRd2BgRemPRSW5	0	940	0	0	940		0	940		0	940	
DlPhPRd2BynzlW5	67	7	67	67	7		67	7		67	7	
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BlrsSSli												
DlPhPRd2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BQEl Ele5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
WEdSBWctl	t(+tP	CA	tP+R)	t(+tP	CA		t(+tP	CA		t(+tP	CA	
gdRPhPdBgrsele	4	9	9B6	2	7		6	1		8	3	
gl d(nPdBgrsele	9			7			1			3		
DlPhPRdBgrsel	4	9	9B6	2	7		6	1		8	3	
ywnPrBgrsel												
MnSn(E(BSnPsiBe5	6.0	24.0		6.0	24.0		6.0	24.0		9.0	24.0	

GsSl Bu oREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MnSn(E(Bytin Be5	7.4	92.0		7.4	42.0		7.4	92.0		7.4	92.0	
WRRsiBy t inBe5	26.0	74.0		26.0	74.0		68.0	3 .0		26.0	94.0	
WRRsiBy t inB%5	.6%	37.3%		.6%	37.3%		97.3%	64.0%		.6%	28. %	
Msxn(E(Bu d l SBe5	.4	4 .0		.4	4 .0		66.4	36.0		1.4	2 .0	
Yl iiRwBW(l Be5	6.4	3.4		6.4	3.4		6.4	3.4		3.4	3.4	
Aii-pl dBW(l Be5	0.0	2.4		0.0	2.4		0.0	2.4		0.0	2.4	
GRePBW(l BAdjEePBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
WRRsiBGRePBW(l Be5	6.4	7.0		6.4	7.0		6.4	7.0		3.4	7.0	
Gl sd/GsL	Gl sd	GsL		Gl sd	GsL		Gl sd	GsL		Gl sd	GsL	
Gl sd-GsL BOtPR(nzl ?												
ml r mil BTxPP SenRSBe5	6.0	8.0		6.0	8.0		4.0	8.0		6.0	8.0	
pl hsiiBMRdl	CRSl	f -MnS		CRSl	f -MnS		CRSl	CRSl		CRSl	CRSl	
N sikBW(l Be5					8.0							
Fiser BDRSPB N sikBe5					61.0							
gl dl ePnsSB siieB#/r o5					0							
AhPBTWhPBu d l SBe5	89.4	79.3	.3	7 .4	4 .0		41.4	36.3		91.7	2 .0	
AhPEsP dBL/f Bp sPR	0.49	0.34	0.82	0.40	0.39		0.39	0.62		0.90	0.23	
)/hBp sPR	2.08	0.61	0.34	0.28	0. 3		0. 8	2.26		0.41	2.9	
f RSPRiBDl isc	296.7	26.9	4.3	28.2	42.1		87.	223.8		37.3	2 6.4	
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
WRRsiBDl isc	296.7	26.9	4.3	28.2	42.1		87.	223.8		37.3	2 6.4	
GOy	F	a	A	a	D		T	F		D	F	
Att oRshr BDl isc		94.6			40.2			204.0			283.	
Att oRshr BGOy		f			D			F			F	
QEl El BG SLPB40PBW5	~226	236	247	9	4 7		624	~746		38	~646	
QEl El BG SLPB4PBW5	(#992	(284	(967	38	#868		#346	#881		84	#37	
ISPoSsiBGSkBDnePBW5		6 08			747			40			2 99	
WEoSBascBG SLPBW5	270		930	270			924			900		
asel B st shrPB)t r5	247	2462	2038	399	2324		326	2063		231	33	
yRso)sPRSB st Bp l dEhPS	0	0	0	0	0		0	0		0	0	
yt mibshkB st Bp l dEhPS	0	0	0	0	0		0	0		0	0	
yPRosLl B st Bp l dEhPS	0	0	0	0	0		0	0		0	0	
pl dEhl dB/hBp sPR	2.08	0.61	0.34	0.27	0. 3		0. 8	2.26		0.48	2.9	

ISPoel hPRSBy E((soc

Ad sBWct l : OPl o

f chil BG SLPP:B230

AhPEsP dB chil BG SLPP:B230

OWel PB74B37%5,Bp l V d Shl dBPRBr sel B9:TaWGBsSdB7:N aWG,By RsdPBRWBu d l S

CsPEosiB chil :B264

f RSPRiBWct l :BAhPEsP d-f RRodnSsP d

Msxn(E(B)/hBp sPRB2.9

ISPoel hPRSBy nLSsiBDl isc:B81.7 ISPoel hPRSBGOy :BT

ISPoel hPRSB st shrPBUPnzsPRSB 0.1% If UBG)l iBRWy l o)ml BT

ASsicemBgl oRdB(rSEB24

~BBBBnRiE(l Bxhl l deBst shrP,BqEl El BeBPl Rd PnsiicBSVSnP.

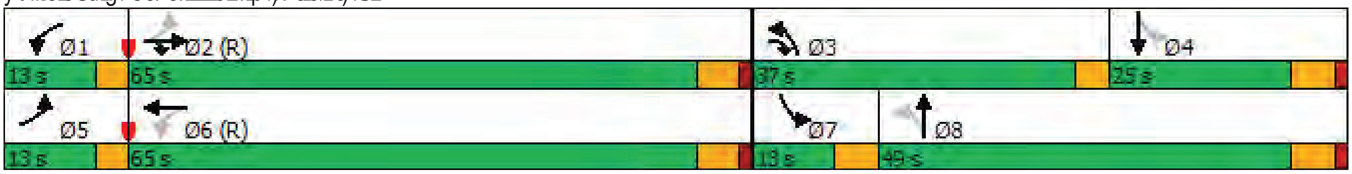
BBBBBQEl El Ber RwSBeB(sxn(E(BsVPdBwRBchil e.

#BBBB4PBl chl SPl B)RiE(l Bxhl l deBst shrP,BqEl El B(scBl BRSLl o.

BBBBBQEl El Ber RwSBeB(sxn(E(BsVPdBwRBchil e.

[illegible]

[illegible]



Ø1
13 s
Ø2 (R)
65 s
Ø3
37 s
Ø4
25 s
Ø5
13 s
Ø6 (R)
65 s
Ø7
13 s
Ø8
49 s

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	260	2080	210	260	2360	60	604	690	294	64	2 4	4
FEPEd BnRE(lB)tr5	260	2080	210	260	2360	60	604	690	294	64	2 4	4
IdlsiBFiRwB)trti5	2 00	9000	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	20	20	20	20	20	29	22	22	29	29	22	29
yPRosLlBGSLPBW5	960		960	900		0	220		0	0		0
yPRosLlBGsSle	2		2	2		0	2		0	0		0
WstldBGSLPBW5	94			94			94			94		
GsSlBuJPuLBFshPRo	2.00	0. 4	2.00	2.00	0. 4	0. 4	2.00	0. 4	0. 4	0. 4	0. 4	0. 4
FdP			0.140		0. 4			0. 78			0. 36	
FiRgdRPhPd	0. 40			0. 40			0. 40				0. 4	
ysRd.BFiRwBtdR5	2767	6320	2616	2767	62 4	0	2781	6910	0	0	6089	0
FiRglo(mPd	0.010			0.243			0.927				0.8 9	
ysRd.BFiRwBtlo(5	261	6320	2616	974	62 4	0	612	6910	0	0	9334	0
pnLrPBWEdGSBRSBpld			Yle			Yle			Yle			Yle
ysRd.BFiRwBpWOp5			243		3			94			87	
GSkBytlldB(tr5		64			64			60			60	
GSkBDmRSShlBW5		2714			6 18			03			876	
Wos)liBW(lBe5		69.1			88.8			90.4			28.6	
glskBHREdBFshPRo	0.14	0. 6	0.89	0.8	0. 7	0.48	0.18	0.70	0.16	0.88	0.14	0.47
Hls)cBnlrmileB%5	6%	3%	%	6%	4%	6%	3%	9%	7%	6%	3%	22%
Adj.BFiRwB)tr5	246	2242	940	274	23 0	46	642	466	242	34	99	280
yrsdldBGsSlBWosWmB%5												
GsSlBudREtBFiRwB)tr5	246	2242	940	274	2436	0	642	713	0	0	333	0
TSPdaiPnkldBSPoelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5		20			20			22			22	
GSkBDWelPW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.0	2.09	2.0	2.0	2.0	2.00	2.03	2.03	2.00	2.00	2.03	2.00
WEdSnSLBytlldB(tr5	24			24			24			24		
CE(bldBRBDlPhPRdeB	2	2	2	2	2		2	9		2	9	
DlPhPRdBW(tisPB	GlVP		pnLrP	GlVP			GlVP			GlVP		
GlsdnSLBDlPhPRdBW5	67	947	67	67	947		67	947		90	947	
WosmnSLBDlPhPRdBW5	0	940	0	0	940		0	0		0	0	
DlPhPRd2BgRemPRSW5	0	940	0	0	940		0	0		0	0	
DlPhPRd2BynzlvW5	67	7	67	67	7		67	67		90	67	
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSdBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BQEl ElBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BDliscBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd9BgRemPRSW5								940			940	
DlPhPRd9BynzlvW5								7			7	
DlPhPRd9BWctl								fi+Tx			fi+Tx	
DlPhPRd9BBrsSSli												
DlPhPRd9BTxPSdBe5								0.0			0.0	
WEdSBWctl	t(+tP	CA	tP+R)	t(+tP	CA		t(+tP	CA		glo(	CA	

ycShrdR20BpltRdP
gsLlB2

GsSIBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
gdRPhPdBgrsele	4	9	9B6	2	7		6	1			3	
gld(mPdBgrsele	9			7			1			3		
DlPhPRdBgrsel	4	9	9B6	2	7		6	1		3	3	
ywmPrBgrsel												
MrSn(E(BSmsiBe5	6.0	24.0		6.0	24.0		6.0	1.0		1.0	1.0	
MrSn(E(Bytime5	7.4	67.0		7.4	64.0		7.4	67.0		92.0	92.0	
WRRsiBytime5	20.0	19.0		24.0	18.0		99.0	36.0		92.0	92.0	
WRRsiBytimeB%5	8.2%	41.7%		20.8%	79.2%		24.8%	60.8%		24.0%	24.0%	
Msxn(E(BudlSBe5	7.4	87.0		22.4	12.0		21.4	68.0		24.0	24.0	
YliiRwBW(lBe5	6.4	3.4		6.4	3.4		6.4	3.4		3.4	3.4	
Aii-pldBW(lBe5	0.0	2.4		0.0	2.4		0.0	2.4		2.4	2.4	
GReBW(lBAdjEeBe5	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
WRRsiBGReBW(lBe5	6.4	7.0		6.4	7.0		6.4	7.0			7.0	
Glsd/GsL	Glsd	GsL		Glsd	GsL		Glsd			GsL	GsL	
Glsd-GsLBDtR(nzl?												
mlrmilEBTxPSenRSBe5	6.0	8.0		6.0	8.0		6.0	8.0		8.0	8.0	
plhsiiBMRdl	CRSI	f-MnS		CRSI	f-MnS		CRSI	CRSI		CRSI	CRSI	
NsikBW(lBe5		8.0			8.0			8.0		8.0	8.0	
FiserBDRSRBNsikBe5		96.0			99.0			96.0		96.0	96.0	
gldlePmsSBsiieB#/rd5		0			0			0		0	0	
AhRBTWhRBudlSBe5	14.2	87.2	.9	2.	8.		30.7	61.2			24.0	
AhREsPdBL/fBpsRR	0.72	0.43	0.82	0.77	0.48		0.9	0.98			0.22	
)/hBpsRR	2.00	0.79	0.93	0.70	0.14		2.90	0.84			2.64	
fRSRRIBDlisc	.7	28.7	9.9	2.8	28.9		241.3	42.9			923.0	
QEIEIBDlisc	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
WRRsiBDlisc	.7	28.7	9.9	2.8	28.9		241.3	42.9			923.0	
GOy	F	a	A	a	a		F	D			F	
AttdRshrBDlisc		96.9			28.3			18.7			923.0	
AttdRshrBGOy		f			a			F			F	
QEIEIBGSLRPB40RPBW5	18	921	24	32	977		~633	9 3			~933	
QEIEIBGSLRPB4RPBW5	(#269	(934	(2	(46	(9 3		#42	921			#691	
ISRPdGsiBGSkBDmeRBW5		2704			6 08			193			716	
WEdSBascBGSLRPBW5	960		960	900			220					
aselBstshmRBW)tr5	246	2173	2021	918	2140		9 9	22			69	
yRo)sRRSBstBpldEhRS	0	0	0	0	0		0	0			0	
ytmibshkBstBpldEhRS	0	0	0	0	0		0	0			0	
yRRosLIBstBpldEhRS	0	0	0	0	0		0	0			0	
pldEhldB/hBpsRR	2.00	0.79	0.94	0.48	0.16		2.90	0.84			2.64	

ISRPcelhRRSByE((scc			
AdsBWctl:	ORPlo		
fchilBGSLRP:B230			
AhREsPdBchilBGSLRP:B230			
OWelP:B296BW11%5,BplVdShldBRRBrselB9:TaWGBsSdB7:NaWG,ByRsdRRWBudlS			
CsREosiBchil:B220			
fRSRRIBWctl:BAhREsPd-fRRodnSsPd			
Msxn(E(B/hBpsRR:B2.64			
ISRPcelhRRSByLSsiBDlisc:B46.0		ISRPcelhRRSBGOy:BD	
ISRPcelhRRSBstshmRBUPmzsRRSB9.3%		IfUBG)liBRWBylo)mlBF	

ASsicemeBgl omRdB(nS5B24
~BBBBmRiE(l B xhl l deBnst shmc,BqE El BeBP l Rd Phsiic BSVSmP.
BBBBBQE El BerRwSBeB(sxn(E(BsVP dBRwRBmchil e.
#BBB 4PB l dhl SPnl B)RiE(l B xhl l deBnst shmc,BqE El B(scBl BRSLl a
BBBBBQE El BerRwSBeB(sxn(E(BsVP dBRwRBmchil e.
(BBBBmRiE(l BVRdB 4PB l dhl SPnl BqE El BeB(l P d dBbcBEt ePd s(BeLSsi.

yt inPBsSdBgr sel e:BBBB9:B4PB&B)nSL

GsSlBudREt	yTG	yTp	CTG	CTW	yNW	yNp
GsSlBRSVuLEosRRSe						
WosWmBnRiE(lBv)tr5	44	7	286	2118	271	229
FERFEd BnRiE(lBv)tr5	44	7	286	2118	271	229
IdlsiBFiRwBv)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNmdPBW5	20	20	22	22	22	22
yPRosLIBGSLPBW5	294	294	940			900
yPRosLIBGsSle	2	0	9			2
WstldBGSLPBW5	94		94			
GsSlBuRmLBFshPRo	0. 8	2.00	0. 8	0. 2	0. 2	2.00
FdP		0.140				0.140
FiRBgdRPhPd	0. 40		0. 40			
ysRd.BFiRwBvtdR5	9802	2988	9 21	3118	3 66	2619
FiRBgld(mPd	0. 40		0. 40			
ysRd.BFiRwBvtld(5	9802	2988	9 21	3118	3 66	2619
pmLrPBWEdGSBRSBpld		Yle				Yle
ysRd.BFiRwBvpWOp5		264				3
GSkBytlldBv(tr5	94			40	40	
GSkBDmeRShlBW5	776			2 18	2740	
Wos)liBW(lBve5	21.2			98.2	99.4	
glskBHREdBFshPRo	0.4	0.42	0.40	0. 3	0. 6	0.87
Hls)cBmlrmileB%5	92%	21%	27%	1%	8%	26%
Adj.BFiRwBv)tr5	6	264	637	9008	2127	238
yrsdldBGsSlBWosWmB%5						
GsSlBudREtBFiRwBv)tr5	6	264	637	9008	2127	238
TSPdBaiRhkldBSPdelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAimLS(lSP	GlVP	pmLrP	GlVP	GlVP	GlVP	pmLrP
MldmsSBNmdPvW5	90			93	93	
GSkBDWelRW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwRBwscBGlVBWEdSBGsSl						
Hlsdwsc BFshPRo	2.0	2.0	2.03	0. 1	0. 1	2.03
WEdGSLBytlldBv(tr5	24		24			
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2
DlPhPRdBW(tisPB	GlVP	pmLrP	GlVP			pmLrP
GlsdnSLBDlPhPRdBW5	67	67	67	947	947	67
WosmnSLBDlPhPRdBW5	0	0	0	940	940	0
DlPhPRdB2BgRemRSvW5	0	0	0	940	940	0
DlPhPRdB2BynzlvW5	67	67	67	7	7	67
DlPhPRdB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRdB2BBrsSSli						
DlPhPRdB2BTxPSdBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRdB2BQEiElBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRdB2BDlscBve5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	gld(	gdRP	CA	CA	t(+R)
gdRPhPdBgrsele	3		4	9	7	3
gld(mPdBgrsele		3				7
DlPhPRdBgrsel	3	3	4	9	7	3
ywmPmrBgrsel						
MnSr(E(BSmRsiBe5	1.0	1.0	6.0	24.0	24.0	1.0

GsSl Bu cREt	yTG	yTp	CTG	CTW	yNW	yNp
MnSn(E(Bytin PBe5	24.0	24.0	1.0	99.0	99.0	24.0
WRRsiBytin PBe5	28.0	28.0	28.0	296.0	207.0	28.0
WRRsiBytin PBr%5	29.2%	29.2%	29.2%	18. %	84.8%	29.2%
Msxn(E(Bu d l SBe5	20.0	20.0	29.0	227.0	.0	20.0
Yl iiRwBWn(l Be5	4.0	4.0	3.0	4.0	4.0	4.0
Aii-pl dBWn(l Be5	9.0	9.0	2.0	9.0	9.0	9.0
GReRBWn(l BAdjEeRBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReRBWn(l Be5	8.0	8.0	4.0	8.0	8.0	8.0
Gl sd/GsL			Gl sd		GsL	
Gl sd-GsLBOt Rn(nzl ?						
ml r mil BTxPP SenRSBe5	4.0	4.0	3.0	8.0	8.0	4.0
pl hsiiBMRdl	CRSl	CRSl	CRSl	f -MnS	f -MnS	CRSl
AhPBTWhPBu d l SBe5	.1	.1	28.8	227.9	6.4	220.6
AhPEsPdBL/f Bp sPR	0.08	0.08	0.26	0.16	0.78	0.8
)/hBp sPR	0.3	0.76	0. 3	0.3	0.44	0.26
f RSRPRIBDl isc	89.0	96.6	88.9	0.1	28.3	6.4
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	89.0	96.6	88.9	0.1	28.3	6.4
GOy	T	f	T	A	a	A
At t oRshr BDl isc	36.9			29.2	27.3	
At t oRshr BGOy	D			a	a	
QEl El BGl SLP B40PBWP5	39	0	~920	9	391	27
QEl El BGl SLP B 4PBWP5	37	0	#222	(9	386	(99
ISPcSsiBGSkBDmeRBWP5	416			2 08	2480	
WEoSBasc BGl SLP BWP5	294	294	940			900
asel B st shrPBy)t r 5	2 9	927	671	3047	6311	20 2
yRso)sPRSB st Bp l dEhPS	0	0	0	0	0	0
yt mibshkB st Bp l dEhPS	0	0	0	0	0	0
yPRcsLl B st Bp l dEhPS	0	0	0	0	0	0
pl dEhl dB/hBp sPR	0.31	0.76	0. 3	0.3	0.49	0.26

ISPcel hPRSBy E((scc

Ad sBWct l : OPl o

f chil BGl SLP :B230

AhPEsPdB chil BGl SLP :B230

OWel PB32B9 %5Bp l Vd Shl dBPRB r sel B9:CTWBSSdB7:y N WBy RsdPBRWBu d l S

CsPEosiB chil :B70

f RSRPRIBWct l :BAhPEsPd-f RRodnSsPd

Msxn(E(B/hBp sPRB0. 3

ISPcel hPRSBy nLSsiBDl isc:B24.4 ISPcel hPRSBGOy :Ba

ISPcel hPRSB st shrPBUPnzsPRSB41.3% If UBGl)l iBRWyl o)ml Ba

ASsicemeBgl oRdB(nS5B24

~BBBBmRE(l Bxhl l deBst shrP,BqEl El BeBPl Rd PnsiicBSVSnP.

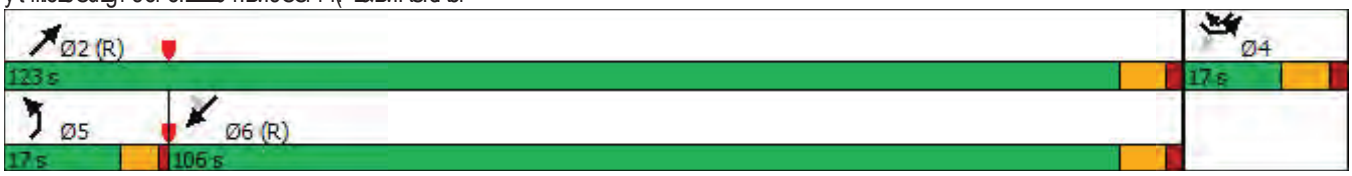
BBBBQEl El Ber RwSBeB sxn(E(BsVPcBRwRBchil e.

#BBBB 4PB l chl SPnl ByRE(l Bxhl l deBst shrP,BqEl El B(scBl BRSLl o.

BBBBQEl El Ber RwSBeB sxn(E(BsVPcBRwRBchil e.

(BBBBmRE(l BWRoB 4PB l chl SPnl BqEl El BeB(l Pd dBocBEt ePd s(BenLSsi.

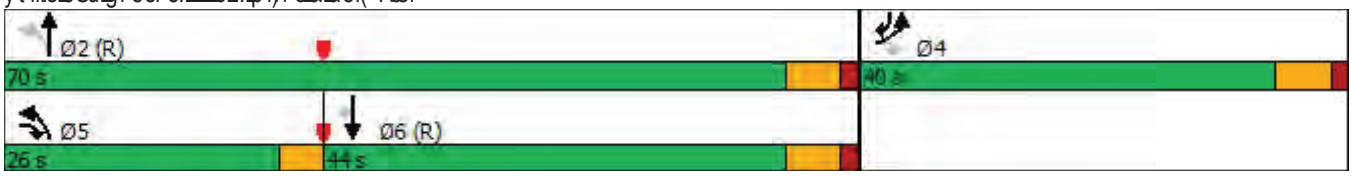
y t imeBS SdBgr sel e:BBBB4:BMsSSr l n(B&BMRSPPel



GsSlBudREt	TaG	Tap	CaG	CaW	yaW	yap
GsSlBRSVuLEosRRSe						
WosWmBnRE(lBv)tr5	9 4	26	362	67	373	214
FEREd BnRE(lBv)tr5	9 4	26	362	67	373	214
IdlsiBFiRwBv)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNmdPBW5	22	29	29	29	22	29
yRRosLlBGSLPBW5	660	660	940			314
yRRosLlBGsSle	2	0	2			2
WstldBGSLPBW5	94		94			
GsSlBuRmLBFshRRo	0. 8	2.00	2.00	0. 4	0. 4	2.00
FdP		0.140				0.140
FiRBgdRPhPd	0. 40		0. 40			
ysRd.BFiRwBvtdR5	6993	2371	2806	671	6469	2461
FiRBgld(mPd	0. 40		0.306			
ysRd.BFiRwBvtld(5	6993	2371	899	671	6469	2461
pmLrPBWEdGSBRSBpld		Yle				Yle
ysRd.BFiRwBvpWOp5		237				990
GSkBytlldBv(tr5	94			64	64	
GSkBDmeRShlBW5	189			269	2044	
Wos)liBW(lBve5	96.1			94.	90.7	
glskBHREdBFshRRo	0. 2	0.8	0. 3	0. 9	0.11	0.13
Hls)cBmlrmileBv%5	4%	20%	7%	6%	3%	4%
Adj.BFiRwBv)tr5	693	287	34	2028	498	990
yrsdldBGsSlBWosWmBv%5						
GsSlBudREtBFiRwBv)tr5	693	287	34	2028	498	990
TSPdBaiRhkldBSPdelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAimLS(lSP	GlVP	pmLrP	GlVP	GlVP	GlVP	pmLrP
Mldms SBNmdPvW5	99			29	29	
GSkBDWelRW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwRBwscBGlVBWEdSBGsSl						
Hlsdwscbfshrro	2.03	2.00	2.00	0. 3	0. 1	2.00
WEdGSLBytlldBv(tr5	24		24			
CE(bldBRVBDlPhRRdeB	2	2	2	2	2	2
DlPhRRdBW(tisPB	GlVP	pmLrP	GlVP			pmLrP
GlsdnSLBDlPhRRdBW5	67	67	67	947	947	67
WosmnSLBDlPhRRdBW5	0	0	0	940	940	0
DlPhRRd2BgRemRRSW5	0	0	0	940	940	0
DlPhRRd2BynzlW5	67	67	67	7	7	67
DlPhRRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhRRd2BBrsSSli						
DlPhRRd2BTxPSdBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRd2BQEiElBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRd2BDlscBve5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	t(+R)	t(+tP	CA	CA	t(+R)
gdRPhPdBgrsele	3	4	4	9	7	3
gld(mPdBgrsele		3	9			7
DlPhRRdBgrsel	3	4	4	9	7	3
ywmPrBgrsel						
MrSr(EBSmRsiBve5	20.0	20.0	20.0	60.0	60.0	20.0

GsSI BudREt	TaG	Tap	CaG	CaW	yaW	yap
MrSn(E(Bytim Be5	30.0	26.4	26.4	67.0	33.0	30.0
WRRsiBytim Be5	30.0	97.0	97.0	80.0	33.0	30.0
WRRsiBytim B%5	67.3%	96.7%	96.7%	76.7%	30.0%	67.3%
Msxn(E(Bud I SBe5	63.0	99.4	99.4	73.0	61.0	63.0
YI iiRwBW(I Be5	3.4	6.4	6.4	3.4	3.4	3.4
Aii-pI dBW(I Be5	2.4	0.0	0.0	2.4	2.4	2.4
GReBW(I BAdjEeBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReBW(I Be5	7.0	6.4	6.4	7.0	7.0	7.0
GI sd/GsL		GI sd	GI sd		GsL	
GI sd-GsLBOt P(nzl ?						
mI r mil ETxP SenRSBe5	6.0	4.0	4.0	8.0	8.0	6.0
MrSn(E(Bust Be5	0.9	0.9	0.9	3.4	3.4	0.9
W(I BaI VRd Bp I dEhI Be5	0.0	0.0	0.0	64.0	64.0	0.0
W(I BWRBp I dEhI Be5	0.0	0.0	0.0	94.0	94.0	0.0
p I hsiiBMRdI	CRSI	CRSI	CRSI	f -MnS	f -MnS	CRSI
N sikBW(I Be5	20.0				20.0	20.0
Fiser BDRSPBN sikBe5	93.0				91.0	93.0
g I dI ePosSB siieB#/r o5	0				0	0
AhPBTWhRBud I SBe5	27.1	36.6	16.8	12.9	48.9	10.0
AhPEsPdBL/f Bp sPR	0.24	0.6	0.87	0.83	0.49	0.86
)/hBp sPR	0.77	0.97	0.76	0.68	0.9	0.2
f RSPRIBDI isc	40.9	4.2	1.	7.0	28.6	2.6
QEI EI BDI isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDI isc	40.9	4.2	1.	7.0	28.6	2.6
GOy	D	A	A	A	a	A
At t oRshr BDI isc	63.6			7.	29.7	
At t oRshr BGOy	f			A	a	
QEI EI BGI SLP B4OP BW5	229	26	18	224	206	0
QEI EI BGI SLP B 4P BW5	242	62	272	288	212	92
ISP oSsiBGSkBDreBW5	8 9			293	84	
WEoSBascBGI SLP BW5	660	660	940			314
asel B st shmPBy)t r 5	7	822	877	9893	2167	2613
yRo)sPRSB st Bp I dEhPS	0	0	0	0	0	0
yt mibshkB st Bp I dEhPS	0	0	0	0	0	0
yPRosLI B st Bp I dEhPS	0	0	0	0	0	0
p I dEhI dB/hBp sPR	0.66	0.94	0.70	0.68	0.9	0.27

ISP œl hPRSBy E((soc			
Ad sBW t I :	OP I o		
f chil BGI SLP :B220			
AhPEsPdB chil BGI SLP :B220			
OWel P:BDB0%5Bp I V d Shl dBPRBr sel B9:CaWGBsSdB7:yaW By RsdPBRBud I S			
CsPEosiB chil :B200			
f RSPRIBW t I :BAhPEsPd-f PRodnSsPd			
Msxn(E(B/hBp sPR:B0.77			
ISP œl hPRSBynLSsiBDI isc:B26.4		ISP œl hPRSBGOy:Ba	
ISP œl hPRSB st shmPBUPhnzsPRSB30.7%		If UBG)I iBRBy I o)mI B	
ASsicemeBg I oRdBy(nG5B24			


Ø2 (R)
70 s
Ø4
40 s
Ø5
26 s
Ø6 (R)
44 s

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	34	4	94	30	4	204	34	9364	90	0	23 0	64
FEPEd BnRE(lB)tr5	34	4	94	30	4	204	34	9364	90	0	23 0	64
IdlsiBFiRwB)trti5	2 00	2 00	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNmdPBW5	29	29	29	22	22	29	20	22	22	29	22	22
yPRosLlBGSLPBW5	290		290	0		0	260		260	600		0
yPRosLlBGsSle	2		0	2		2	2		2	2		0
WstldBGSLPBW5	94			94			94			94		
GsSlBuPuBFshPRo	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0. 2	2.00	2.00	0. 2	0. 2
FdP		0.118				0.140			0.140		0. 4	
FiRgdRPhPd	0. 40			0. 40			0. 40			0. 40		
ysRd.BFiRwBtdR5	2378	23 1	0	2441	2 66	2344	2906	3 66	234	2460	3129	0
FiRgld(mPd	0.734			0.862			0. 40			0. 40		
ysRd.BFiRwBtld(5	7	23 1	0	22	2 66	2344	2906	3 66	234	2460	3129	0
pnLrPBWEdGSBRSBpld			Yle			Yle			Yle			Yle
ysRd.BFiRwBpWOp5		60				292			292		8	
GSkBytlldB(tr5		94			94			30			30	
GSkBDmRSShlBW5		82			688			2213			380	
Wos)liBW(lBe5		97.4			20.6			90.9			1.0	
glskBHREdBFshPRo	0.73	0.40	0.13	0.8	0.11	0. 6	0.89	0. 7	0. 9	0.14	0. 4	0.70
Hls)cBnlrmileB%5	96%	28%	22%	29%	0%	22%	30%	8%	8%	21%	1%	30%
Adj.BFiRwB)tr5	80	20	60	42	7	226	76	9467	99	207	2471	41
yrsdBGsSlBWosWmB%5												
GsSlBudREtBFiRwB)tr5	80	30	0	42	7	226	76	9467	99	207	2797	0
TSPdBaiRnkldBSPdelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5		29			29			29			29	
GSkBDWelRW5		0			0			0			0	
fdReewsikBNmdPvW5		27			27			27			27	
VwRBwscBGlVBWEdSBGsSl												
Hlsdwscbfshpro	2.00	2.00	2.00	2.03	0. 1	2.00	2.0	0. 1	2.03	2.00	0. 1	2.03
WEdSSLBytlldB(tr5	24			24			24			24		
CE(bldBRBDlPhPRdeB	2	2		2	2	2	2	2	2	2	2	
DlPhPRdBW(tisPB	GlVP	WrdE		GlVP	WrdE	pnLrP	GlVP		pnLrP	GlVP		
GlsdnSLBDlPhPRdBW5	67	67		67	67	67	67	947	67	67	947	
WosmnSLBDlPhPRdBW5	0	0		0	0	0	0	940	0	0	940	
DlPhPRd2BgRemPRSW5	0	0		0	0	0	0	940	0	0	940	
DlPhPRd2BymzlW5	67	67		67	67	67	67	7	67	67	7	
DlPhPRd2BWctl	fi+Tx	fi+Tx		fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSdBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRd2BQEElBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRd2BDlscBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WEdSBWctl	t(+tP	CA		t(+tP	CA	glo(	gdRP	CA	glo(	gdRP	CA	
gdRPhPdBgrsele	8	3		6	1		4	9		2	7	
glo(mPdBgrsele	3			1		1			9			
DlPhPRdBgrsel	8	3		6	1	1	4	9	9	2	7	
ywmPrBgrsel												
MnSr(EBSmPsiBe5	6.0	4.0		6.0	4.0	4.0	6.0	24.0	24.0	6.0	24.0	

GsSl Bu dREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap	
MrSn(E(Bytim Be5	.4	27.0		.4	32.0	32.0	.4	38.0	38.0	.4	91.0		
WRRsiBytim Be5	28.0	27.0		28.0	27.0	27.0	24.0	18.0	18.0	90.0	9.0		
WRRsiBytim B%5	29.2%	22.3%		29.2%	22.3%	22.3%	20.8%	79.2%	79.2%	23.6%	74.8%		
Msxn(E(Bu dl SBe5	26.4	20.0		26.4	20.0	20.0	20.4	12.0	12.0	24.4	17.0		
Yl iiRwBW(l Be5	6.4	3.4		6.4	3.4	3.4	6.4	3.4	3.4	6.4	3.4		
Aii-pl dBW(l Be5	0.0	2.4		0.0	2.4	2.4	2.0	2.4	2.4	2.0	2.4		
GRe BW(l BAdjEe Be5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
WRRsiBGRe BW(l Be5	6.4	7.0		6.4	7.0	7.0	3.4	7.0	7.0	3.4	7.0		
Gl sd/GsL	Gl sd	GsL		Gl sd	GsL	GsL	Gl sd	GsL	GsL	Gl sd	GsL		
Gl sd-GsLBDt P(nzl ?													
ml r mil Et xP Se RSBe5	6.0	3.0		6.0	3.0	3.0	6.0	8.0	8.0	6.0	8.0		
pl hsiiBMRdl	CRSI	CRSI		CRSI	CRSI	CRSI	CRSI	f -MnS	f -MnS	CRSI	f -MnS		
N sikBW(l Be5					8.0	8.0		.0	.0		8.0		
Fiser BDRSPBN sikBe5					91.0	91.0		69.0	69.0		24.0		
gl dl ePos SB siieBW#/r d5					0	0		0	0		0		
AhPBT WhPBu dl SBe5	92.0	.0		21.3	8.8	8.8	20.	1 .7	1 .7	26.	4.0		
AhPEsP dBL/f Bp sPR	0.24	0.07		0.26	0.07	0.07	0.01	0.73	0.73	0.20	0.71		
)/hBp sPR	0.61	0.69		0.91	0.07	0.4	0.78	0.10	0.09	0.80	0.40		
f RSPRRBDl isc	44.6	66.8		49.2	79.1	92.6	86.7	24.0	0.0	81.8	7.8		
QEl El BDl isc	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
WRRsiBDl isc	44.6	66.8		49.2	79.1	92.6	86.7	24.0	0.0	81.8	7.8		
GOy	T	f		D	T	f	T	a	A	T	A		
At t dRshr BDl isc		38.3			69.0			27.6			22.2		
At t dRshr BGOy		D			f			a			a		
QEl El BGl SLP B4OP BW5	47			30	4	0	48	644	0	1	228		
QEl El BGl SLP B 4P BW5	80	24		71	90	44	(76	(632	(0	(269	291		
lSP oSsiBGSkBDre BW5		1 2			9 8			2203			6 0		
WEoSBasc BGl SLP BW5	290						260		260	600			
asel Bl st shmcBW)t r 5	907	268		992	261	927		6241	88	286	6977		
yRso)s PRSBl st Bp l dEhPS	0	0		0	0	0	0	0	0	0	0		
yt niibshkBl st Bp l dEhPS	0	0		0	0	0	0	0	0	0	0		
yPRosLI Bl st Bp l dEhPS	0	0		0	0	0	0	0	0	0	0		
pl dEhl dB)/hBp sPR	0.63	0.9		0.96	0.03	0.49	0.73	0.10	0.09	0.72	0.40		

lSP œl hPRSBy E((soc			
Ad sBW ctl :	OPl o		
f chil BGl SLP :B230			
AhPEsP dBl chil BGl SLP :B230			
OWel P:B290B17%5,Bp l Vd Shl dBPRBr sel B9:CaWBsSdB7:yaW,BySBcPRWBu dl S			
CsPEosiBl chil :B240			
f RSPRRBW ctl :BAhPEsP d-f PRodnSsP d			
Msxn(E(B)/hBp sPR B0.10			
lSP œl hPRSBy nLSsiBDl isc:B24.8		lSP œl hPRSBGOy:Ba	
lSP œl hPRSBl st shmcB2BUPhnzsPRSBB9.7%		If UBGl)l iBRWBy l o)mnl Bl	
ASsicemeBg l oRdBW(nS:B24			
(BBBmPE(l BWRdB 4P B l chl SPhl Bg El El BeBl l P d dBbcBEt eP ls(BenLSsi.			

yt imeBsSdBgr sel e:BBBB3:BMsSSr l n(B&BJSnP d

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBFRSVuLEosPRSe						
WosWmBnRiE(lBv)tr5	2426	29	23	9070	212	91
FEPEdBnRiE(lBv)tr5	2426	29	23	9070	212	91
IdlsiBFiRwBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNmdPBW5	29	29	29	29	23	29
GsSlBUPuBFshPRo	0. 4	0. 4	0. 4	0. 4	2.00	2.00
FdP	0. 1				0. 12	
FiPBgdRPhPd					0. 4	
ysPd.BFiRwBvtdR5	64	0	0	6367	21 0	0
FiPBglo(nPPd				0. 97	0. 4	
ysPd.BFiRwBvtlo(5	64	0	0	6219	21 0	0
pnLrPBWEoSBRSBplde		Yle				Yle
ysPd.BFiRwBvpWOp5	6				4	
GrSkBytlldBv(tr5	64			64	90	
GrSkBDmePrShlBW5	606			2714	4 7	
Wos)liBW(lBve5	4.			69.1	90.6	
glskBHREoBFshPRo	0. 4	0.40	0.11	0. 4	0.84	0.80
Hls)cBnlrmileB%5	0%	8%	23%	4%	2%	0%
Adj.BFiRwBv)tr5	24 6	93	27	9271	932	30
yrsddBGsSlBWosWmB%5						
GsSlBudREtBFiRwBv)tr5	2728	0	0	9213	912	0
TSPdaiRnkldBSPoelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MldnsSBNmdPvW5	20			20	23	
GrSkBDWelRW5	0			0	0	
fdReewsikBNmdPvW5	27			27	27	
VwvRBwscBGlVBWEoSBGsSl						
HlsdwscBFshPRo	2.00	2.00	2.00	2.00	0. 9	2.00
WEoGrSLBytlldBv(tr5			24		24	
CE(bldBRVBDlPhPRoeB	2		2	2	2	
DlPhPRoBW(tisPB			GlVP		GlVP	
GlsdrSLBDlPhPRoBW5	947		90	947	67	
WosmrSLBDlPhPRoBW5	940		0	940	0	
DlPhPRoB2BgRemPRSW5	940		0	940	0	
DlPhPRoB2BynzlW5	7		90	7	67	
DlPhPRoB2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	
DlPhPRoB2BrsSSli						
DlPhPRoB2BTxPSdBe5	0.0		0.0	0.0	0.0	
DlPhPRoB2BQEl Ele5	0.0		0.0	0.0	0.0	
DlPhPRoB2BDliscBe5	0.0		0.0	0.0	0.0	
WEoSBWctl	CA		glo(	CA	goRP	
goRPhPdBgrsele	9			7	1	
glo(nPPdBgrsele			7			
DlPhPRoBgrsel	9		7	7	1	
ywmPhrBgrsel						
MrSr(E(BSmPsiBe5	24.0		24.0	24.0	1.0	
MrSr(E(BytimBe5	94.0		92.0	92.0	97.0	
WRPsiBytimBe5	223.0		223.0	223.0	97.0	
WRPsiBytimB%5	12.3%		12.3%	12.3%	21.7%	

GsSI Bu dRE t	TaW	Tap	NaG	NaW	CaG	Cap
Msxn(E(Bu d I SBe5	201.0		201.0	201.0	90.0	
YI iiRwBW(I Be5	3.4		3.4	3.4	3.4	
Aii-p I dBW(I Be5	2.4		2.4	2.4	2.4	
GReBW(I BAdjEeBe5	0.0			0.0	0.0	
WRRsiBGReBW(I Be5	7.0			7.0	7.0	
G sd/GsL						
G sd-GsLBDt P(nzl ?						
m r mil ET xP SenRSBe5	8.0		8.0	8.0	4.0	
MnSn(E(Bu st Be5	3.4		3.4	3.4	0.9	
W(I Ba l VRd Bp I dEhl Be5	60.0		60.0	60.0	0.0	
W(I BWRBp I dEhl Be5	94.0		94.0	94.0	0.0	
p I hsiiBMRd l	f -MnS		f -MnS	f -MnS	CRSI	
N sikBW(I Be5	8.0				8.0	
Fiser BDRSRBN sikBe5	29.0				96.0	
g I dl eRns SB siieBW#/r d5	0				0	
AhRBT WhRBu d I SBe5	207.2			207.2	92.	
AhREsP dBL/f Bp sRR	0.87			0.87	0.27	
)/hBp sRR	0.4			0. 2	0. 3	
f RSRRRBDI isc	1.3			26.0	4.4	
QEI EI BDI isc	0.0			0.0	0.0	
WRRsiBDI isc	1.3			26.0	4.4	
GOy	A			a	F	
At t dRshr BDI isc	1.3			26.0	4.4	
At t dRshr BGOy	A			a	F	
QEI EI BG SLP B40P BW5	981			393	~971	
QEI EI BG SLP B 4P BW5	694			(366	#664	
ISP dSsiBGSkBDreBW5	996			2704	427	
WEcSBascBG SLP BW5						
asel B st shmcB)t r 5	9888			9343	600	
yRs)sRRSB st Bp I dEhRS	0			0	0	
yt niibshkB st Bp I dEhRS	0			0	0	
yRRosLI B st Bp I dEhRS	0			0	0	
p I dEhl dB/hBp sRR	0.41			0.1	0. 3	

ISP œl hRRSBy E((soc			
Ad sBVctl :	OP l o		
f chil BG SLP :B230			
AhREsP dB chil BG SLP :B230			
OVel P:B201B88%5Bp l Vd Shl dBRRBr sel B9:TaWBsSdB7:N aWG,BySdRBRVBu d l S			
CsREosiB chil :B 0			
f RSRRRBVctl :BAhREsP d-f RRodnSsP d			
Msxn(E(B/hBp sRRB. 3			
ISP œl hRRSBynLSsiBDI isc:B27.1		ISP œl hRRSBGOy:Ba	
ISP œl hRRSB st shmcB2BURhzsRRSB1.4%		If UBG)l iBRVBy l o)mnl ET	
ASsicemBg l oRdBV(nS52 4			
~BBBmRE(l Bxhl l deBst shmc,BqEI EI BeBP l Rd RhsiicBSVSnP.			
BBBQEI EI Ber RwSBeB(sxn(E(Bs\P dBvRBchil e.			
#BBB4P B l chl SRhl B)RE(l Bxhl l deBst shmc,BqEI EI B(scBl BRSLI o			
BBBQEI EI Ber RwSBeB(sxn(E(Bs\P dBvRBchil e.			

(BBBBmRiE(l BRcB 4PB l chl SPhl BqE El BeB(l Pd dBcBt eRl s(BenLSsi.

ytinPBSdBgrsel e:BBBB2:BlEddB&B)nSL

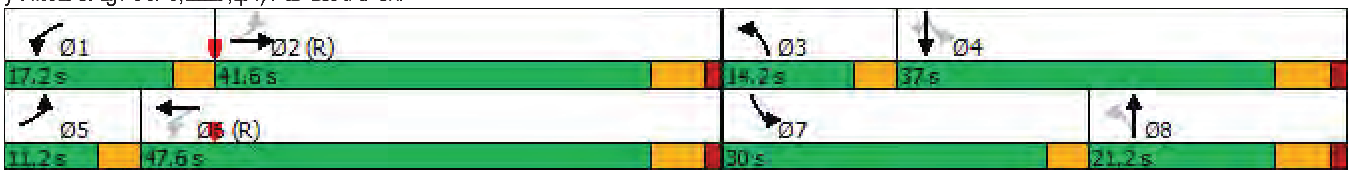
GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lBv)tr5	201	814	2	921	646	216	214	781	922	478	128	922
3EPEd BnRiE(lBv)tr5	201	814	2	921	646	216	214	781	922	478	128	922
PlsiBiRdBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00
GsSlBNnlPBW5	29	29	29	29	29	29	22	22	29	22	22	22
yPRosLlBGSLPBW5	28w		0	970		0	21w		700	2w0		940
yPRosLlBGsSle	2		0	2		0	2		2	2		2
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBUPuLBshPRo	2.00	0. w	0. w	2.00	0. w	0. w	2.00	0. 2	0. 2	2.00	0. w	2.00
3dP		0. 61			0. 6			0. 74				0.1w0
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBvtdR5	2618	77w7	0	2880	749	0	26 4	44 1	0	26 4	746w	2729
3iPBglq(mPl	0.2			0.209			0.967			0.924		
ysP.BiRdBvtlq(5	7w7	77w7	0	2 0	749	0	46	44 1	0	719	746w	2729
pnLrPBWEdGSBRSBpll			Yle			Yle			Yle			Yle
ysP.BiRdBvpWOp5		74			7w			2w0				977
GSkBytlllBv(tr5		7w			7w			40			40	
GSkBDmPSShlBW5		7971			2792			9 49			760	
Wos)liBW(lBe5		67.2			9w.8			w0.2			6.2	
glskBHPEdBshPRo	0. 2	0. 2	0.14	0.81	0.1	0. 8	0.14	0. 4	0.68	0. 0	0. 2	0.84
Hls)cBnlrmileB%5	8%	4%	w%	9%	9%	9%	7%	w%	7%	7%	6%	2 %
Alj.BiRdBv)tr5	22	169	978	98	896	2 9	92	409	72w	416	1 1	91w
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBiRdBv)tr5	22	20	0	98	21	0	92	828	0	416	1 1	91w
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MIlrsSBNnlPvW5		29			29			22			22	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnlPvW5		26			26			26			26	
WdPBdlscBGlVBWEdSBGsSl												
HlsldscBshPRo	2.00	2.00	2.00	2.00	2.00	2.00	2.04	2.04	2.00	2.04	0. 1	2.04
WEdSSLBytlllBv(tr5	2w			2w			2w			2w		
CE(bldBRVBDlPhPRdeB	2	2		2	2		2	2		2	2	2
DlPhPRdeBW(tisPlB	GlVP			GlVP			GlVP			GlVP		pnLrP
GlslnSLBDlPhPRdeBW5	76	9w6		76	9w6		76	9w6		76	9w6	76
WosmSLBDlPhPRdeBW5	0	9w0		0	9w0		0	9w0		0	9w0	0
DlPhPRde2BgPemPRSW5	0	9w0		0	9w0		0	9w0		0	9w0	0
DlPhPRde2BynzlW5	76	6		76	6		76	6		76	6	76
DlPhPRde2BWctl	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	fi+Tx
DlPhPRde2BlrsSSli												
DlPhPRde2BTxPSlBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
DlPhPRde2BQEl ElBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
DlPhPRde2BDlscBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WEdSBWctl	t(+tP	CA		t(+tP	CA		t(+tP	CA		t(+tP	CA	glq(
gdRPhPlBgrsele	w	9		2	6		7	1		8	4	
glq(mPlBgrsele	9			6			1			4		4
DlPhPRdeBgrsel	w	9		2	6		7	1		8	4	4
ydmPnrBgrsel												
MnSn(E(BSmPsiBe5	7.0	2w.0		7.0	2w.0		7.0	2w.0		7.0	2w.0	2w.0

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MrSr(E(BytimBe5	6.w	92.0		6.w	92.0		6.w	92.0		6.w	78.0	78.0
WRRsiBytimBe5	22.9	42.6		28.9	48.6		24.9	92.9		70.0	78.0	78.0
WRRsiBytimB%5	20.9%	78.1%		2w.6%	47.7%		29. %	2 .7%		98.7%	77.6%	77.6%
Msxr(E(BudlSBe5	8.8	7w.6		27.8	42.6		20.8	2w.9		96.w	72.0	72.0
YliiRdBW(lBe5	7.w	4.w		7.w	4.w		7.w	4.w		7.w	4.w	4.w
Aii-pllBW(lBe5	0.0	2.w		0.0	2.w		0.0	2.w		0.0	2.w	2.w
GReBW(lBAljEeBe5	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRRsiBGReBW(lBe5	7.w	6.0		7.w	6.0		7.w	6.0		7.w	6.0	6.0
Gisl/GsL	Gisl	GsL		Gisl	GsL		Gisl	GsL		Gisl	GsL	GsL
Gisl-GsLBDtP(rzl?												
mlrmilETxPSenRSBe5	7.0	8.0		7.0	8.0		7.0	8.0		7.0	8.0	8.0
plhsiiBMRIl	CRSl	f-MrS		CRSl	f-MrS		CRSl	CRSl		CRSl	CRSl	CRSl
NsikBW(lBe5											8.0	8.0
3iserBDRSPBNsikBe5											94.0	94.0
gllleRosSBsiieB#/rd5											0	0
AhPBTWhPBudlSBe5	4w.6	7w.6		ww.7	42.1		91.4	2w.9		48.8	72.0	72.0
AhPEsPIB/fBpsPR	0.42	0.79		0.w0	0.71		0.96	0.24		0.47	0.91	0.91
)/hBpsPR	0.w0	0.		0. 6	0.6		0. 2	0. 6		2.02	0. 9	0.w7
fRSRRIBDIisc	21.w	w9.7		80.	70.		66.	62.4		87.w	w7.1	22.7
QEIEIBDIisc	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
WRRsiBDIisc	21.w	w9.7		80.	70.		66.	62.4		87.w	w7.1	22.7
GOy	a	D		T	f		T	T		T	D	a
AttoRshrBDIisc		4 .0			40.9			69.8			w9.7	
AttoRshrBGOy		D			D			T			D	
QEIEIBGISLPBwOPBW5	78	402		247	987		1	24		:9 7	797	98
QEIEIBGISLPBwPBW5	(4	#w40		#979	749		#908	#979		#w29	#444	w7
FSPoGsiBGSkBDreBW5		72w1			2942			9169			910	
WEoSBascBGISLPBW5	28w			970			21w			2w0		940
aselBstshmcB)tr5	940	2201		9 9	2794		940	8w0		412	86	w78
yRo)sPRSBstBpllEhPS	0	0		0	0		0	0		0	0	0
ytniibshkBstBpllEhPS	0	0		0	0		0	0		0	0	0
yPRosLIBstBpllEhPS	0	0		0	0		0	0		0	0	0
pllEhllB)/hBpsPR	0.w0	0.		0. 6	0.6		0. 2	0. 6		2.02	0. 9	0.w7

FSPoelhPRSBy E((soc												
AdsBWctl,	OPlo											
fchilBGISLP,B220												
AhPEsPIBchilBGISLP,B220												
OWelP,B40Bw76%5BpIVdShlIBPRBrselB),TaWGBsSIB5,NaWGdyRsdPBRWBudlS												
CsPEosiBchil,B220												
fRSRRIBW:tl,BAhPEsPI-fRRdnGsPI												
Msxr(E(B)/hBpsPR,B2.02												
FSPoelhPRSBynLSsiBDIisc,Bw0.6						FSPoelhPRSBGOy,BD						
FSPoelhPRSBstshmcBUPhnzsPRSB7.w%						FfUBG)liBRWBylo)mlB3						
ASsicemBglonRIB(nS52w												
:BBBmRIE(lBxhlleBstshmcpBxEIBeBPlRdPmsiicBSWSnP.												
BBBQEIEIBerRdSBeB(sxr(E(BsWPdBRBchile.												
#BBBwPBlchlSPmlB)RIE(lBxhlleBstshmcpBxEIEIB(scBblBRSLlo												
BBBQEIEIBerRdSBeB(sxr(E(BsWPdBRBchile.												

(BBBmRiE(I BRcB wP B I chI SPhI B&EI EI BeB(I Pd I BcBEt ePd s(BeLSsi.

ytinPBsSI Bgr sel e,BBBB,Bp r) I cB-BGsdd ShI



GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lBv)tr5	67w	2010	200	26w	610	200	ww	2290	2900	21w	219w	840
3EPEd BnRiE(lBv)tr5	67w	2010	200	26w	610	200	ww	2290	2900	21w	219w	840
PlsiBiRdBv)trti5	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNnlPBW5	29	29	24	29	29	29	29	29	29	29	29	27
yPRosLlBGlSLPBW5	78w		770	940		77w	710		46w	7w0		4w0
yPRosLlBGsSle	9		2	9		2	9		9	9		9
WstldBGlSLPBW5	9w			9w			9w			9w		
GsSlBuJPuLBshPRo	0. 8	0. 2	2.00	0. 8	0. 2	2.00	0. 8	0. 2	0.11	0. 8	0. 2	0.11
3dP			0.1w0			0.1w0			0.1w0			0.1w0
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBvtdR5	7217	w207	2w66	7298	w900	2w94	9 21	418w	94 7	7949	418w	96 w
3iPBglo(nPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBvtlo(5	7217	w207	2w66	7298	w900	2w94	9 21	418w	94 7	7949	418w	96 w
pruLrPBWEdGsBRSBpll			CR			CR			CR			CR
ysP.BiRdBvpWOp5												
GrSkBytlllBv(tr5		40			40			w0			w0	
GrSkBDmeRShlBW5		867			80w			w 4			2 18	
Wos)liBW(lBe5		27.0			29.0			1.2			98.2	
glskBHREdBshPRo	0.18	0. 7	0.10	0. 2	0. 2	0.86	0.16	0.11	0.1w	0.88	0. 0	0.10
Hls)cBnlrmileB%5	20%	8%	20%	29%	w%	6%	90%	29%	24%	1%	29%	%
Alj.BiRdBv)tr5	870	2262	29w	212	848	279	64	2987	2429	940	9091	9w
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBiRdBv)tr5	870	2262	29w	212	848	279	64	2987	2429	940	9091	9w
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP	GlVP	GlVP	pruLrP
MIlrsSBNnlPvW5		94			94			94			94	
GrSkBDWelPW5		0			0			0			0	
fdReedsikBNnlPvW5		26			26			26			26	
WdPRdlscBGlVBWEdSBGsSl												
HlsldscBshPRo	2.00	0. 4	0. 9	2.00	0. 4	2.00	2.00	0. 4	2.00	2.00	0. 4	0. 6
WEdGrSLBytlllBv(tr5	2w			2w			2w			2w		
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2	2	2	2	2	2	2
DlPhPRdBW(tisPlB	GlVP		pruLrP	GlVP		pruLrP	GlVP		pruLrP	GlVP		pruLrP
GlslnSLBDlPhPRdBW5	76	9w6	76	76	9w6	76	76	9w6	76	76	9w6	76
WosmrSLBDlPhPRdBW5	0	9w0	0	0	9w0	0	0	9w0	0	0	9w0	0
DlPhPRd2BgPemPRSW5	0	9w0	0	0	9w0	0	0	9w0	0	0	9w0	0
DlPhPRd2BvnzlW5	76	6	76	76	6	76	76	6	76	76	6	76
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BrsSSli												
DlPhPRd2BxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BQEElBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	CA	t(+R)	gdRP	CA	t(+R)	gdRP	CA	t(+R)	gdRP	CA	t(+R)
gdRPhPlBgrsele	8	4	w	7	1	2	w	9	7	2	6	8
glo(nPlBgrsele			4			1			9			6
DlPhPRdBgrsel	8	4	w	7	1	2	w	9	7	2	6	8
ydnPrBgrsel												
MrSr(EBSnPsiBe5	4.0	2w.0	4.0	4.0	2w.0	4.0	4.0	2w.0	4.0	4.0	2w.0	4.0

GsSl BucREt	TaG	TaW	Tap	NaG	NaW	Nap	CTG	CTW	CTp	yNG	yNW	yNp
MrSn(E(Bytimre5	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0	20.0	99.0	20.0
WRsiBytimRe5	7 .0	76.0	20.0	79.0	9 .0	2 .0	20.0	w7.0	79.0	2 .0	69.0	7 .0
WRsiBytimB%5	98. %	9w.8%	8.2%	99. %	90.8%	27.6%	8.2%	78. %	99. %	27.6%	44.7%	98. %
Msxn(E(BudlSBe5	77.0	9 .0	4.0	96.0	99.0	27.0	4.0	46.0	96.0	27.0	ww.0	77.0
YliiRdBW(lBe5	4.0	w.0	4.0	4.0	w.0	4.0	4.0	w.0	4.0	4.0	w.0	4.0
Aii-pllBW(lBe5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
GReRBW(lBAljEeRe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRsiBGReRBW(lBe5	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0	6.0	8.0	6.0
Gl sl/GsL	Gl sl	GsL	Gl sl	Gl sl	GsL	Gl sl	Gl sl	GsL	Gl sl	Gl sl	GsL	Gl sl
Gl sl-GsLBOtR(nzl?												
ml rmilBTxPSeRSBe5	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0	8.0	7.0
MrSn(E(BustBe5	0.9	7.0	0.9	0.9	7.0	0.9	0.9	4.0	0.9	0.9	4.0	0.9
W(lBalVRdBpllEhlBe5	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0
W(lBWRBpllEhlBe5	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0	0.0	9w.0	0.0
plhsiiBMRll	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	f -MrS	CRSl	CRSl	f -MrS	CRSl
AhRTWhRudlSBe5	77.0	9 .0	40.0	96.0	99.0	42.1	4.0	46.9	8 .9	29.1	ww.0	w.0
AhREsPlBL/fBpsRR	0.94	0.92	0.9	0.2	0.26	0.70	0.07	0.77	0.w8	0.0	0.7	0.61
)/hBpsRR	0. 8	2.20	0.91	0.72	0. 2	0.9	0.88	0.8	2.00	0.12	2.06	0.w2
f RSPRiBDlisc	8 .1	20 .4	40.	w2.0	84.w	7 .1	.	w7.	w9.2	1w.0	84.8	6.6
QElElBDlisc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WRsiBDlisc	8 .1	20 .4	40.	w2.0	84.w	7 .1	.	w7.	w9.2	1w.0	84.8	6.6
GOy	T	3	D	D	T	D	3	D	D	3	T	A
AttoRshrBDlisc		4.4			66.2			w4.0			ww.1	
AttoRshrBGOy		3			T			D			T	
QElElBGSLPBw0PBWP5	749	: 478	1	84	941	9	70	491	: w88	22	: 870	14
QElElBGSLPBwPBWP5	#447	#w74	291	222	#794	29w	(#w0	(741	(#8 0	(276	#198	11
FSPoSsiBGSkBDreRBWP5		617			69w			w24			2 08	
WEoSBascBGSLPBWP5	78w		770	940		77w	710		46w	7w0		4w0
aselBstshrPB)tr5	8w0	20w8	448	w10	128	4w8	17	260	2420	702	2 2w	2191
yRo)sRRSBstBpllEhRS	0	0	0	0	0	0	0	0	0	0	0	0
ytmibshkBstBpllEhRS	0	0	0	0	0	0	0	0	0	0	0	0
yRosLlBstBpllEhRS	0	0	0	0	0	0	0	0	0	0	0	0
pllEhllB)/hBpsRR	0. 8	2.20	0.91	0.72	0. 2	0.9	0.88	0.8	2.00	0.10	2.06	0.w2

FSPoelhRRSBy E((soc

Ad sBWctl, OPlo

f chilBGSLP,B240

AhREsPlBchilBGSLP,B240

OWelP,B270Bv 7%5Bpl VdShllBRBrselB,CTWBSSlB,yNWBy RsoRBudlS

CsREosiBchil,B240

f RSPRiBWctl,BAhREsPl-f RRdnSsPl

Msxn(E(B)/hBpsRR,B2.20

FSPoelhRRSBynLSsiBDlisc,B6w.2 FSPoelhRRSBGOy,BT

FSPoelhRRSBstshrPBURnzsRRSB .2% FF UBG)liBRWBylo)mlBT

ASsicereBjlonRlB(nS5B2w

: BBBnRiE(lBxhllleBstshrPoBEl El BeBPlRdRsiicBSVSnP.

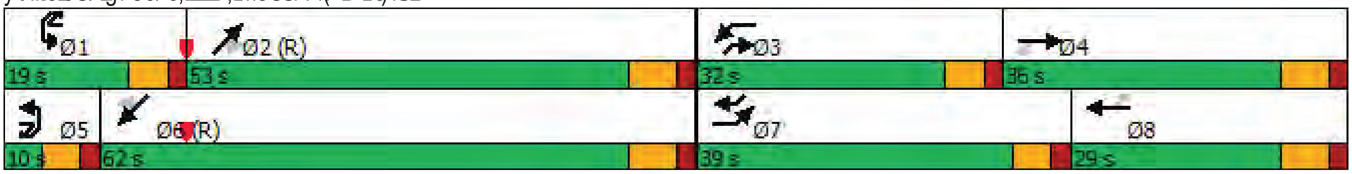
BBBBQElElBerRdSBeB(sxn(E(BsVPoBRdRBchile.

#BBBwPBlchlSRlB)RiE(lBxhllleBstshrPoBElElB(scBlBRSLlo.

BBBBQElElBerRdSBeB(sxn(E(BsVPoBRdRBchile.

(BBBBmRiE(l BVRdB wPB l chl SPnl BkEl El BeB(l Pd l BbcBEt ePd s(BenLSsi.

yt inPBsSl Bgr sel e,BBBBY,BMsSSrl n(B-BFo) nSL



GsSlBudcREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlB RSVuLEosPRSe												
WosWmBnRiE(lB)tr5	w0	7w	700	w0w	80	160	80	277w	80	79w	21w0	9w
3EPEd BnRiE(lB)tr5	w0	7w	700	w0w	80	160	80	277w	80	79w	21w0	9w
PlsiBiRdB)trti5	2 00	2 00	2 00	2 00	2 00	2 00	2 00	9000	2 00	2 00	2 00	2 00
GsSlBNnPBW5	22	29	22	29	29	29	22	22	29	29	22	29
yPRosLIBGSLPBW5	22w		22w	0		0	24w		24w	700		0
yPRosLIBGsSle	2		2	2		2	2		0	2		0
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBuJPuLBshPRo	2.00	2.00	2.00	2.00	0. w	0. w	2.00	0. 2	0. 2	2.00	0. 2	0. 2
3dP			0.1w0		0.189	0.1w0		0. 7			0. 1	
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBtdR5	2ww1	2167	2487	2880	2w47	2w04	2w28	4 w4	0	2880	46w8	0
3iPBgl(nPl	0.216			0.879			0.0			0.0 7		
ysP.BiRdBtl(5	70w	2167	2487	2764	2w47	2w04	2w1	4 w4	0	287	46w8	0
pnLrPBWEdGSBRSBpll			Yle			Yle			Yle			Yle
ysP.BiRdBpWOp5			20		946	784		6			9	
GSkBytlllB(tr5		70			70			40			40	
GSkBDmPSShlBW5		28w7			41			2ww2			2214	
Wos)liBW(lBe5		7 .1			22.2			96.4			90.9	
glskBHPEdBshPRo	0.66	0. 9	0.16	0. 9	0. 9	0. 9	0.12	0. 2	0. 9	0. 9	0. 6	0.17
Hls)cBnl rmileB%5	29%	9%	6%	9%	9%	9%	2w%	6%	9%	9%	8%	78%
Alj.BiRdB)tr5	86	71	74	w4	86	7w	16	2468	86	7w7	2 98	70
yrsdlBGsSlBWosWmB%5						48%						
GsSlBudcREtBiRdB)tr5	86	71	74	w4	w2w	4 6	16	2w47	0	7w7	2 w8	0
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
Mll rssBNnPrW5		29			29			29			29	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnPrW5		26			26			26			26	
WdPBdlscBGlWBWEdSBGsSl												
Hls ldscBshPRo	2.04	2.00	2.04	2.00	2.00	2.00	2.04	0. 1	2.00	2.00	2.04	2.00
WEdSSLBytlllB(tr5	2w			2w			2w			2w		
CE(bldBRBDlPhPRdeB	2	9	2	2	9	2	2	2		2	2	
DlPhPRdBW(tisPlB	GlVP	WfdE	pnLrP	GlVP	WfdE	pnLrP	GlVP			GlVP		
GlslnSLBDlPhPRdBW5	76	200	76	90	200	90	76	9w6		90	9w6	
WosmSLBDlPhPRdBW5	0	0	0	0	0	0	0	9w0		0	9w0	
DlPhPRd2BgRemPRSW5	0	0	0	0	0	0	0	9w0		0	9w0	
DlPhPRd2BynzlW5	76	6	76	90	6	90	76	6		90	6	
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BQEl Ele5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd2BDliscBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
DlPhPRd9BgRemPRSW5		4			4							
DlPhPRd9BynzlW5		6			6							
DlPhPRd9BWctl		fi+Tx			fi+Tx							
DlPhPRd9BBrsSSli												
DlPhPRd9BTxPSlBe5		0.0			0.0							
WEdSBWctl	glo(	CA	glo(	glo(	CA	glo(	t(+tP	CA		t(+tP	CA	

GsSl Bu dRE t	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
gdRPhPl Bgr sel e		4			1		w	9		2	6	
gl d(mPl Bgr sel e	4		4	1		1	9			6		
Dl Ph PRdBgr sel	4	4	4	1	1	1	w	9		2	6	
yd mPhr Bgr sel												
MrSn(E(BSmsiBe5	1.0	1.0	1.0	2.0	2.0	2.0	7.0	90.0		w.0	90.0	
MrSn(E(Byt imBe5	24.w	24.w	24.w	41.0	41.0	41.0	8.0	96.w		.w	96.w	
WRRsiByt imBe5	60.0	60.0	60.0	60.0	60.0	60.0	.0	w9.0		91.0	82.0	
WRRsiByt imB%5	49. %	49. %	49. %	49. %	49. %	49. %	6.4%	78.2%		90.0%	w0.8%	
Msxn(E(Bu d l SBe5	w7.w	w7.w	w7.w	ww.w	ww.w	ww.w	w.0	4w.w		94.0	64.w	
Yl iiRd BW(l Be5	4.w	4.w	4.w	7.w	7.w	7.w	7.w	4.w		7.w	4.w	
Aii-pl l BW(l Be5	9.0	9.0	9.0	2.0	2.0	2.0	0.w	9.0		0.w	9.0	
GReBW(l BAl jEeBe5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
WRRsiBGReBW(l Be5	6.w	6.w	6.w	4.w	4.w	4.w	4.0	6.w		4.0	6.w	
Gl sl /GsL							Gl sl	Gl sl		GsL	GsL	
Gl sl -GsLBDt R(nzl ?								Yl e		Yl e		
ml r mil Et xP Se RSBe5	w.0	w.0	w.0	7.0	7.0	7.0	7.0	8.0		7.0	8.0	
MrSn(E(Bu st Be5	0.9	0.9	0.9	7.0	7.0	7.0	0.9	4.0		7.0	4.0	
W(l Bal VRd Bpl l Ehl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9w.0		0.0	9w.0	
W(l BWRBpl l Ehl Be5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9w.0		0.0	9w.0	
pl hsiiBMRl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	CRSl	f -MrS		CRSl	f -MrS	
N sikBW(l Be5				8.0	8.0	8.0						
3iser BDRSPBN sikBe5				22.0	22.0	22.0						
gl l ePosSBi siieB#/r d5				0	0	0						
AhPBT WhPBu d l SBe5	w7.w	w7.w	w7.w	ww.w	ww.w	ww.w	41.0	4w.w		68.0	64.w	
AhPEsPl BL/f Bp sPR	0.71	0.71	0.71	0.40	0.40	0.40	0.74	0.79		0.41	0.46	
)/hBp sPR	0.66	0.0w	0.ww	2.09	0.61	0.60	0.14	0. 6		0.	0. 2	
f RSRPRIBDl isc	64.w	98.8	96.w	14.8	99.4	22.9	0.	60.9		87.8	21.0	
QEl El BDl isc	0.0	0.0	0.0	9 .	9.2	0.1	0.0	0.0		0.0	0.0	
WRRsiBDl isc	64.w	98.8	96.w	224.w	94.w	29.0	0.	60.9		87.8	21.0	
GOy	T	f	f	3	f	a	3	T		T	a	
At t dRshr BDl isc		79.1			w9.9			62.1			96.w	
At t dRshr BGOy		f			D			T			f	
QEl El BGl SLPBwOPBW5	w8	99	280	: w24	92w	10	ww	w09		960	2w9	
QEl El BGl SLPBwPBW5	12	48	9w2	#8ww	760	90w	#20w	#606		#486	219	
FSPdSsiBGSkBDreBW5		2687			40			2482			2204	
WEdSBascBGl SLPBW5	22w		22w				24w			700		
asel Bl st shmRBy)t r 5	226	822	670	w40	860	192	209	2624		7w6	9246	
yRo)sPRSBl st Bpl l EhPS	0	0	0	89	298	221	0	0		0	0	
yt niibshkBl st Bpl l EhPS	0	0	0	0	0	0	0	0		0	0	
yPRosLI Bl st Bpl l EhPS	0	0	0	0	0	0	0	0		0	0	
pl l Ehl l B/hBp sPR	0.66	0.0w	0.ww	2.28	0.12	0.82	0.14	0. 6		0.	0. 2	

FSPœl hPRSBy E((scc	
Ad sBW:t l ,	OPl o
f chil BGl SLP, B240	
AhPEsPl Bl chil BGl SLP, B240	
OWel P, B2wB22%5Bpl Vd Shl l BPRBr sel B9, CaWGBsSl B6, yaWGBy RsdPRVBu d l S	
CsPEosiBl chil , B22w	
f RSRPRIBW:t l , BAhPEsPl -f PRd nSsPl	

Msxn(E(B/hBo sPRR,B2.09

FSP ceI hPRSBy nLSsiBDI isc,B47.4

FSP ceI hPRSBCOy ,BD

FSP ceI hPRSB st shnPcBUPnzsPRSB 8.4%

Ff UBGI) I iBRVBy I o) nI B3

ASsicemeBg I onRI B(nS5B2w

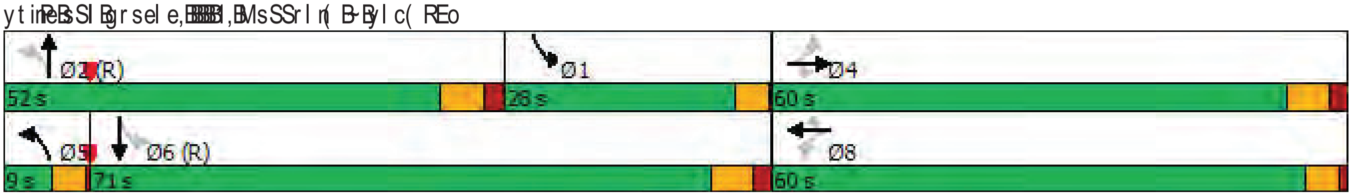
: BBBBnRE(I B xhI I I eBnst shnPcpB&E| E| BeBPI Rd PnsiicBSVSnP.

BBBBQE| E| Ber Rd SBeB(sxn(E(BsVP cBPd RBnchil e.

#BBBB wP B3I chI SPnI B)RE(I B xhI I I eBnst shnPcpB&E| E| B(scBI BRSLI o.

BBBBQE| E| Ber Rd SBeB(sxn(E(BsVP cBPd RBnchil e.

y t inPBsSI Bgr seI e,BBBB1,BMsSSrI n(B-By I c(REo



GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBRSVuLEosPRSe						
WosWmBnRE(lB)tr5	219w	720	20	2w80	220	2w
3EPEd BnRE(lB)tr5	219w	720	20	2w80	220	2w
Fl siBiRdB)trti5	9000	2 00	2 00	9000	2 00	2 00
GsSlBNnlPBW5	29	29	29	29	29	27
yPRosLlBGSLPBW5		760	78w		9 w	9 w
yPRosLlBGsSle		2	9		2	2
WstldBGSLPBW5			9w		9w	
GsSlBJPuLBshPRo	0. w	2.00	0. 8	0. w	0. 8	2.00
3dP		0.1w0				0.1w0
3iPRgdRPhPl			0. w0		0. w0	
ysP.BiRdBtdR5	762	2461	9w78	7w1w	702	29 4
3iPRgld(nPl			0. w0		0. w0	
ysP.BiRdBtld(5	762	2461	9w78	7w1w	702	29 4
pnLrPBWEdGSBRSBpll		Yle				Yle
ysP.BiRdBpWOp5		744				4w
GrSkBytlllB(tr5	ww			ww	70	
GrSkBDmePrShlBW5	207			0	2286	
Wos)liBW(lBe5	29.			29.7	96.8	
glskBHREdBshPRo	0. 9	0. 0	0.42	0.11	0.14	0.77
Hls)cBnlrmileB%5	w%	20%	71%	6%	26%	9 %
Alj.BiRdB)tr5	2 14	744	94	2814	272	4w
yrsdlBGsSlBWosWmB%5						
GsSlBudREtBiRdB)tr5	2 14	744	94	2814	272	4w
TSPdaiRnklBBSPcelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
Mll rsSBNnlPvW5	94			94	94	
GrSkBDWelPW5	0			0	0	
fdReedsikBNnlPvW5	26			26	26	
WdRBdlscBGlVBWEdSBGsSl						
Hlsldsc BshPRo	0. 4	2.00	2.00	0. 4	2.00	0. 6
WEdGrSLBytlllB(tr5			2w		2w	
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2
DlPhPRdBW(tisPB		pnLrP	GlVP		GlVP	pnLrP
GlslnSLBDlPhPRdBW5	9w6	76	76	9w6	76	76
WosmnSLBDlPhPRdBW5	9w0	0	0	9w0	0	0
DlPhPRd2BgRemPRSW5	9w0	0	0	9w0	0	0
DlPhPRd2BynzlW5	6	76	76	6	76	76
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BrsSSli						
DlPhPRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BQEl Ble5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	CA	t(+R)	gdRP	CA	gdRP	glq(
gdRPhPlBgrsele	9	1	2		1	
glq(nPlBgrsele		9		6		1
DlPhPRdBgrsel	9	1	2	6	1	1
ydnPnrBgrsel						
MnSn(E(BSnnsiBe5	9w.0	20.0	w.0	9w.0	20.0	20.0

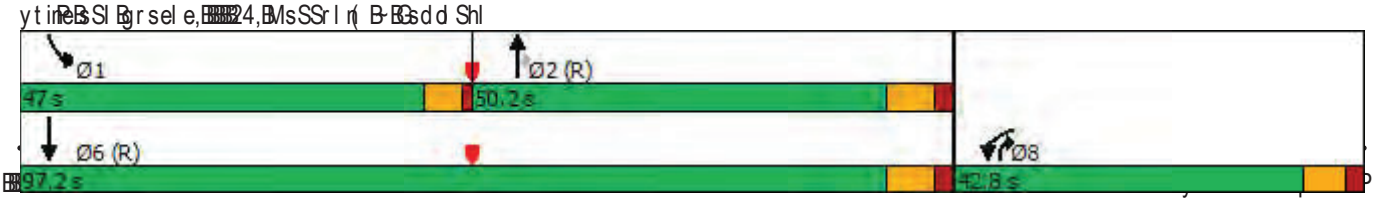
Movement	EBT	EBR	NBL	NBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	72	26	7	72	26	26
Future Volume (vph)	72	26	7	72	26	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0		
Lane Util. Factor	1.00		1.00	1.00		
Frpb, ped/bikes	1.00		1.00	1.00		
Flpb, ped/bikes	1.00		1.00	1.00		
Frt	1.00		1.00	1.00		
Flt Protected	1.00		0.95	1.00		
Satd. Flow (prot)	1863		1770	1863		
Flt Permitted	1.00		0.95	1.00		
Satd. Flow (perm)	1863		1770	1863		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	80	29	8	80	29	29
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	80	0	8	80	0	0
Confirm Phases						
Parking (#/hr)						
Turn Type						
Protected Phases	2		1	6		
Permitted Phases						
Actuated Green, G (s)	84.5		9.5	84.5		
Effective Green, g (s)	84.5		9.5	84.5		
Actuated g/C Ratio	0.94		0.11	0.94		
Clearance Time (s)	4.0		4.0	4.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	1750		187	1750		
v/s Ratio Prot	0.04		c0.00	0.04		
v/s Ratio Perm						
v/c Ratio	0.05		0.04	0.05		
Uniform Delay, d1	0.3		40.1	0.3		
Progression Factor	1.00		1.00	1.00		
Incremental Delay, d2	0.1		0.1	0.1		
Delay (s)	0.4		40.2	0.4		
Level of Service	A		D	A		
Approach Delay (s)	0.4		40.2	0.4		
Approach LOS	A		D	A		
Intersection Summary						
HCM 2000 Control Delay		1.2	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio		0.06				
Actuated Cycle Length (s)		90.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization		16.8%	ICU Level of Service		A	
Analysis Period (min)		15				
c Critical Lane Group						

GsSlBudREt	NaG	Nap	CaW	Cap	yaG	yaW
GsSlBRSVuLEosRRSe						
VosVmBnRE(lB)tr5	620	4w0	297w	690	160	9760
3EREd BnRE(lB)tr5	620	4w0	297w	690	160	9760
Fl siB3iRdB)trti5	2 00	2 00	9000	2 00	2 00	9000
GsSlBNnlPBW5	20	20	22	29	22	22
yPRosLlBGSLPBW5	0	98w		7w0	4 w	
yPRosLlBGsSle	9	2		2	9	
VstldBGSLPBW5	9w				9w	
GsSlBUFuL3shPRo	0. 8	2.00	0. 2	2.00	0. 8	0. 2
3dP		0.1w0		0.1w0		
3iPBgdRPhPl	0. w0				0. w0	
ysP.B3iRdBtdR5	70w4	2499	4 77	2w71	7916	4 8
3iPBgld(nPl	0. w0				0. w0	
ysP.B3iRdBtld(5	70w4	2499	4 77	2w71	7916	4 8
pnLrPBWEdGSBRSBpll		Yle		Yle		
ysP.B3iRdBpVOp5		478		2		
GSkBytlllB(tr5	7w		w0			w0
GSkBDnePShlBW5	1ww		26w0			88
Vos)liBW(lBe5	26.8		99.w			20.6
glskBHREd3shPRo	0.11	0.1	0. 0	0. 2	0. 6	0. w
Hls)cBnlrnileB%5	8%	6%	8%	w%	7%	6%
Alj.B3iRdB)tr5	6 7	w06	2789	612	1 6	9414
yrsdlBGsSlBVosVmB%5						
GsSlBudREtB3iRdB)tr5	6 7	w06	2789	612	1 6	9414
TSPdaiRnklBBSPcelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	pnLrP	GlVP	GlVP
Mllrs5BNnlPvW5	90		99			99
GSkBDWelPW5	0		0			0
fdReedsikBNnlPvW5	26		26			26
WdRBdlscBGlVBVEdSBGsSl						
Hlsldsc3shPRo	2.0	2.0	0. 1	2.00	2.04	0. 1
VEdSSLBytlllB(tr5	2w				2w	
CE(bldBRVBDlPhPRdeB	2	2	2	2	2	2
DlPhPRdBW(tisPB	GlVP	pnLrP		pnLrP	GlVP	
GlslnSLBDlPhPRdBW5	76	76	9w6	76	76	9w6
VosmnSLBDlPhPRdBW5	0	0	9w0	0	0	9w0
DlPhPRd2BgRemPRSW5	0	0	9w0	0	0	9w0
DlPhPRd2BynzlW5	76	76	6	76	76	6
DlPhPRd2BVctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRd2BrsSSli						
DlPhPRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BQEElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
VEdSBVctl	gdRP	3dl	CA	t(+R)	gdRP	CA
gdRPhPlBgrsele	1		9	1	2	6
gld(nPlBgrsele		3dl		9		
DlPhPRdBgrsel	1		9	1	2	6
ydnPnrBgrsel						
MnSn(E(BSnnsiBe5	1.0		2w.0	1.0	4.0	2w.0

GsSlBudRet	NaG	Nap	CaW	Cap	yaG	yaW
MrSr(E(Bytim5	24.w		99.0	24.w	.0	99.0
WRRsiBytim5	49.1		w0.9	49.1	48.0	8.9
WRRsiBytim%5	70.6%		7w. %	70.6%	77.6%	6 .4%
Msxr(E(Bud l SB5	76.7		47.9	76.7	49.0	0.9
YliiRdBW(lB5	4.w		w.0	4.w	4.0	w.0
Aii-pll BW(lB5	9.0		9.0	9.0	2.0	9.0
GReBW(lBAljEeB5	0.0		0.0	0.0	0.0	0.0
WRRsiBGReBW(lB5	6.w		8.0	6.w	w.0	8.0
Gl sl /GsL			GsL		Gl sl	
Gl sl -GsLBDtP(rzl ?						
mlr mil ETxPSenRSB5	w.0		8.0	w.0	4.0	8.0
plhsiiBMRl l	CRSl		f -MrS	CRSl	CRSl	f -MrS
AhPBTWhRBud l SB5	76.7	240.0	44.0	18.7	42.9	0.9
AhPEsPl BL/f BpsPR	0.96	2.00	0.72	0.69	0.9	0.64
)/hBpsPR	0.11	0.76	0.11	0.80	0. 7	0.88
f RSPRRBDl isc	67.0	0.8	46.9	26.2	64.0	2 .1
QEl El BDl isc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDl isc	67.0	0.8	46.9	26.2	64.0	2 .1
GOy	T	A	D	a	T	a
Att dRshrBDl isc	76.8		76.9			72.w
Att dRshrBGOy	D		D			f
QEl El BGl SLPBwOPBW5	727	0	471	479	40w	ww9
QEl El BGl SLPBwPBW5	#711	0	48w	w62	#w94	622
FSPdSsiBGlSkBDreBW5	88w		2w80			6
WEdSBascBGl SLPBW5		98w		7w0	4 w	
asel Bl st shmPBy)t r 5	8 2	2499	2ww2	66	1w	7908
yRo)sPRRSBl st BpllEhPS	0	0	0	0	0	0
yt nibshkBl st BpllEhPS	0	0	0	0	0	0
yPRosLIBl st BpllEhPS	0	0	0	0	0	0
pllEhllB/hBpsPR	0.11	0.76	0.11	0.80	0. 2	0.88

FSPoelhPRSBy E((soc					
Ad sBWctl ,	OPlo				
f chil BGl SLP,B240					
AhPEsPl Bl chil BGl SLP,B240					
OWel P,B40B9 %5BpllVd Shl lBPRBrsel B9,CaWBsSlB6,yaWBy RsdPBWBud l S					
CsPEosiBl chil ,B 0					
f RSPRRBWctl ,BAhPEsPl -f PRRd nSsPl					
Msxr(E(B/hBpsPR,B0. 7					
FSPoelhPRSBy nLSsiBDl isc,B7.			FSPoelhPRSBGOy,Bl		
FSPoelhPRSBl st shmPBJPhzsPRSB10.0%			Ff UBGl)liBRBy lo)mlBD		
ASsicemBglonRlBy(nS52w					
#BBBwPBl chl SPmlB,RtE(lBxhllleBst shmPdBEl El B(scBl BRSLlo					
BBBQEl El BerRdSBeB(sxr(E(BsVPdBdRBchil e.					

ytimBsSlBgrsele,BBB24,BMsSSrl n(B-BGsddShl



gsLlB27

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlB RSVuLEosPRSe						
WosWmBnRE(lB)tr5	20 0	7w0	22w	120	2 w	20w
3EPEd BnRE(lB)tr5	20 0	7w0	22w	120	2 w	20w
Fl siB3iRdB)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSl BNnlP BW5	22	29	29	29	29	29
GsSl BUFuB3shPRo	0. w	0. w	0. w	0. w	2.00	2.00
3dP	0. w4					0.1w0
3iPBgdRPhPl				0. 9	0. w0	
ysP.B3iRdBtdR5	7949	0	0	7749	2807	24 w
3iPBgl d(nPPl				0.4 7	0. w0	
ysP.B3iRdBtl d(5	7949	0	0	2662	2807	24 w
pnLrPBWEdGSBRSBpl l		Yl e				CR
ysP.B3iRdBpWOp5	271					
GSkBytl l lB(tr5	7w			7w	70	
GSkBDmeRShl BW5	1ww			7971	688	
Wos)liBW(lBe5	26.8			67.2	2w.4	
glskBHREdB3shPRo	0. 4	0.61	0.80	0. w	0.17	0.89
Hls)cBnlrnhileB%5	7%	9%	1%	8%	6%	1%
Alj.B3iRdB)tr5	2260	w2w	264	1w7	97w	246
yrsdlBGsSl BWosWmB%5						
GsSl BudREtB3iRdB)tr5	268w	0	0	2028	97w	246
TSPdaiRhkl lBSPcelhPRS	CR	CR	CR	CR	CR	CR
GsSl BAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
Mll nsSBNnlPvW5	29			29	29	
GSkBDWelPW5	0			0	0	
fdReedsikBNnlPvW5	26			26	26	
WdRBdlscBGlVBWEdGsSl						
Hl sldscB3shPRo	2.04	2.00	2.00	2.00	2.00	2.00
WEdGSLBytl l lB(tr5			2w		2w	
CE(bldBRBDlPhPRceB	2		2	2	2	2
DlPhPRdBW(tisPB			GlVP		GlVP	pnLrP
GlslnSLBDlPhPRdBW5	9w6		90	9w6	76	76
WosmnSLBDlPhPRdBW5	9w0		0	9w0	0	0
DlPhPRdB2BgRemPRSW5	9w0		0	9w0	0	0
DlPhPRdB2BynzlW5	6		90	6	76	76
DlPhPRdB2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhPRdB2BBrsSSli						
DlPhPRdB2BTxPSlBe5	0.0		0.0	0.0	0.0	0.0
DlPhPRdB2BQEl ElBe5	0.0		0.0	0.0	0.0	0.0
DlPhPRdB2BDliscBe5	0.0		0.0	0.0	0.0	0.0
WEdGSBWctl	CA		t(+tP	CA	gdRP	gl d(
gdRPhPl Bgrsel e	9		2	6	1	
gl d(nPPl Bgrsel e			6			1
DlPhPRdBgrsel	9		2	6	1	1
ydnPhrBgrsel						
MrSn(E(BSnnsiBe5	2w.0		7.0	2w.0	w.0	w.0
MrSn(E(BytimBe5	92.0		6.w	92.0	22.0	22.0
WRRsiBytimBe5	8 .w		6.w	16.0	94.0	94.0
WRRsiBytimB%5	89.7%		w. %	81.9%	92.1%	92.1%

GsSl Bu dREt	TaW	Tap	NaG	NaW	CaG	Cap
Msxr(E(Bu d l SBe5	87.w		7.0	10.0	21.0	21.0
Yl iiRd BW(l Be5	4.w		7.w	4.w	4.w	4.w
Aii-p l l BW(l Be5	2.w		0.0	2.w	2.w	2.w
GReBW(l BAl jEeBe5	0.0			0.0	0.0	0.0
WRRsiBGReBW(l Be5	6.0			6.0	6.0	6.0
Gl sl /GsL	GsL		Gl sl			
Gl sl -GsLBDt P(nzl ?						
ml r mil ET xP SenRSBe5	8.0		7.0	8.0	w.0	w.0
p l hsiiBMRl l	f -MnS		CRSI	f -MnS	CRSI	CRSI
AhPBTWhPBu d l SBe5	8 .1			8 .1	21.9	21.9
AhPEsP l BL/f Bp sPR	0.87			0.87	0.28	0.28
)/hBp sPR	0.80			2.9wl i	0.17	0.w
f RSRRBDl isc	.6			27.9	6 .8	w7.9
QEl El BDl isc	0.9			0.0	0.0	0.0
WRRsiBDl isc	.1			27.9	6 .8	w7.9
GOy	A			a	T	D
At t dRshr BDl isc	.1			27.9	67.4	
At t dRshr BGOy	A			a	T	
QEl El BGl SLP BwOP BW5	987			8	267	8
QEl El BGl SLP Bw P BW5	74w			(7 7	#9w	291
FSP dSsiBGSkBDreBW5	88w			72wl	w 8	
WEdSBascBGl SLP BW5						
asel B st shmRBy)t r 5	9711			2929	916	9w2
yRo)sPRSB st Bp l l EhPS	24			0	0	0
yt niibshkB st Bp l l EhPS	0			0	0	0
yPRosLl B st Bp l l EhPS	0			0	0	0
p l l Ehl l B/hBp sPR	0.8w			0.14	0.19	0.wl

FSP el hPRSBy E((scc			
Ad sBVctl ,	OPl o		
f chil BGl SLP ,B220			
AhPEsP l B chil BGl SLP ,B220			
OVel P,B1Bv10%5Bp l Vd Shl l BRRBr sel B9,TaWBsSl B6,NaWGBy RsdPBRVBu d l S			
CsPEosiB chil ,BBw			
f RSRRBVctl ,BAhPEsP l -f RRd nSsP l			
Msxr(E(B/hBp sPR,B0.14			
FSP el hPRSBy nLSsiBDl isc,B28.6		FSP el hPRSBGOy ,Ba	
FSP el hPRSB st shmRBUPhnzsPRSB 9.1%		Ff UBGl)l iBRVBy l o)mnl EB	
ASsicemeBg l onRl B(nS32w			
#BBBBwP B l chl SPnl B)RtE(l Bxhl l eBst shmRdBXEl El B(scBbl BRSLl o.			
BBBBQEl El BerRd SBeB(sxn(E(BsVP dBRdRBchil e.			
(BBBBnRtE(l BRdBwP B l chl SPnl BXEl El BeB(l P d l BbcEEteRds(BenLSsi.			
l iBBBBDl VshPRBGl VRBssSl .Bp l hRl l Bdm P B2BP RELr BssSl BseBsBl VBssSl .			

yt imeBsSl Bg r sel e,BBBB21,BwP B-BGsd d Shl

ycShr dRB20Bp l t RdP
gsLl B2w

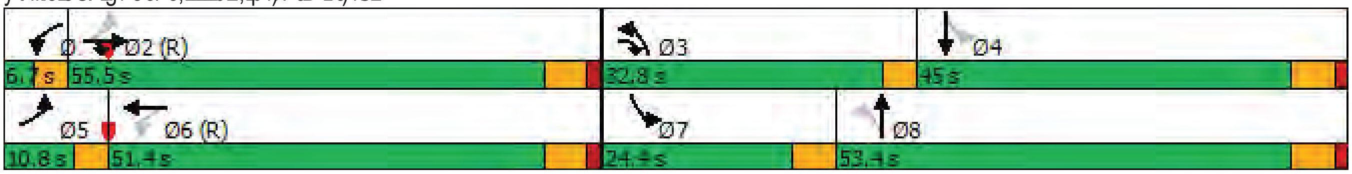
GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRiE(lB)tr5	290	20 4	w0w	48	617	69	72w	640	48	2w4	180	99
3EPEd BnRiE(lB)tr5	290	20 4	w0w	48	617	69	72w	640	48	2w4	180	99
PlsiBiRdB)trti5	2 00	9000	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNnPBW5	20	22	20	22	22	29	20	22	29	20	22	29
yPRosLlBGSLPBW5	260		940	260		0	92w		w0	900		w0
yPRosLlBGsSle	2		2	2		0	2		0	2		0
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBuPnLBshPRo	2.00	0. w	2.00	2.00	0. w	0. w	2.00	0. w	0. w	2.00	0. w	0. w
3dP			0.1w0		0. 18			0. 11			0. w	
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BiRdBtdRP5	2w1	7477	2780	284w	7788	0	2w21	79 0	0	2w1	7728	0
3iPBgl q(nPPl	0.247			0.011			0.0 4			0.9 1		
ysP.BiRdBtl q(5	97	7477	2780	269	7788	0	2w0	79 0	0	4	7728	0
pnLrPBWEdGSBRSBpll			Yl e			Yl e			Yl e			Yl e
ysP.BiRdBpWOp5			w2		8			8			9	
GSkBytlllB(tr5		40			40			40			40	
GSkBDnePShlBW5		7 18			876			2070			9009	
Wos)liBW(lBe5		61.0			29.w			28.6			74.2	
glskBHREdBshPRo	0.19	0. 2	0.14	0.81	0.1	0.11	0.17	0.1	0.8w	0.12	0.1	0.68
Hls)cBnlrmileB%5	6%	8%	20%	0%	9%	9%	22%	4%	24%	6%	4%	9w%
Alj.BiRdB)tr5	246	2909	602	60	868	80	710	82	67	2 0	81	77
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBiRdB)tr5	246	2909	602	60	178	0	710	819	0	2 0	2022	0
TSPdaiPnkllBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP	GlVP	GlVP	pnLrP
MllrsSBNnPvW5		22			22			20			20	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnPvW5		26			26			26			26	
WdPBdlscBGlVBWEdSBGsSl												
HlsldscBshPRo	2.0	0. 1	2.0	2.04	2.04	2.00	2.0	2.04	2.00	2.0	2.04	2.00
WEdSSLBytlllB(tr5	2w			2w			2w			2w		
CE(bldBRBDlPhPRdeB	2	2	2	2	2		2	2		2	2	
DlPhPRdBW(tisPB	GlVP		pnLrP	GlVP			GlVP			GlVP		
GlslnSLBDlPhPRdBW5	76	9w6	76	76	9w6		76	9w6		76	9w6	
WosmnSLBDlPhPRdBW5	0	9w0	0	0	9w0		0	9w0		0	9w0	
DlPhPRd2BgPemPRSW5	0	9w0	0	0	9w0		0	9w0		0	9w0	
DlPhPRd2BynzlW5	76	6	76	76	6		76	6		76	6	
DlPhPRd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx		fi+Tx	fi+Tx		fi+Tx	fi+Tx	
DlPhPRd2BrsSSli												
DlPhPRd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BQEElBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
DlPhPRd2BDlscBe5	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
WEdSBWctl	t(+tP	CA	tP+R)	t(+tP	CA		t(+tP	CA		t(+tP	CA	
gdRPhPlBgrsele	w	9	9B7	2	6		7	1		8	4	
gl q(nPPlBgrsele	9			6			1			4		
DlPhPRdBgrsel	w	9	9B7	2	6		7	1		8	4	
ydnPnrBgrsel												
MnSn(EBSnPsiBe5	7.0	2w.0		7.0	2w.0		7.0	2w.0		9.0	2w.0	

	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
	6.w	92.0		6.w	w2.0		6.w	92.0		6.w	92.0	
	20.1	ww.w		6.8	w2.4		79.1	w7.4		94.4	4w.0	
	8.8%	7 .6%		4.1%	76.8%		97.4%	71.2%		28.4%	79.2%	
	8.7	4 .w		7.9	4w.4		9 .7	48.4		2 .	7 .0	
	7.w	4.w		7.w	4.w		7.w	4.w		4.w	4.w	
	0.0	2.w		0.0	2.w		0.0	2.w		0.0	2.w	
	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
	7.w	6.0		7.w	6.0		7.w	6.0		4.w	6.0	
	7.0	8.0		7.0	8.0		w.0	8.0		7.0	8.0	
					8.0							
					71.0							
					0							
	w1.8	w0.1	17.6	w2.2	4w.4		84.7	w9.6		ww.9	7 .0	
	0.49	0.76	0.60	0.76	0.79		0.w7	0.71		0.7	0.91	
	0.16	0. 6	0.89	0.67	0.86		2.04	0.67		0.62	2.0	
	42.0	70.4	20.w	w8.4	48.w		1.6	71.1		91.	204.	
	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
	42.0	70.4	20.w	w8.4	48.w		1.6	71.1		91.	204.	
	D	f	a	T	D		3	D		f	3	
		9w.2			41.2			w1.7			9.	
		f			D			T			3	
	44	4w4	9w0	77	7w8		: 796	702		2	: w4w	
	(4w	(422	(900	#w8	470		#469	7 0		297	#689	
		7 08			6w6			w0			2 99	
	260		940	260			92w			900		
	280	2946	17	w	20		76w	2942		780	9w	
	0	0	0	0	0		0	0		0	0	
	0	0	0	0	0		0	0		0	0	
	0	0	0	0	0		0	0		0	0	
	0.16	0. 6	0.89	0.67	0.86		2.04	0.67		0.w2	2.0	

	OPlo
	240
	240
	27w
	2.0
	9.2
	0. %
	2w

(BBBBmRiE(I BRcB wP B I chI SPI BE EI EI BeB(I P d I BbcBEt eRd s(BenLSsi.

y t inPBsSI Bgr sel e,BBBB2,Bp r) I dB-BFo) nSL



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	160	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	160	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.986			0.957			0.977	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3170	0	1678	3238	0	0	3208	0
Flt Permitted	0.095			0.067			0.195				0.666	
Satd. Flow (perm)	164	3410	1383	115	3170	0	344	3238	0	0	2167	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149		10			51			15	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1441	222	228	1089	114	305	417	169	201	400	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1441	222	228	1203	0	305	586	0	0	708	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	13.0	61.8		17.2	66.0		12.0	61.0		49.0	49.0	
Total Split (%)	9.3%	44.1%		12.3%	47.1%		8.6%	43.6%		35.0%	35.0%	
Maximum Green (s)	9.5	55.8		13.7	60.0		8.5	55.0		43.0	43.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	67.8	55.8	67.8	75.5	60.0		57.5	55.0			43.0	
Actuated g/C Ratio	0.48	0.40	0.48	0.54	0.43		0.41	0.39			0.31	
v/c Ratio	0.85	1.06	0.30	1.09	0.88		1.37	0.45			1.05	
Control Delay	53.4	70.8	4.7	127.3	31.4		223.1	29.7			93.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	53.4	70.8	4.7	127.3	31.4		223.1	29.7			93.7	
LOS	D	E	A	F	C		F	C			F	
Approach Delay		61.2			46.6			95.9			93.7	
Approach LOS		E			D			F			F	
Queue Length 50th (ft)	77	~750	12	~187	264		~289	187			~363	
Queue Length 95th (ft)	m#106	m#876	m29	m#253	m289		#471	141			#446	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	179	1359	746	210	1364		222	1303			675	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.85	1.06	0.30	1.09	0.88		1.37	0.45			1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 127 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.37			
Intersection Signal Delay: 68.0		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

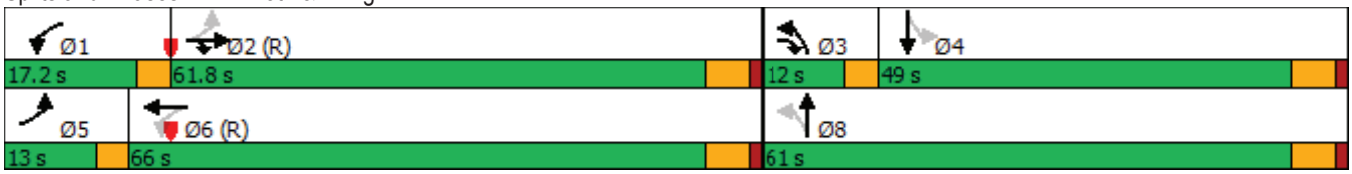
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



GsSlBudREt	yTG	yTp	CTG	CTW	yNW	yNp
GsSlBRSVuLEosRRSe						
WosWmBnRiE(lBy)tr5	202	w	20w	2w	9614	8w
3EREd BnRiE(lBy)tr5	202	w	20w	2w	9614	8w
RlsiBiRdBy)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNnRPBW5	20	20	22	22	22	22
yRRosLIBGSLRPBW5	29w	29w	9w0			900
yRRosLIBGsSle	2	0	9			2
WstldBGSLRPBW5	9w		9w			
GsSlBuRmLBshRRo	0. 8	2.00	0. 8	0. 2	0. 2	2.00
3dP		0.1w0				0.1w0
3iRBgdRPhPl	0. w0		0. w0			
ysP.BiRdBtdR5	9802	2988	9 21	4118	4 77	2719
3iRBgld(nRPl	0. w0		0. w0			
ysP.BiRdBtld(5	9802	2988	9 21	4118	4 77	2719
pnLrPBWEdGSBRSBpll		Yle				Yle
ysP.BiRdBpWOp5		278				w9
GSkBytlllBy(tr5	9w			w0	w0	
GSkBDmRSShlBW5	667			2 18	26w0	
Wos)liBW(lBe5	21.2			98.2	99.w	
glskBHREdBshRRo	0.w	0.w2	0.w0	0. 4	0. 7	0.86
Hls)cBnlrmileB%5	92%	21%	26%	1%	8%	27%
Alj.BiRdBy)tr5	282	216	920	2802	9116	
yrsdlBGsSlBWosWmB%5						
GsSlBudREtBiRdBy)tr5	282	216	920	2802	9116	
TSRPdBaiRhklIBSRPcelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MIlrsSBNnRPvW5	90			94	94	
GSkBDWelRW5	0			0	0	
fdReedsikBNnRPvW5	26			26	26	
WdRBdlscBGlVBWEdSBGsSl						
HlsldscBshRRo	2.0	2.0	2.04	0. 1	0. 1	2.04
WEdGSLBytlllBy(tr5	2w		2w			
CE(bldBRVBDlPhRRceB	2	2	2	2	2	2
DlPhRRceBW(tisPB	GlVP	pnLrP	GlVP			pnLrP
GlslnSLBDlPhRRceBW5	76	76	76	9w6	9w6	76
WosmnSLBDlPhRRceBW5	0	0	0	9w0	9w0	0
DlPhRRcd2BgRemRRSW5	0	0	0	9w0	9w0	0
DlPhRRcd2BynzlW5	76	76	76	6	6	76
DlPhRRcd2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhRRcd2BBrsSSli						
DlPhRRcd2BTxPSlBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRcd2BQEiElBe5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRcd2BDlscBe5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	gld(	gdRP	CA	CA	t(+R)
gdRPhPlBgrsele	4		w	9	6	4
gld(nRPlBgrsele		4				6
DlPhRRdBgrsel	4	4	w	9	6	4
ydnRnrBgrsel						
MnSn(E(BSnRsiBe5	1.0	1.0	7.0	2w.0	2w.0	1.0

GsSI BudcREt	yTG	yTp	CTG	CTW	yNW	yNp
MrSn(E(BytimBe5	2w.0	2w.0	1.0	99.0	99.0	2w.0
WRRsiBytimBe5	97.0	97.0	21.0	228.0	.0	97.0
WRRsiBytimB%5	26.4%	26.4%	29. %	17.6%	80.8%	26.4%
Msxn(E(BudISBe5	26.0	26.0	27.0	220.0	9.0	26.0
YIiiRdBW(IBe5	w.0	w.0	4.0	w.0	w.0	w.0
Aii-pIIBW(IBe5	9.0	9.0	2.0	9.0	9.0	9.0
GReBW(IBAIjEeBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGReBW(IBe5	8.0	8.0	w.0	8.0	8.0	8.0
GIsI/GsL			GIsI		GsL	
GIsI-GsLBDtP(nzI?						
mIrmilETxPSenRSBe5	w.0	w.0	4.0	8.0	8.0	w.0
pIhsiiBMRII	CRSI	CRSI	CRSI	f-MnS	f-MnS	CRSI
AhPBTWhRBudISBe5	24.1	24.1	27.9	222.9	7.0	224.1
AhPEsPIBL/fBpsPR	0.22	0.22	0.0	0.8	0.66	0.19
)/hBpsPR	0.60	0.89	0.88	0.44	0.11	0.0
fRSPRRIBDIisc	61.8	74.w	w8.9	4.	26.0	0.1
QEIEIBDIisc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDIisc	61.8	74.w	w8.9	4.	26.0	0.1
GOy	T	f	T	A	a	A
AttdRshrBDIisc	w0.			20.8	2w.w	
AttdRshrBGOy	D			a	a	
QEIEIBGISLPBwOPBW5	88	49	6	90w	417	7
QEIEIBGISLPBwPBW5	84	27	87	(970	w18	(w
FSPodSsiBGkSkBDreBW5	w17			2 08	2w80	
WEcSBascBGISLPBW5	29w	29w	9w0			900
aselBstshmPBB)tr5	701	968	988	7110	7986	22w7
yRo)sPRSBstBpIIEhPS	0	0	0	0	0	0
ytmibshkBstBpIIEhPS	0	0	0	0	0	0
yPRosLIBstBpIIEhPS	0	0	0	0	0	0
pIIEhIIB/hBpsPR	0.w6	0.80	0.86	0.44	0.11	0.0

FSPoelhPRSBy E((soc			
AdsBWctI,	OPIo		
fchilBGISLP,B240			
AhPEsPIBchilBGISLP,B240			
OWelP,B20 Bw81%5BpIVdShIIBPRBrselB9,CTWBsSIB5,yNWBy RsoPBRWBudIS			
CsPEosiBchil,B0			
fRSPRRIBWctI,BAhPEsPI-fRRdnSsPI			
Msxn(E(B/hBpsPR,B0.11			
FSPoelhPRSBymLSsiBDIisc,B26.9		FSPoelhPRSBGOy,Ba	
FSPoelhPRSBstshmPBUPmzsPRSB58.6%		FfUBG)IiBRWyIo)mlB	
ASsicemeBgIonRIBy(nS52w			
(BBBmRIE(IBWRcBwPBIchISPmIBxEIEIBeB(IPdIBbcBEtePds(BenLSsi.			

ytmeBsSIBgrselee,BBBBBw,BMsSSrIn(B-BMRSPPel

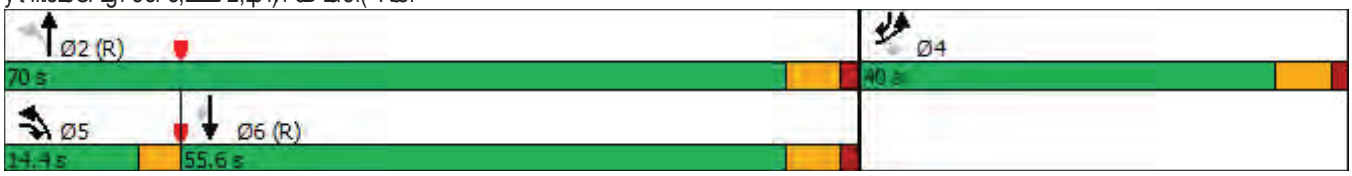
ycShrdRB20BpItRdP
gsLIB97

GsSlBudcREt	TaG	Tap	CaG	CaW	yaW	yap
GsSlBRSVuLEosRRSe						
WosWmBnRiE(lBv)tr5	747	219	48	w16	w	w77
3EREd BnRiE(lBv)tr5	747	219	48	w16	w	w77
Fl siBiRdBv)trti5	2 00	2 00	2 00	9000	9000	2 00
GsSlBNnlPBW5	22	29	29	29	22	29
yRRosLlBGSLPBW5	770	770	9w0			41w
yRRosLlBGsSle	2	0	2			2
WstldBGSLPBW5	9w		9w			
GsSlBuRmLBshRRo	0. 8	2.00	2.00	0. w	0. w	2.00
3dP		0.1w0				0.1w0
3iRggdRPhPl	0. w0		0. w0			
ysP.BiRdBvtdR5	7994	2461	2807	761	7w79	2w71
3iRgglq(nRPl	0. w0		0.286			
ysP.BiRdBvtlq(5	7994	2461	72w	761	7w79	2w71
pnLrPBWEdGSBRSBpll		Yle				Yle
ysP.BiRdBvpWOp5		78				67w
GrSkBytlllBv(tr5	9w			7w	7w	
GrSkBDmeRShlBW5	189			279	20ww	
Wos)liBW(lBve5	97.1			9w.	90.6	
glskBHREdBshRRo	0. 2	0.8	0. 4	0. 9	0.11	0.14
Hls)cBnlrmileB%5	w%	20%	6%	7%	4%	w%
Alj.BiRdBv)tr5	788	970	w0	678	2272	67w
yrsdlBGsSlBWosWmB%5						
GsSlBudcREtBiRdBv)tr5	788	970	w0	678	2272	67w
TSRPdBaiRnklIBBSPcelhRRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MIlrsSBNnlPrW5	99			29	29	
GrSkBDWelRW5	0			0	0	
fdReedsikBNnlPrW5	26			26	26	
WdRBdlscBGlWBWEdSBGsSl						
Hlsldscl3shRRo	2.04	2.00	2.00	0. 4	0. 1	2.00
WEdGrSLBytlllBv(tr5	2w		2w			
CE(bldBRVBDlPhRRceB	2	2	2	2	2	2
DlPhRRcBW(tisPlB	GlVP	pnLrP	GlVP			pnLrP
GlslnSLBDlPhRRcBW5	76	76	76	9w6	9w6	76
WosmnSLBDlPhRRcBW5	0	0	0	9w0	9w0	0
DlPhRRcB2BgRemRRSW5	0	0	0	9w0	9w0	0
DlPhRRcB2BynzlW5	76	76	76	6	6	76
DlPhRRcB2BWctl	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx
DlPhRRcB2BlrsSSli						
DlPhRRcB2BTxPSlBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRcB2BQEiElBve5	0.0	0.0	0.0	0.0	0.0	0.0
DlPhRRcB2BDlscBve5	0.0	0.0	0.0	0.0	0.0	0.0
WEdSBWctl	gdRP	t(+R)	t(+tP	CA	CA	t(+R)
gdRPhPlBgrsele	4	w	w	9	6	4
glq(nRPlBgrsele		4	9			6
DlPhRRcBgrsel	4	w	w	9	6	4
ydnRRrBgrsel						
MrSr(E(BSnRsiBve5	20.0	20.0	20.0	70.0	70.0	20.0

GsSI BucREt	TaG	Tap	CaG	CaW	yaW	yap
MrSn(E(Bytimpe5	40.0	27.w	27.w	76.0	44.0	40.0
WRRsiBytimpe5	40.0	24.4	24.4	80.0	ww.6	40.0
WRRsiBytimpB%5	76.4%	27.2%	27.2%	67.6%	w0.w%	76.4%
Msxn(E(BudISBe5	74.0	20.	20.	64.0	4 .6	74.0
YliiRdBWn(IBe5	4.w	7.w	7.w	4.w	4.w	4.w
Aii-pIIBWn(IBe5	2.w	0.0	0.0	2.w	2.w	2.w
GRePBWn(IBAIjEePBe5	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBGRePBWn(IBe5	6.0	7.w	7.w	6.0	6.0	6.0
GIsI/GsL		GIsI	GIsI		GsL	
GIsI-GsLBOtPn(nzl ?						
mIrmilBTxPSenRSBe5	7.0	w.0	w.0	8.0	8.0	7.0
MrSn(E(BustBe5	0.9	0.9	0.9	4.w	4.w	0.9
Wn(IBaIVRdBpIIEhIBe5	0.0	0.0	0.0	7w.0	7w.0	0.0
Wn(IBWRBpIIEhIBe5	0.0	0.0	0.0	9w.0	9w.0	0.0
pIhsiiBMRII	CRSI	CRSI	CRSI	f -MnS	f -MnS	CRSI
NsikBWn(IBe5	20.0				20.0	20.0
3iserBDRSPBNsikBe5	94.0				91.0	94.0
gIIIePnsSBsiieB#/rc5	0				0	0
AhPBTWhPBudISBe5	90.7	76.4	10.9	88.8	64.2	0.4
AhPEsPIBL/fBpsPR	0.21	0.77	0.87	0.82	0.w1	0.19
)/hBpsPR	0.67	0.4w	0.24	0.94	0.ww	0.46
fRSPRiBDIisc	4w.	96.9	w.	6.4	26.2	2.7
QEIEIBDIisc	0.0	0.0	0.0	0.0	0.0	0.0
WRRsiBDIisc	4w.	96.9	w.	6.4	26.2	2.7
GOy	D	f	A	A	a	A
AttcRshrBDIisc	71.w			6.4	20.1	
AttcRshrBGOy	D			A	a	
QEIEIBGSLPBw0PBWP5	291	206	1	87	940	0
QEIEIBGSLPBwPBWP5	266	27w	97	221	771	20
FSPcSsiBGSkBDrePBWP5	8 9			294	8w	
WEcSBascBGSLPBWP5	770	770	9w0			41w
aselBstshrPB)tr5	6	w90	768	9606	90w8	241
yPso)sPRSBstBpIIEhPS	0	0	0	0	0	0
ytmibshkBstBpIIEhPS	0	0	0	0	0	0
yPRcsLIBstBpIIEhPS	0	0	0	0	0	0
pIIEhIIB)/hBpsPR	0.71	0.44	0.24	0.94	0.ww	0.47

FSPcelhPRSBy E((scc

Ad sBWctI, OPIo
fchilBGSLP,B220
AhPEsPIBchilBGSLP,B220
OWelP,BDB0%5BpIVdShIIBPRBrselB,CaWGBSIB,yaWBy RcPRWBudIS
CsPEcsiBchil,B200
fRSPRiBWctI,BAhPEsPI-fRRdnSsPI
Msxn(E(B)/hBpsPR,B0.67
FSPcelhPRSBynLSsiBDIisc,B2w.7 FSPcelhPRSBGOy,Ba
FSPcelhPRSBstshrPBUPnzsPRSBw8.6% Ff UBG)IiBRWyIo)mIBa
ASsicereBgIcRIB(nS5B2w


Ø2 (R)
70 s
Ø4
40 s
Ø5
14.4 s
Ø6 (R)
55.6 s

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
GsSlBRSVuLEosPRSe												
WosWmBnRE(lB)tr5	220	w	80	4w	w	0	90	9909	20	ww	2191	90
3EPEd BnRE(lB)tr5	220	w	80	4w	w	0	90	9909	20	ww	2191	90
PlsiBBiRdB)trti5	2 00	2 00	2 00	2 00	9000	2 00	2 00	9000	2 00	2 00	9000	2 00
GsSlBNnPBW5	29	29	29	22	22	29	20	22	22	29	22	22
yPRosLlBGSLPBW5	290		290	0		0	270		270	700		0
yPRosLlBGsSle	2		0	2		2	2		2	2		0
WstldBGSLPBW5	9w			9w			9w			9w		
GsSlBUPuLBshPRo	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0. 2	2.00	2.00	0. 2	0. 2
3dP		0.166				0.1w0			0.1w0		0. 8	
3iPBgdRPPhPl	0. w0			0. w0			0. w0			0. w0		
ysP.BBiRdBtdRP5	2468	2484	0	2ww1	2 77	24ww	2907	4 77	24w	2w70	4141	0
3iPBgld(nPPl	0.6w6			0.6 8			0. w0			0. w0		
ysP.BBiRdBtld(5	2027	2484	0	2247	2 77	24ww	2907	4 77	24w	2w70	4141	0
pruLrPBWEdGSBRSBpll			Yle			Yle			Yle			Yle
ysP.BBiRdBpWOp5		17				8			16		9	
GSkBytlllB(tr5		9w			9w			40			40	
GSkBDmPSShlBW5		82			788			2214			480	
Wos)liBW(lBe5		96.w			20.7			90.9			1.0	
glskBHPEdBshPRo	0.64	0.w0	0.14	0.8	0.11	0. 7	0.89	0. 6	0. 9	0.1w	0. w	0.60
Hls)cBnlrmileB%5	97%	28%	22%	29%	0%	22%	40%	8%	8%	21%	1%	40%
Alj.BBiRdB)tr5	289	20	17	w8	6	8	91	99 4	22	6w	2 94	77
yrsdlBGsSlBWosWmB%5												
GsSlBudREtBBiRdB)tr5	289	7	0	w8	6	8	91	99 4	22	6w	2 w8	0
TSPdaiPnklIBSPcelhPRS	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	GlVP	prLrP	GlVP	GlVP	prLrP	GlVP	GlVP	prLrP	GlVP	GlVP	prLrP
MIlrsSBNnPrvW5		29			29			29			29	
GSkBDWelPW5		0			0			0			0	
fdReedsikBNnPrvW5		26			26			26			26	
WdRBdlscBGlVBWEdSBGsSl												
HlsldscBBshPRo	2.00	2.00	2.00	2.04	0. 1	2.00	2.0	0. 1	2.04	2.00	0. 1	2.04
WEdSSLBytlllB(tr5	2w			2w			2w			2w		
CE(bldBRWDlPhPRdeB	2	2		2	2	2	2	2	2	2	2	
DlPhPRdBW(tisPB	GlVP	WrdE		GlVP	WrdE	prLrP	GlVP		prLrP	GlVP		
GlslnSLBDlPhPRdBW5	76	76		76	76	76	76	9w6	76	76	9w6	
WosmSLBDlPhPRdBW5	0	0		0	0	0	0	9w0	0	0	9w0	
DlPhPRd2BgPemPRSW5	0	0		0	0	0	0	9w0	0	0	9w0	
DlPhPRd2BynzlW5	76	76		76	76	76	76	6	76	76	6	
DlPhPRd2BWctl	fi+Tx	fi+Tx		fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	fi+Tx	
DlPhPRd2BBrsSSli												
DlPhPRd2BTxPSIBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRd2BQEIElBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DlPhPRd2BDlscBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WEdSBWctl	t(+tP	CA		t(+tP	CA	glo(	gdRP	CA	glo(	gdRP	CA	
gdRPhPlBgrsele	8	4		7	1		w	9		2	6	
glo(nPPlBgrsele	4			1		1			9			
DlPhPRdBgrsel	8	4		7	1	1	w	9	9	2	6	
ydnPnrBgrsel												
MnSn(E(BSnPsiBe5	7.0	w.0		7.0	w.0	w.0	7.0	2w.0	2w.0	7.0	2w.0	

GsSlBudREt	TaG	TaW	Tap	NaG	NaW	Nap	CaG	CaW	Cap	yaG	yaW	yap
MnSn(E(BytimBe5	.w	26.0		.w	42.0	42.0	.w	48.0	48.0	.w	91.0	
WRRsiBytimBe5	.1	42.9		.6	42.0	42.0	27.4	86.9	86.9	27.0	8w.1	
WRRsiBytimB%5	8.0%	9 .4%		6. %	9 .7%	9 .7%	.6%	w4.4%	w4.4%	.7%	w4.2%	
Msxn(E(BudlSBe5	6.7	7w.9		6.2	7w.0	7w.0	1.	80.9	80.9	1.w	6 .1	
YliiRdBW(lBe5	7.w	4.w		7.w	4.w	4.w	7.w	4.w	4.w	7.w	4.w	
Aii-pllBW(lBe5	0.0	2.w		0.0	2.w	2.w	2.0	2.w	2.w	2.0	2.w	
GReBW(lBAljEeBe5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WRRsiBGReBW(lBe5	7.w	6.0		7.w	6.0	6.0	4.w	6.0	6.0	4.w	6.0	
Gisl/GsL	Gisl	GsL		Gisl	GsL	GsL	Gisl	GsL	GsL	Gisl	GsL	
Gisl-GsLBDtP(nzl?												
mlrmilBTxPSenRSBe5	7.0	4.0		7.0	4.0	4.0	7.0	8.0	8.0	7.0	8.0	
plhsiiBMRIl	CRSI	CRSI		CRSI	CRSI	CRSI	CRSI	f-MnS	f-MnS	CRSI	f-MnS	
NsikBW(lBe5					8.0	8.0		.0	.0		8.0	
3iserBDRSPBNsikBe5					91.0	91.0		79.0	79.0		2w.0	
glleRnsSBsiieBW#/rd5					0	0		0	0		0	
AhPBTWhPBudlSBe5	21.4	20.1		28.7	1.8	1.8	1.1	7.7	7.7	22.8	200.w	
AhPEsPIBL/fBpsPR	0.27	0.01		0.29	0.06	0.06	0.06	0.68	0.68	0.01	0.89	
)/hBpsPR	2.29	0.4		0.76	0.0w	0.w4	0.78	0.80	0.02	0.w2	0.w6	
fRSPRRIBDIisc	269.w	94.7		w1.w	60.4	99.2	87.w	w.	0.0	87.4	9.9	
QEIEIBDIisc	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WRRsiBDIisc	269.w	94.7		w1.w	60.4	99.2	87.w	w.	0.0	87.4	9.9	
GOy	3	f		T	T	f	T	A	A	T	A	
AttoRshrBDIisc		224.0			76.w			6.8			4.w	
AttoRshrBGOy		3			D			A			A	
QEIEIBGISLPBwOPBW5	:2 2			48	w	0	96	260	0	62	w4	
QEIEIBGISLPBwPBW5	2w4	7		86	90	w6	(70	(979	(0	(6w	(64	
FSPoSsiBGSkBDreBW5		1 2			9 8			2204			7 0	
WEoSBascBGISLPBW5	290						270		270	700		
aselBstshmcBB)tr5	2w7	479		2w	417	476	14	7916	2000	270	7419	
yRso)sPRSBstBpllEhPS	0	0		0	0	0	0	0	0	0	0	
ytniibshkBstBpllEhPS	0	0		0	0	0	0	0	0	0	0	
yPRosLIBstBpllEhPS	0	0		0	0	0	0	0	0	0	0	
pllEhllB)/hBpsPR	2.29	0.99		0.76	0.02	0.99	0.77	0.80	0.02	0.w0	0.w6	

FSPœlhmRSByE((soc

AdsBWctl, OPlo

fchilBGISLP,B240

AhPEsPIBchilBGISLP,B240

OWelP,B2B2%5BpIVdShlIBPRBrselB9,CaWBsSIB6,yaWBy9sdPBRVBudlS

CsPEosiBchil,B290

fRSPRRIBWctl,BAhPEsPI-fRRdnSsPI

Msxn(E(B)/hBpsPR,B2.29

FSPœlhmRSByLSsiBDIisc,B29.8 FSPœlhmRSBGOy,Ba

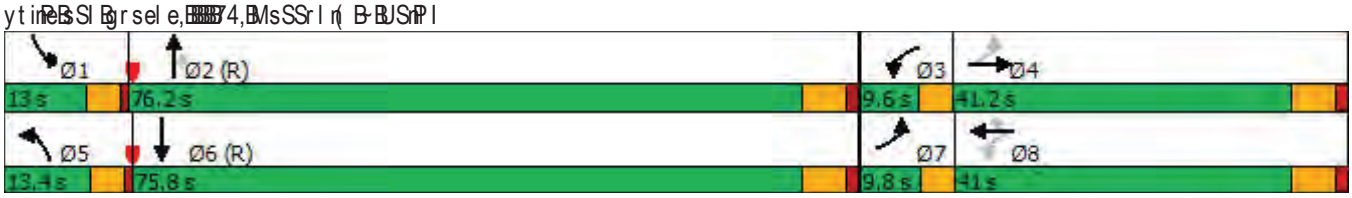
FSPœlhmRSBstshmcBBUPmzsPRSB61.w% FfUBG)liBRVBylo)mlB

ASsicemeBglonRlBv(nS52w

:BBBmRE(lBxhlleBstshmcpBEIBeBPIRdPmsiicBSVSmP.

BBBQEIEIBerRdSBeB(sxn(E(BsVPdBRBchile.

(BBBmRE(lBRcBwPBlchlSPmlBBEIEIBeB(lPdlBocBEteRds(BenLSsi.


Ø1
13 s
Ø2 (R)
76.2 s
Ø3
9.6 s
Ø4
41.2 s
Ø5
13.4 s
Ø6 (R)
75.8 s
Ø7
9.8 s
Ø8
41 s

GsSlBudREt	TaW	Tap	NaG	NaW	CaG	Cap
GsSlBRSVuLEosPRSe						
WosWmBnRiE(lBv)tr5	9299	96	w4	2717	w9	269
3EPEdBnRiE(lBv)tr5	9299	96	w4	2717	w9	269
PlsiB3iRdBv)trti5	2 00	2 00	2 00	2 00	2 00	2 00
GsSlBNnPBW5	29	29	29	29	24	29
GsSlBUPn.B3shPRo	0. w	0. w	0. w	0. w	2.00	2.00
3dP	0. 8				0.1 6	
3iPBgdRPhPl				0. 1	0. 1	
ysP.B3iRdBtdR5	7w 7	0	0	742	28 9	0
3iPBglo(nPPl				0.w88	0. 1	
ysP.B3iRdBtlo(5	7w 7	0	0	2 88	28 9	0
pnLrPBWEoSBRSBpll		Yle				Yle
ysP.B3iRdBpWOp5	w				90	
GSkBytlllBv(tr5	7w			7w	90	
GSkBDmeRShlBW5	707			261w	w 6	
Wos)liBW(lBe5	w.			79.1	90.7	
glskBHREdB3shPRo	0. w	0.w0	0.11	0. w	0.8w	0.80
Hls)cBnlrnhileB%5	0%	8%	24%	w%	2%	0%
Alj.B3iRdBv)tr5	9974	w9	62	24w6	6	972
yrsdlBGsSlBWosWmB%5						
GsSlBudREtB3iRdBv)tr5	9916	0	0	2w28	700	0
TSPdaiRhklBBSPcelhPRS	CR	CR	CR	CR	CR	CR
GsSlBAinLS(lSP	GlVP	pnLrP	GlVP	GlVP	GlVP	pnLrP
MllnsSBNnPvW5	20			20	24	
GSkBDWelRW5	0			0	0	
fdReedsikBNnPvW5	26			26	26	
WdRBdlscBGlVBWEoSBGsSl						
HlsldscB3shPRo	2.00	2.00	2.00	2.00	0. 9	2.00
WEoSSLBytlllBv(tr5			2w		2w	
CE(bldBRVBDlPhPRceB	2		2	2	2	
DlPhPRdBW(tisPB			GlVP		GlVP	
GlslnSLBDlPhPRdBW5	9w6		90	9w6	76	
WosmnSLBDlPhPRdBW5	9w0		0	9w0	0	
DlPhPRdB2BgRemPRSW5	9w0		0	9w0	0	
DlPhPRdB2BynzlW5	6		90	6	76	
DlPhPRdB2BWctl	fi+Tx		fi+Tx	fi+Tx	fi+Tx	
DlPhPRdB2B5rsSSli						
DlPhPRdB2BTxPSlBe5	0.0		0.0	0.0	0.0	
DlPhPRdB2BQEl Elle5	0.0		0.0	0.0	0.0	
DlPhPRdB2BDliscBe5	0.0		0.0	0.0	0.0	
WEoSBWctl	CA		glo(	CA	gdRP	
gdRPhPlBgrsele	9			6	1	
glo(nPPlBgrsele			6			
DlPhPRdBgrsel	9		6	6	1	
ydnPhrBgrsel						
MnSn(E(BSnnsiBe5	2w.0		2w.0	2w.0	1.0	
MnSn(E(BytinBe5	9w.0		92.0	92.0	96.0	
WRRsiBytinBe5	227.0		227.0	227.0	98.0	
WRRsiBytinB%5	10.8%		10.8%	10.8%	2 .7%	

GsSIBudRE t	TaW	Tap	NaG	NaW	CaG	Cap
Msxn(E(Bud I SBe5	208.0		208.0	208.0	92.0	
YI iiRd BW(I Be5	4.w		4.w	4.w	4.w	
Aii-p I I BW(I Be5	2.w		2.w	2.w	2.w	
GReBW(I BAI jEeBe5	0.0			0.0	0.0	
WRRsiBGReBW(I Be5	6.0			6.0	6.0	
GIsI/GsL						
GIsI-GsLBDt P(nzI ?						
mI r mil ET xP SenRSBe5	8.0		8.0	8.0	w.0	
MrSn(E(Bust Be5	4.w		4.w	4.w	0.9	
W(I Bal VRd Bp I I EhI Be5	70.0		70.0	70.0	0.0	
W(I BWRBp I I EhI Be5	9w.0		9w.0	9w.0	0.0	
p I hsiiBMRI I	f -MrS		f -MrS	f -MrS	CRSI	
N sikBW(I Be5	8.0				8.0	
3iser BDRSPBN sikBe5	29.0				97.0	
g I I ePosSB siieBW#/r d5	0				0	
AhPBT WhPBud I SBe5	208.0			208.0	92.0	
AhPEsP I BL/f Bp sPR	0.86			0.86	0.2w	
)/hBp sPR	0.17			2.70I i	2.0w	
f RSPRRIBDI isc	24.9			46.1	290.0	
QEI EI BDI isc	0.0			0.0	0.0	
WRRsiBDI isc	24.9			46.1	290.0	
GOy	a			D	3	
At t dRshr BDI isc	24.9			46.1	290.0	
At t dRshr BGOy	a			D	3	
QEI EI BG SLP BW0P BW5	690			: 4w1	: 912	
QEI EI BG SLP B wP BW5	898			(#w8	#744	
FSP oSsiBGSkBDreBW5	997			260w	w26	
WEcSBascBG SLP BW5						
asel B st shmcB)t r 5	9848			2w20	91w	
yRso)sPRSB st Bp I I EhPS	0			0	0	
yt niibshkB st Bp I I EhPS	0			0	0	
yPRosLI B st Bp I I EhPS	0			0	0	
p I I EhI I B)/hBp sPR	0.17			2.00	2.0w	

FSP oel hPRSBy E((soc			
Ad sBW ctI ,	OPI o		
f chil BG SLP ,B240			
AhPEsP I B chil BG SLP ,B240			
OWel P,B 7Bw66%5Bp I Vd ShI I BPRB r sel B9,TaWBsSI B6,N aWGBy RsdPBRWBud I S			
CsPEosiB chil ,B270			
f RSPRRIBW ctI ,BAhPEsP I -f PRd nGsP I			
Msxn(E(B)/hBp sPR,B2.0w			
FSP oel hPRSBy nLSsiBDI isc,B74.0		FSP oel hPRSBGOy ,B	
FSP oel hPRSB st shmcB2BUPhnzsPRSB200.w%		Ff UBG)I iBRWBy I o)mI Bu	
ASsicemBg I onRI B(nS52w			
: BBBmRE(I B xhI I eBst shmcBpBEI EI BeBP I Rd PhsiicBSWSnP.			
BBBBQEI EI Ber Rd SBeB(sxn(E(Bs\P dBRd RBchil e.			
#BBBB wP B I chI SPhI B)RE(I B xhI I eBst shmcBpBEI EI B(scBBI BRSLI o.			
BBBBQEI EI Ber Rd SBeB(sxn(E(Bs\P dBRd RBchil e.			

[illegible]

[illegible]

[illegible]


Ø2 (R)
113 s
Ø6 (R)
113 s
Ø8
27 s

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	566	765	297	907	144	174	743	31
Future Volume (vph)	212	589	146	158	566	765	297	907	144	174	743	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	135		0	270		0	185		700	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.944			0.937				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1683	7757	0	1330	7741	0	1694	4667	0	1694	7465	1712
Flt Permitted	0.108			0.191			0.429			0.174		
Satd. Flow (perm)	192	7757	0	756	7741	0	365	4667	0	279	7465	1712
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		77			113			45				99
Link Speed (mph)		75			75			40			40	
Link Distance (ft)		7278			1721			2942			760	
Travel Time (s)		67.1			25.3			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.38	0.89	0.93	0.84	0.94	0.63	0.90	0.91	0.34
Heavy Vehicles (%)	3%	4%	5%	2%	2%	2%	7%	5%	7%	7%	6%	19%
Adj. Flow (vph)	277	643	134	207	676	736	749	961	215	149	781	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	277	821	0	207	1012	0	749	1136	0	149	781	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	76	256		76	256		76	256		76	256	76
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	76	6		76	6		76	6		76	6	76
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	8		3	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		7	8		3	4	4
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		7.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	73.0	73.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	73.0		16.0	73.0	73.0
Total Split (%)	17.6%	78.2%		17.6%	78.2%		14.5%	77.6%		14.5%	77.6%	77.6%
Maximum Green (s)	11.5	76.0		11.5	76.0		12.5	71.0		12.5	71.0	71.0
Yellow Time (s)	7.5	4.5		7.5	4.5		7.5	4.5		7.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.5	6.0		7.5	6.0		7.5	6.0		7.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	7.0	3.0		7.0	3.0		7.0	3.0		7.0	3.0	3.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											3.0	3.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.7	73.2		49.4	76.1		46.4	71.6		47.3	29.9	29.9
Actuated g/C Ratio	0.43	0.74		0.45	0.77		0.42	0.29		0.40	0.23	0.23
v/c Ratio	0.92	0.31		0.68	0.86		0.81	0.86		0.61	0.41	0.22
Control Delay	69.6	74.0		28.3	79.4		79.4	47.2		70.9	74.0	3.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	69.6	74.0		28.3	79.4		79.4	47.2		70.9	74.0	3.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		41.9			73.6			42.7			29.1	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	123	242		80	715		166	280		62	114	0
Queue Length 95th (ft)	#232	712		108	793		#240	#741		111	159	21
Internal Link Dist (ft)		7158			1241			2862			280	
Turn Bay Length (ft)	135			270			185			150		240
Base Capacity (vph)	257	1155		709	1134		477	1732		262	936	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.31		0.66	0.86		0.81	0.86		0.53	0.79	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 70 (23%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 79.1		Intersection LOS: D	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	305	355	35	200	850	60	55	1430	800	290	1225	500
Future Volume (vph)	305	355	35	200	850	60	55	1430	800	290	1225	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	17
Storage Length (ft)	735		770	240		775	780		465	750		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.93	0.91	1.00	0.93	0.91	1.00	0.93	0.91	0.88	0.93	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	7187	5107	1566	7123	5200	1524	2918	4835	2497	7242	4835	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	7187	5107	1566	7123	5200	1524	2918	4835	2497	7242	4835	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		367			305			594			1983	
Travel Time (s)		17.0			12.0			8.1			23.1	
Peak Hour Factor	0.83	0.97	0.80	0.91	0.91	0.36	0.86	0.88	0.85	0.33	0.90	0.80
Heavy Vehicles (%)	10%	3%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	220	974	39	64	1630	941	733	1761	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	220	974	39	64	1630	941	733	1761	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	76	256	76	76	256	76	76	256	76	76	256	76
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	76	6	76	76	6	76	76	6	76	76	6	76
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	4	5	7	8	1	5	2	7	1	6	3
Permitted Phases			4			8			2			6
Detector Phase	3	4	5	7	8	1	5	2	7	1	6	3
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	79.0	48.0	10.0	22.0	71.0	14.0	10.0	56.0	22.0	14.0	60.0	79.0
Total Split (%)	23.9%	74.7%	3.1%	15.3%	22.1%	10.0%	3.1%	40.0%	15.3%	10.0%	42.9%	23.9%
Maximum Green (s)	77.0	41.0	4.0	16.0	24.0	8.0	4.0	49.0	16.0	8.0	57.0	77.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	7.0	3.0	7.0	7.0	3.0	7.0	7.0	3.0	7.0	7.0	3.0	7.0
Minimum Gap (s)	0.2	7.0	0.2	0.2	7.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	77.0	42.0	57.0	15.0	24.0	79.0	4.0	49.0	31.0	8.0	57.0	97.0
Actuated g/C Ratio	0.24	0.70	0.78	0.11	0.13	0.28	0.07	0.75	0.51	0.06	0.78	0.66
v/c Ratio	1.08	0.57	0.16	0.66	1.05	0.19	0.33	0.98	0.34	2.04	0.34	0.75
Control Delay	106.7	42.6	70.2	69.6	98.3	79.9	124.4	43.0	16.0	509.1	51.1	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.7	42.6	70.2	69.6	98.3	79.9	124.4	43.0	16.0	509.1	51.1	18.0
LOS	F	D	C	E	F	D	F	D	B	F	D	B
Approach Delay		32.0			89.3			78.0			115.4	
Approach LOS		E			F			D			F	
Queue Length 50th (ft)	~427	228	53	100	~778	55	28	442	188	~282	431	135
Queue Length 95th (ft)	#522	234	88	145	#472	87	m#55	#625	237	#719	513	220
Internal Link Dist (ft)		687			625			514			1903	
Turn Bay Length (ft)	735		770	240		775	780		465	750		450
Base Capacity (vph)	350	1529	592	753	891	424	87	1306	1282	185	1845	1390
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.57	0.16	0.62	1.05	0.19	0.33	0.98	0.37	2.04	0.34	0.75

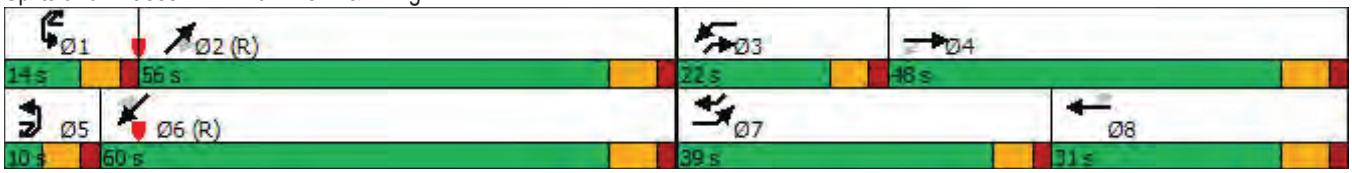
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 176 (93%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.04			
Intersection Signal Delay: 36.2		Intersection LOS: E	
Intersection Capacity Utilization 92.6%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	65	140	425	50	565	250	1300	100	260	1175	65
Future Volume (vph)	15	65	140	425	50	565	250	1300	100	260	1175	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	225		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	0.93	0.91	1.00	0.93	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.962		0.950			0.950		
Satd. Flow (prot)	1558	1867	1437	1681	1302	2383	2947	4939	1587	7477	4686	1139
Flt Permitted	0.590			0.583	0.593		0.950			0.950		
Satd. Flow (perm)	968	1867	1437	1079	1056	2383	2947	4939	1587	7477	4686	1139
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			193			93			129
Link Speed (mph)		70			70			40			40	
Link Distance (ft)		258			527			1551			1184	
Travel Time (s)		5.9			11.9			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.87
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	3%	73%
Adj. Flow (vph)	27	31	167	462	54	614	709	1868	109	287	1182	38
Shared Lane Traffic (%)				45%								
Lane Group Flow (vph)	27	31	167	254	262	614	709	1868	109	287	1182	38
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	76	100	76	20	100	20	76	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	76	6	76	20	6	20	76	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

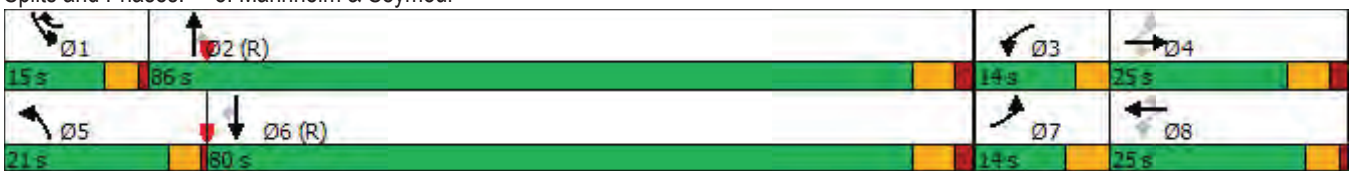
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	4		7	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	3	4	4	7	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	7.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	3.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	14.0	25.0	25.0	14.0	25.0	15.0	21.0	86.0	86.0	15.0	80.0	80.0
Total Split (%)	10.0%	13.9%	13.9%	10.0%	13.9%	10.3%	15.0%	61.4%	61.4%	10.3%	53.1%	53.1%
Maximum Green (s)	9.5	18.5	18.5	10.5	20.5	10.5	13.0	39.5	39.5	10.5	37.5	37.5
Yellow Time (s)	4.5	4.5	4.5	7.5	7.5	7.5	7.5	4.5	4.5	7.5	4.5	4.5
All-Red Time (s)	0.0	2.0	2.0	0.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.5	6.5	7.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	7.0	7.0	7.0	7.0	3.0	3.0	7.0	3.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	7.0	7.0	7.0	0.2	4.0	4.0	7.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					3.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	27.9	12.8	12.8	74.5	77.7	46.9	18.8	37.5	37.5	16.8	32.1	32.1
Actuated g/C Ratio	0.13	0.09	0.09	0.25	0.24	0.74	0.17	0.52	0.52	0.12	0.52	0.52
v/c Ratio	0.11	0.42	0.58	0.33	0.82	0.58	0.38	0.31	0.12	0.69	0.49	0.12
Control Delay	41.5	66.5	16.5	67.3	69.2	29.7	32.9	23.0	7.9	31.4	72.0	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	66.5	16.5	67.3	69.2	29.7	32.9	23.0	7.9	31.4	72.0	7.3
LOS	D	E	B	E	E	C	E	C	A	E	C	A
Approach Delay		72.5			46.7			72.1			73.8	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	16	67	0	210	220	181	179	482	5	140	781	10
Queue Length 95th (ft)	70	109	53	#734	#416	280	#185	434	72	#257	132	17
Internal Link Dist (ft)		138			447			1431			1104	
Turn Bay Length (ft)	115		115	225		150	145		145	200		150
Base Capacity (vph)	211	246	776	728	719	1064	400	2823	940	411	2498	689
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.29	0.49	0.33	0.82	0.58	0.33	0.66	0.12	0.69	0.43	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 114 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 76.9	Intersection LOS: D
Intersection Capacity Utilization 32.2%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1490	190	15	1765	700	5
Future Volume (vph)	1490	190	15	1765	700	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	17
Storage Length (ft)		760	735		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.93	0.95	0.93	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	7619	1468	2573	7585	7019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	7619	1468	2573	7585	7019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		211				15
Link Speed (mph)	55			55	70	
Link Distance (ft)	1079			990	1136	
Travel Time (s)	12.9			12.7	26.3	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.77
Heavy Vehicles (%)	5%	10%	78%	6%	16%	29%
Adj. Flow (vph)	1620	211	73	1551	753	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1620	211	73	1551	753	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	76	76	256	76	76
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	76	76	6	76	76
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	71.5	16.0	9.5	71.5	16.0	16.0
Total Split (s)	34.0	26.0	10.0	84.0	26.0	26.0
Total Split (%)	63.7%	27.6%	9.1%	36.4%	27.6%	27.6%
Maximum Green (s)	63.5	20.0	5.5	33.5	20.0	20.0
Yellow Time (s)	4.5	4.5	7.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	7.0	3.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.9	38.7	5.8	56.1	13.4	13.4
Actuated g/C Ratio	0.59	0.90	0.03	0.65	0.20	0.20
v/c Ratio	0.36	0.16	0.22	0.63	0.59	0.06
Control Delay	13.0	0.4	48.8	10.9	78.2	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	0.4	48.8	10.9	78.2	13.4
LOS	B	A	D	B	D	B
Approach Delay	15.1			11.8	73.7	
Approach LOS	B			B	D	
Queue Length 50th (ft)	786	0	10	260	95	0
Queue Length 95th (ft)	433	8	17	710	158	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		760	735		295	295
Base Capacity (vph)	2911	1744	168	7102	370	724
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.16	0.22	0.50	0.49	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.36			
Intersection Signal Delay: 15.9		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

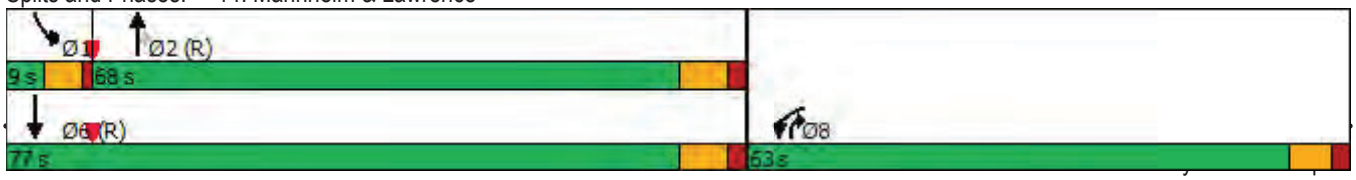
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	495	375	1330	375	220	1725
Future Volume (vph)	495	375	1330	375	220	1725
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	235		750	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.93	1.00	0.91	1.00	0.93	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	7054	1422	4977	1578	7286	4939
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	7054	1422	4977	1578	7286	4939
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		544				
Link Speed (mph)	75		50			50
Link Distance (ft)	855		1650			339
Travel Time (s)	16.3		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	3%	6%	3%	5%	7%	6%
Adj. Flow (vph)	567	826	1963	808	229	1795
Shared Lane Traffic (%)						
Lane Group Flow (vph)	567	826	1963	808	229	1795
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	76	76	256	76	76	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	76	76	6	76	76	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	67.0		68.0	67.0	9.0	33.0
Total Split (%)	45.0%		48.6%	45.0%	6.4%	55.0%
Maximum Green (s)	56.5		61.0	56.5	4.0	30.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		3.0	6.5	5.0	3.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	4.0	3.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	47.0	140.0	61.0	111.0	13.5	87.5
Actuated g/C Ratio	0.71	1.00	0.44	0.39	0.12	0.60
v/c Ratio	0.60	0.58	0.92	0.66	0.56	0.43
Control Delay	47.1	1.3	79.0	4.3	67.5	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	1.3	79.0	4.3	67.5	13.6
LOS	D	A	D	A	E	B
Approach Delay	18.5		29.0			24.1
Approach LOS	B		C			C
Queue Length 50th (ft)	225	0	598	88	102	248
Queue Length 95th (ft)	241	0	310	45	#257	755
Internal Link Dist (ft)	335		1530			699
Turn Bay Length (ft)		235		750	495	
Base Capacity (vph)	1272	1422	2149	1763	409	2968
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.58	0.92	0.59	0.56	0.43

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 30
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 68.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence

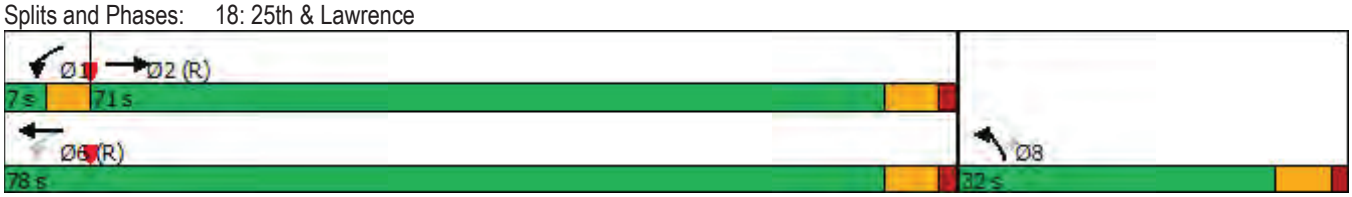


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	340	190	55	1030	185	115
Future Volume (vph)	340	190	55	1030	185	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.961					0.850
Flt Protected				0.993	0.950	
Satd. Flow (prot)	7264	0	0	7762	1307	1495
Flt Permitted				0.362	0.950	
Satd. Flow (perm)	7264	0	0	2569	1307	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	39					
Link Speed (mph)	75			75	70	
Link Distance (ft)	855			7278	633	
Travel Time (s)	16.3			67.1	15.4	
Peak Hour Factor	0.94	0.68	0.30	0.95	0.87	0.32
Heavy Vehicles (%)	7%	2%	8%	3%	6%	8%
Adj. Flow (vph)	383	239	39	1126	227	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1066	0	0	1205	227	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	76	76
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	76	76
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		7.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	31.0		3.0	38.0	72.0	72.0
Total Split (%)	64.5%		6.4%	30.9%	29.1%	29.1%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	65.0		7.5	32.0	26.0	26.0
Yellow Time (s)	4.5		7.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		7.0	3.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	33.0			33.0	21.0	21.0
Actuated g/C Ratio	0.30			0.30	0.19	0.19
v/c Ratio	0.46			0.63	0.69	0.56
Control Delay	3.9			8.3	52.0	43.7
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	3.9			8.3	52.0	43.7
LOS	A			A	D	D
Approach Delay	3.9			8.3	50.0	
Approach LOS	A			A	D	
Queue Length 50th (ft)	147			84	143	107
Queue Length 95th (ft)	215			730	199	126
Internal Link Dist (ft)	335			7158	593	
Turn Bay Length (ft)						
Base Capacity (vph)	2703			1393	402	757
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.46			0.63	0.55	0.45

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 82.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 18: 25th & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	571	799	57	954	229	774	1015	21	68	484	24
Future Volume (vph)	173	571	799	57	954	229	774	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.931			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	7477	1730	1345	7722	0	1518	7774	0	1589	7284	0
Flt Permitted	0.068			0.416			0.151			0.134		
Satd. Flow (perm)	114	7477	1730	364	7722	0	241	7774	0	291	7284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		25			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		7983			376			1070			2002	
Travel Time (s)		68.0			12.5			13.6			74.1	
Peak Hour Factor	0.82	0.91	0.84	0.38	0.89	0.88	0.87	0.89	0.35	0.81	0.89	0.63
Heavy Vehicles (%)	6%	3%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	163	584	435	68	1032	260	402	1140	28	84	544	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	584	435	68	1772	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	76	256	76	76	256		76	256		76	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	76	6	76	76	6		76	6		76	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 7	1	6		7	8		3	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 7	1	6		7	8		3	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		75.0	54.0		10.0	29.0	
Total Split (%)	10.3%	48.6%		5.3%	47.6%		25.0%	78.6%		3.1%	20.3%	
Maximum Green (s)	11.5	62.0		4.5	55.0		71.5	48.0		5.5	27.0	
Yellow Time (s)	7.5	4.5		7.5	4.5		7.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.5	6.0		7.5	6.0		7.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	7.0	3.0		7.0	3.0		5.0	3.0		7.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					3.0							
Flash Dont Walk (s)					78.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	32.5	67.6	98.6	62.0	55.0		60.5	48.0		70.0	27.0	
Actuated g/C Ratio	0.52	0.45	0.30	0.44	0.79		0.47	0.74		0.21	0.16	
v/c Ratio	0.97	0.73	0.43	0.18	1.01		1.07	1.02		0.34	1.03	
Control Delay	83.8	9.8	7.5	18.9	68.7		92.2	33.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	83.8	9.8	7.5	18.9	68.7		92.2	33.0		68.1	112.8	
LOS	F	A	A	B	E		F	E		E	F	
Approach Delay		18.0			65.9			80.9			103.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	86	84	73	70	~679		~742	~592		46	~705	
Queue Length 95th (ft)	m#193	m99	m71	49	#385		#436	#318		#89	#421	
Internal Link Dist (ft)		7903			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	769	1720		791	1144		117	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.97	0.73	0.43	0.18	1.01		1.07	1.02		0.34	1.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 175			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 64.7		Intersection LOS: E	
Intersection Capacity Utilization 90.8%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	1030	180	170	1470	70	705	720	125	75	195	95
Future Volume (vph)	170	1030	180	170	1470	70	705	720	125	75	195	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	270		270	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.963			0.947	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1676	7410	1787	1676	7195	0	1638	7280	0	0	7032	0
Flt Permitted	0.060			0.126			0.183				0.382	
Satd. Flow (perm)	107	7410	1787	213	7195	0	770	7280	0	0	2415	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133		4			28			80	
Link Speed (mph)		75			75			70			70	
Link Distance (ft)		1685			7983			904			367	
Travel Time (s)		72.8			33.3			20.5			13.7	
Peak Hour Factor	0.85	0.97	0.32	0.39	0.96	0.53	0.83	0.60	0.87	0.33	0.85	0.56
Heavy Vehicles (%)	7%	4%	9%	7%	5%	7%	4%	2%	6%	7%	4%	11%
Adj. Flow (vph)	157	1151	250	165	1490	57	751	577	151	45	229	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	1151	250	165	1547	0	751	684	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	76	256	76	76	256		76	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	76	6	76	76	6		76	76		20	76	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 7	1	6		7	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 7	1	6		7	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	15.0		7.0	15.0		7.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	76.0		6.5	75.0		6.5	76.0		76.0	76.0	
Total Split (s)	11.0	32.0		15.0	36.0		26.0	57.0		23.0	23.0	
Total Split (%)	3.9%	51.4%		10.3%	54.7%		18.6%	73.9%		19.7%	19.7%	
Maximum Green (s)	3.5	66.0		11.5	30.0		22.5	43.0		21.0	21.0	
Yellow Time (s)	7.5	4.5		7.5	4.5		7.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	7.5	6.0		7.5	6.0		7.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	7.0	3.0		7.0	3.0		7.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		3.0			3.0			3.0		3.0	3.0	
Flash Dont Walk (s)		27.0			22.0			27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	36.8	66.8	92.8	82.9	30.0		49.5	43.0			21.0	
Actuated g/C Ratio	0.55	0.48	0.66	0.59	0.50		0.75	0.74			0.15	
v/c Ratio	1.11	0.31	0.26	0.30	0.96		1.05	0.61			1.07	
Control Delay	140.6	22.9	1.3	74.6	72.6		101.4	40.0			98.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	140.6	22.9	1.3	74.6	72.6		101.4	40.0			98.8	
LOS	F	C	A	C	C		F	D			F	
Approach Delay		71.1			72.8			60.8			98.8	
Approach LOS		C			C			E			F	
Queue Length 50th (ft)	~117	227	9	33	745		~283	262			~197	
Queue Length 95th (ft)	m#240	250	17	m82	m744		#459	194			#236	
Internal Link Dist (ft)		1605			7903			824			687	
Turn Bay Length (ft)	270		270	200			110					
Base Capacity (vph)	178	1626	936	245	1599		777	1119			470	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	1.11	0.31	0.26	0.63	0.96		1.05	0.61			1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 127 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 44.5		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	

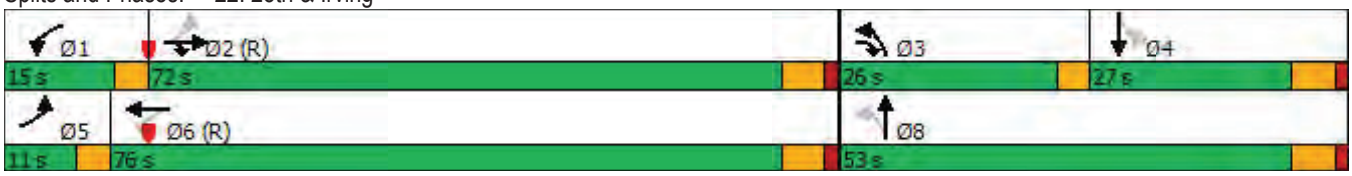
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	0	69	710	75	230	137	1883	0	0	1689	112
Future Volume (vph)	55	0	69	710	75	230	137	1883	0	0	1689	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.93	1.00	1.00	0.93	1.00	1.00	0.93	0.91	1.00	0.93	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2301	1867	1233	7477	1867	1587	2918	4883	1867	7614	4977	1782
Flt Permitted	0.372			0.501			0.067					
Satd. Flow (perm)	2081	1867	1233	1810	1867	1587	194	4883	1867	7614	4977	1782
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189			208						140
Link Speed (mph)		25			70			50			50	
Link Distance (ft)		667			295			1983			1650	
Travel Time (s)		18.1			6.3			23.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.97	0.36
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	3%	17%
Adj. Flow (vph)	97	0	175	773	78	297	746	2003	0	0	1816	143
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	0	175	773	78	297	746	2003	0	0	1816	143
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	76	100	76	20	100	20	76	256	20	20	256	76
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	76	6	76	20	6	20	76	6	20	20	6	76
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	3	4		7	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	3	4	4	7	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	5.0	5.0	7.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	9.5	15.0	15.0	9.5	25.0	25.0	8.0	22.0	22.0	9.5	22.0	22.0
Total Split (s)	10.0	19.0	19.0	24.0	77.0	77.0	20.0	33.0	33.0	20.0	33.0	33.0
Total Split (%)	3.1%	17.6%	17.6%	13.1%	27.6%	27.6%	14.7%	55.0%	55.0%	14.7%	55.0%	55.0%
Maximum Green (s)	5.5	12.0	12.0	19.5	26.0	26.0	15.0	30.0	30.0	15.5	30.0	30.0
Yellow Time (s)	7.5	5.0	5.0	7.5	5.0	5.0	4.0	5.0	5.0	7.5	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	3.0	3.0	4.5	3.0	3.0	5.0	3.0	3.0	4.5	3.0	3.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	7.0	5.0	5.0	7.0	7.0	7.0	4.0	3.0	3.0	7.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					3.0	3.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	16.8		8.8	72.3	20.2	20.2	93.8	95.8			34.3	34.3
Actuated g/C Ratio	0.12		0.06	0.27	0.14	0.14	0.30	0.68			0.57	0.57
v/c Ratio	0.74		0.57	0.55	0.14	0.32	0.33	0.60			0.69	0.18
Control Delay	46.3		9.4	48.6	51.9	23.5	57.9	1.5			27.4	2.9
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	46.3		9.4	48.6	51.9	23.5	57.9	1.5			27.4	2.9
LOS	D		A	D	D	C	D	A			C	A
Approach Delay		24.6			79.5			9.2			21.9	
Approach LOS		C			D			A			C	
Queue Length 50th (ft)	75		0	176	71	32	94	28			524	11
Queue Length 95th (ft)	76		0	137	67	132	51	m28			410	14
Internal Link Dist (ft)		587			215			1903			1530	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	234		282	648	745	467	460	7744			2672	802
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.74		0.48	0.52	0.11	0.67	0.35	0.60			0.69	0.18

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 30.9%		ICU Level of Service C	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

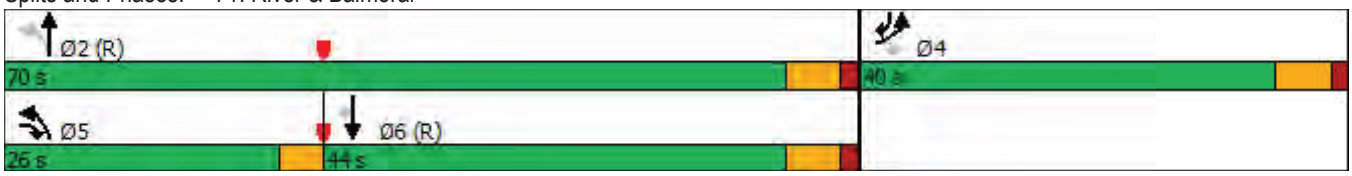
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	179	471	976	464	185
Future Volume (vph)	295	179	471	976	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	770	770	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.93	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	7224	1468	1307	7689	7572	1578
Flt Permitted	0.950		0.407			
Satd. Flow (perm)	7224	1468	322	7689	7572	1578
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			75	75	
Link Distance (ft)	832			1729	1055	
Travel Time (s)	27.8			25.9	20.6	
Peak Hour Factor	0.91	0.39	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	7%	4%	5%
Adj. Flow (vph)	724	136	459	1013	523	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	724	136	459	1013	523	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	76	76	76	256	256	76
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	76	76	76	6	6	76
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	70.0	70.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	17.5	17.5	76.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	30.0	44.0	40.0
Total Split (%)	76.4%	27.6%	27.6%	67.6%	40.0%	76.4%
Maximum Green (s)	74.0	22.5	22.5	64.0	78.0	74.0
Yellow Time (s)	4.5	7.5	7.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	5.0	3.0	3.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	75.0	75.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	47.7	87.3	81.2	53.2	80.0
Actuated g/C Ratio	0.15	0.79	0.36	0.34	0.52	0.37
v/c Ratio	0.66	0.26	0.67	0.73	0.29	0.19
Control Delay	50.2	5.1	8.9	6.0	13.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.1	8.9	6.0	13.7	1.7
LOS	D	A	A	A	B	A
Approach Delay	74.7			6.9	12.6	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	17	83	115	107	0
Queue Length 95th (ft)	151	71	161	133	181	21
Internal Link Dist (ft)	392			1249	935	
Turn Bay Length (ft)	770	770	250			485
Base Capacity (vph)	996	311	366	2324	1876	1784
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.25	0.60	0.73	0.29	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 30.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 71: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	2110	20	90	1260	75
Future Volume (vph)	45	5	25	40	5	105	45	2110	20	90	1260	75
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	170		170	700		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.883				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1463	1498	0	1558	1977	1455	1207	4977	1459	1570	4398	0
Flt Permitted	0.354			0.371			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1977	1455	1207	4977	1459	1570	4398	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70				117			86		6	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		931			733			1184			430	
Travel Time (s)		26.5			10.7			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.39	0.88	0.97	0.32	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	27%	13%	11%	12%	0%	11%	40%	3%	3%	18%	8%	40%
Adj. Flow (vph)	30	10	70	51	6	117	67	2198	22	106	1726	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	40	0	51	6	117	67	2198	22	106	1784	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	76	76		76	76	76	76	256	76	76	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	76	76		76	76	76	76	6	76	76	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	4		7	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	3	4		7	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	5.0		7.0	5.0	5.0	7.0	15.0	15.0	7.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	43.0	43.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	3.1%	29.7%		3.1%	29.7%	29.7%	14.7%	49.7%	49.7%	14.7%	49.7%	
Maximum Green (s)	6.5	75.0		6.5	75.0	75.0	15.5	67.0	67.0	15.5	67.0	
Yellow Time (s)	7.5	4.5		7.5	4.5	4.5	7.5	4.5	4.5	7.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.5	6.0		7.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	7.0	4.0		7.0	4.0	4.0	7.0	3.0	3.0	7.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					3.0	3.0		9.0	9.0		3.0	
Flash Dont Walk (s)					28.0	28.0		72.0	72.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.7	8.6		16.7	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.43	0.77		0.77	0.05	0.58	0.58	0.68	0.02	0.65	0.42	
Control Delay	67.9	77.8		53.4	60.4	22.7	87.5	8.2	0.1	56.4	14.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	67.9	77.8		53.4	60.4	22.7	87.5	8.2	0.1	56.4	14.3	
LOS	E	C		E	E	C	F	A	A	E	B	
Approach Delay		52.9			74.2			10.2			13.3	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	58	9		42	5	0	58	205	0	90	186	
Queue Length 95th (ft)	32	14		30	20	61	85	286	m0	m176	268	
Internal Link Dist (ft)		891			293			1104			790	
Turn Bay Length (ft)	120						170		170	700		
Base Capacity (vph)	150	793		156	487	448	178	7273	983	185	7709	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.43	0.10		0.77	0.01	0.25	0.46	0.68	0.02	0.53	0.42	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 15.1 Intersection LOS: B
Intersection Capacity Utilization 66.6% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 74: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1517	12	14	2060	181	28
Future Volume (vph)	1517	12	14	2060	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	7599	0	0	7476	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	7599	0	0	7182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7				5	
Link Speed (mph)	75			75	20	
Link Distance (ft)	707			1685	596	
Travel Time (s)	5.9			72.8	20.7	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.35	0.30
Heavy Vehicles (%)	0%	3%	14%	5%	1%	0%
Adj. Flow (vph)	1597	24	16	2168	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1613	0	0	2184	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	76	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	76	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	76.0	
Total Split (s)	105.0		105.0	105.0	75.0	
Total Split (%)	35.0%		35.0%	35.0%	25.0%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	99.0		99.0	99.0	29.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	70.0		70.0	70.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	3.0				3.0	
Flash Dont Walk (s)	12.0				27.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	102.2			102.2	25.8	
Actuated g/C Ratio	0.37			0.37	0.18	
v/c Ratio	0.62			0.94	0.80	
Control Delay	10.9			18.8	30.6	
Queue Delay	0.0			0.0	0.0	
Total Delay	10.9			18.8	30.6	
LOS	B			B	E	
Approach Delay	10.9			18.8	30.6	
Approach LOS	B			B	E	
Queue Length 50th (ft)	753			463	240	
Queue Length 95th (ft)	478			m492	232	
Internal Link Dist (ft)	227			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2628			2727	795	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.94	0.31	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (33%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 170			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

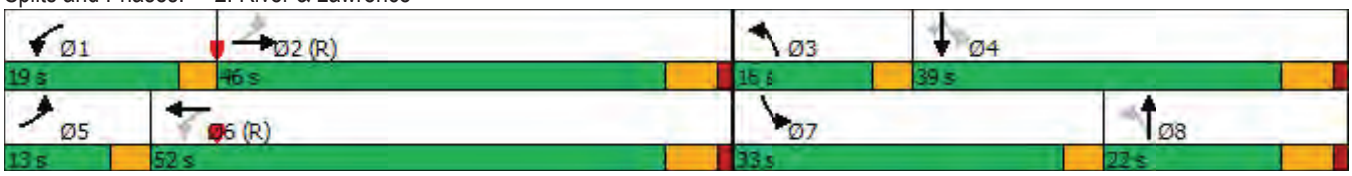
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.965			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3431	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.165			0.091			0.238			0.197		
Satd. Flow (perm)	282	3449	0	171	3431	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			39			96				228
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	751	230	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	981	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	13.0	46.0		19.0	52.0		16.0	22.0		33.0	39.0	39.0
Total Split (%)	10.8%	38.3%		15.8%	43.3%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	9.5	40.0		15.5	46.0		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.7	40.3		61.2	46.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.43	0.34		0.51	0.39		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.53	0.91		0.89	0.73		0.85	0.93		0.97	0.91	0.43
Control Delay	21.3	43.3		61.0	33.9		59.1	64.5		66.1	56.4	8.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.3	43.3		61.0	33.9		59.1	64.5		66.1	56.4	8.2
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		41.1			39.5			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	31	417		141	326		103	170		307	361	11
Queue Length 95th (ft)	m50	#543		#256	380		#230	#234		#522	#484	63
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	229	1179		296	1350		247	735		496	994	583
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.51	0.91		0.86	0.73		0.84	0.93		0.96	0.91	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.3		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	165	680	100	55	1090	960	345	2050	770
Future Volume (vph)	635	1080	100	165	680	100	55	1090	960	345	2050	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	190	810	119	60	1198	1157	397	2135	885
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	190	810	119	60	1198	1157	397	2135	885
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0
Total Split (s)	29.0	46.0	10.0	18.0	35.0	26.0	10.0	50.0	18.0	26.0	66.0	29.0
Total Split (%)	20.7%	32.9%	7.1%	12.9%	25.0%	18.6%	7.1%	35.7%	12.9%	18.6%	47.1%	20.7%
Maximum Green (s)	23.0	39.0	4.0	12.0	28.0	20.0	4.0	43.0	12.0	20.0	59.0	23.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	23.0	38.3	49.8	12.0	27.3	53.9	4.4	44.1	63.1	19.5	59.2	89.2
Actuated g/C Ratio	0.16	0.27	0.36	0.09	0.20	0.38	0.03	0.32	0.45	0.14	0.42	0.64
v/c Ratio	1.27	0.93	0.22	0.72	0.81	0.21	0.62	0.76	0.97	0.89	1.00	0.51
Control Delay	181.2	61.5	32.8	78.0	61.2	29.7	75.5	48.3	58.0	61.1	48.8	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	181.2	61.5	32.8	78.0	61.2	29.7	75.5	48.3	58.0	61.1	48.8	25.6
LOS	F	E	C	E	E	C	E	D	E	E	D	C
Approach Delay		97.3			60.7			53.6			44.2	
Approach LOS		F			E			D			D	
Queue Length 50th (ft)	~393	438	76	88	259	71	29	258	625	176	~734	405
Queue Length 95th (ft)	#518	426	115	126	286	110	m#43	356	#651	m198	#848	m443
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	527	1476	547	265	1020	564	96	1578	1197	459	2138	1733
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	0.91	0.22	0.72	0.79	0.21	0.63	0.76	0.97	0.86	1.00	0.51

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 61.2		Intersection LOS: E	
Intersection Capacity Utilization 93.2%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	35	300	285	40	590	70	1335	70	325	1960	25
Future Volume (vph)	50	35	300	285	40	590	70	1335	70	325	1960	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	225		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.963		0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1681	1704	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.293			0.732	0.753		0.950			0.950		
Satd. Flow (perm)	480	1863	1473	1295	1333	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			284			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			523			1551			1184	
Travel Time (s)		5.9			11.9			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	61	38	361	310	43	641	80	1435	76	353	2253	28
Shared Lane Traffic (%)				44%								
Lane Group Flow (vph)	61	38	361	174	179	641	80	1435	76	353	2253	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	9.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	16.0	9.5	77.0	77.0	16.0	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	11.4%	6.8%	55.0%	55.0%	11.4%	59.6%	59.6%
Maximum Green (s)	18.0	40.5	40.5	18.0	18.0	11.5	5.5	70.5	70.5	11.5	77.0	77.0
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)				7.0	7.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
Act Effct Green (s)	37.5	37.5	37.5	24.2	24.2	44.4	5.7	69.4	69.4	15.6	79.8	79.8
Actuated g/C Ratio	0.27	0.27	0.27	0.17	0.17	0.32	0.04	0.50	0.50	0.11	0.57	0.57
v/c Ratio	0.28	0.08	0.78	0.78	0.78	0.60	0.67	0.58	0.09	0.92	0.84	0.04
Control Delay	40.9	36.7	46.7	79.2	78.6	25.5	91.8	26.1	0.2	102.2	12.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	36.7	46.7	79.2	78.6	25.5	91.8	26.1	0.2	102.2	12.6	0.1
LOS	D	D	D	E	E	C	F	C	A	F	B	A
Approach Delay		45.1			44.5			28.1			24.5	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	41	25	224	161	166	163	37	325	0	~211	161	0
Queue Length 95th (ft)	72	54	304	#317	#324	246	#75	372	0	#311	222	m0
Internal Link Dist (ft)		178			443			1471			1104	
Turn Bay Length (ft)	115		115	225		150	145		145	200		150
Base Capacity (vph)	267	538	492	223	230	1076	120	2507	868	383	2669	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.07	0.73	0.78	0.78	0.60	0.67	0.57	0.09	0.92	0.84	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 135 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 80.0%	ICU Level of Service D
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1825	310	10	1570	110	15
Future Volume (vph)	1825	310	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		323				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1962	323	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1962	323	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	84.5	16.0	9.5	94.0	16.0	16.0
Total Split (%)	76.8%	14.5%	8.6%	85.5%	14.5%	14.5%
Maximum Green (s)	78.0	10.0	5.0	87.5	10.0	10.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	59.9	81.2	5.2	63.1	10.3	10.3
Actuated g/C Ratio	0.69	0.94	0.06	0.73	0.12	0.12
v/c Ratio	0.78	0.23	0.13	0.63	0.35	0.15
Control Delay	11.9	0.5	47.0	6.7	41.8	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	0.5	47.0	6.7	41.8	18.9
LOS	B	A	D	A	D	B
Approach Delay	10.3			7.2	37.9	
Approach LOS	B			A	D	
Queue Length 50th (ft)	258	0	4	185	25	0
Queue Length 95th (ft)	498	9	11	226	72	11
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	3245	1400	151	3350	361	177
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.23	0.13	0.49	0.35	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 10.0		Intersection LOS: B	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	610	450	1235	720	860	2360
Future Volume (vph)	610	450	1235	720	860	2360
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		447		7		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	685	511	1286	783	1024	2713
Shared Lane Traffic (%)						
Lane Group Flow (vph)	685	511	1286	783	1024	2713
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	37.0		59.0	37.0	44.0	103.0
Total Split (%)	26.4%		42.1%	26.4%	31.4%	73.6%
Maximum Green (s)	30.5		52.0	30.5	39.0	96.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	30.5	140.0	52.0	89.5	39.0	96.0
Actuated g/C Ratio	0.22	1.00	0.37	0.64	0.28	0.69
v/c Ratio	1.03	0.36	0.70	0.79	1.12	0.79
Control Delay	95.7	0.7	32.0	14.1	114.0	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.7	0.7	32.0	14.1	114.0	17.5
LOS	F	A	C	B	F	B
Approach Delay	55.1		25.2			43.9
Approach LOS	E		C			D
Queue Length 50th (ft)	~343	0	220	119	~551	576
Queue Length 95th (ft)	#459	0	264	148	#610	588
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	665	1422	1832	985	915	3414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.36	0.70	0.79	1.12	0.79

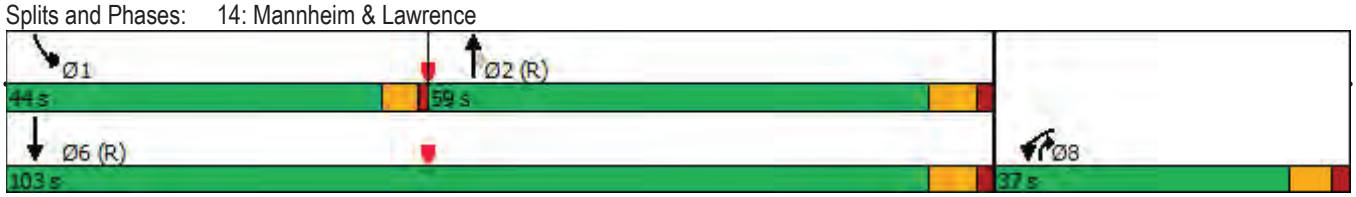
Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 40.3 Intersection LOS: D
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1135	405	115	810	195	105
Future Volume (vph)	1135	405	115	810	195	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.959					0.850
Flt Protected				0.994	0.950	
Satd. Flow (prot)	3258	0	0	3350	1703	1495
Flt Permitted				0.515	0.950	
Satd. Flow (perm)	3258	0	0	1735	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	94					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1220	455	129	900	210	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1675	0	0	1029	210	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	85.0		13.0	98.0	22.0	22.0
Total Split (%)	70.8%		10.8%	81.7%	18.3%	18.3%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	79.0		9.5	92.0	16.0	16.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	89.9			89.9	18.1	18.1
Actuated g/C Ratio	0.75			0.75	0.15	0.15
v/c Ratio	0.68			0.91dl	0.82	0.68
Control Delay	8.7			10.2	75.1	64.8
Queue Delay	0.3			0.0	0.0	0.0
Total Delay	9.1			10.2	75.1	64.8
LOS	A			B	E	E
Approach Delay	9.1			10.2	70.7	
Approach LOS	A			B	E	
Queue Length 50th (ft)	281			344	160	113
Queue Length 95th (ft)	318			101	#312	140
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2465			1330	256	225
Starvation Cap Reductn	273			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.76			0.77	0.82	0.68

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			

Splits and Phases: 18: 25th & Lawrence

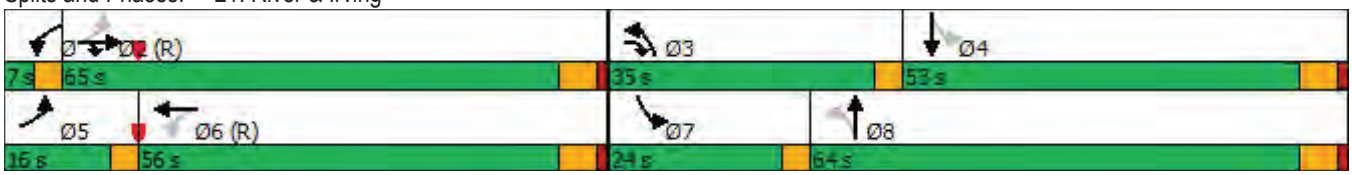
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3373	0	1518	3296	0	1589	3315	0
Flt Permitted	0.151			0.079			0.079			0.300		
Satd. Flow (perm)	253	3433	1370	145	3373	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		7			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	719	76	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	795	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Maximum Green (s)	12.5	59.0		3.5	50.0		31.5	58.0		20.5	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.73	0.95	0.66	0.61	0.75		1.03	0.61		0.59	1.05	
Control Delay	38.5	36.3	10.8	60.3	53.8		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.5	36.3	10.8	60.3	53.8		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.1			54.2			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	49	561	215	32	392		~343	343		99	~613	
Queue Length 95th (ft)	m59	m595	m239	#73	472		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	212	1295	835	85	1066		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.72	0.95	0.66	0.61	0.75		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.8		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	160	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	160	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3217	0
Flt Permitted	0.077			0.061			0.192				0.692	
Satd. Flow (perm)	133	3410	1383	105	3181	0	339	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112		5			85			11	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	174	217	1112	77	285	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	174	217	1189	0	285	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	21.0	72.0		20.4	71.4		14.6	67.6		53.0	53.0	
Total Split (%)	13.1%	45.0%		12.8%	44.6%		9.1%	42.3%		33.1%	33.1%	
Maximum Green (s)	17.5	66.0		16.9	65.4		11.1	61.6		47.0	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.7	66.0	80.6	85.1	65.7		64.1	61.6			47.0	
Actuated g/C Ratio	0.54	0.41	0.50	0.53	0.41		0.40	0.38			0.29	
v/c Ratio	0.94	0.97	0.23	1.00	0.91		1.25	0.39			1.02	
Control Delay	75.9	53.6	7.5	118.1	38.6		176.9	30.1			93.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	75.9	53.6	7.5	118.1	38.6		176.9	30.1			93.5	
LOS	E	D	A	F	D		F	C			F	
Approach Delay		51.8			50.9			83.4			93.5	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	174	673	20	169	580		~285	164			~393	
Queue Length 95th (ft)	155	m#874	m46	m#269	m641		#498	178			#475	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	235	1406	752	217	1309		228	1279			671	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.92	0.97	0.23	1.00	0.91		1.25	0.39			1.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay: 63.0		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

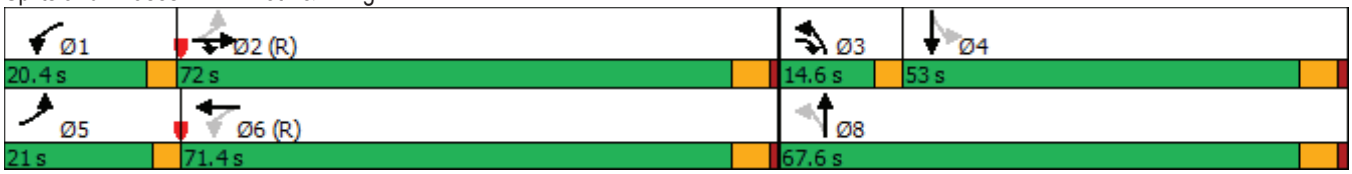
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	101	0	95	415	25	90	105	1599	0	0	2684	75
Future Volume (vph)	101	0	95	415	25	90	105	1599	0	0	2684	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2724	1863	1225	3433	1863	1583	2367	4979	1863	3614	4933	1259
Flt Permitted	0.740			0.496			0.045					
Satd. Flow (perm)	2121	1863	1225	1792	1863	1583	112	4979	1863	3614	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125						125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Adj. Flow (vph)	158	0	119	451	27	98	114	1666	0	0	2739	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	0	119	451	27	98	114	1666	0	0	2739	109
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	15.0	15.0	15.0	12.0	25.0	25.0	8.0	22.0	22.0	15.0	22.0	22.0
Total Split (s)	15.0	20.0	20.0	20.0	25.0	25.0	10.0	83.0	83.0	17.0	90.0	90.0
Total Split (%)	10.7%	14.3%	14.3%	14.3%	17.9%	17.9%	7.1%	59.3%	59.3%	12.1%	64.3%	64.3%
Maximum Green (s)	8.0	13.0	13.0	13.0	18.0	18.0	5.0	76.0	76.0	10.0	83.0	83.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	4.0	7.0	7.0	5.0	7.0	7.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	17.5		9.5	27.5	14.5	14.5	98.5	96.5			84.0	84.0
Actuated g/C Ratio	0.12		0.07	0.20	0.10	0.10	0.70	0.69			0.60	0.60
v/c Ratio	0.53		0.60	0.89	0.14	0.36	0.57	0.49			0.93	0.14
Control Delay	54.1		21.7	72.6	58.0	7.7	30.5	4.2			33.5	1.7
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	54.1		21.7	72.6	58.0	7.7	30.5	4.2			33.5	1.7
LOS	D		C	E	E	A	C	A			C	A
Approach Delay		40.2			60.8			5.9			32.3	
Approach LOS		D			E			A			C	
Queue Length 50th (ft)	63		0	196	23	0	12	46			905	6
Queue Length 95th (ft)	64		37	#253	53	31	m21	m172			m934	m8
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	298		227	504	239	312	199	3433			2961	805
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.53		0.52	0.89	0.11	0.31	0.57	0.49			0.93	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 24 (17%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 85.3%		ICU Level of Service E	

Analysis Period (min) 15

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

m Volume for 95th percentile queue is metered by upstream signal.

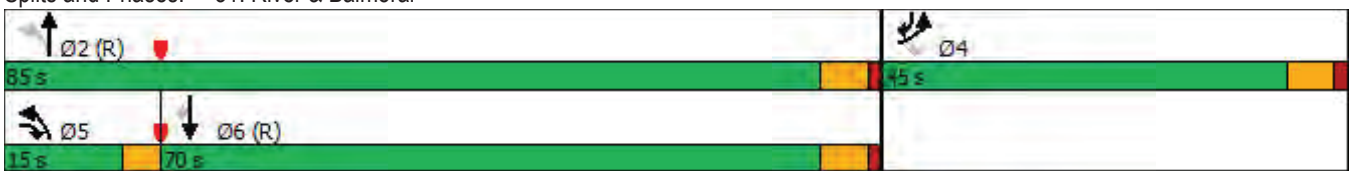
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Maximum Green (s)	39.0	11.5	11.5	79.0	64.0	39.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1932	10	55	1948	20
Future Volume (vph)	110	5	70	45	5	90	20	1932	10	55	1948	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4845	0
Flt Permitted	0.541			0.698			0.950			0.950		
Satd. Flow (perm)	836	1479	0	1145	1933	1455	1203	4933	1459	1530	4845	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				113			113		4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	2247	11	65	2072	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	2247	11	65	2112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	16.0	23.0		11.0	18.0	18.0	14.2	88.0	88.0	18.0	91.8	
Total Split (%)	11.4%	16.4%		7.9%	12.9%	12.9%	10.1%	62.9%	62.9%	12.9%	65.6%	
Maximum Green (s)	12.5	17.0		7.5	12.0	12.0	9.7	82.0	82.0	13.5	85.8	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	26.2	14.9		18.0	8.2	8.2	8.6	91.2	91.2	10.8	95.6	
Actuated g/C Ratio	0.19	0.11		0.13	0.06	0.06	0.06	0.65	0.65	0.08	0.68	
v/c Ratio	0.57	0.40		0.41	0.06	0.58	0.46	0.70	0.01	0.55	0.64	
Control Delay	61.1	20.7		56.1	61.8	22.1	78.5	12.3	0.0	85.1	2.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.1	20.7		56.1	61.8	22.1	78.5	12.3	0.0	85.1	2.7	
LOS	E	C		E	E	C	E	B	A	F	A	
Approach Delay		43.7			36.3			13.2			5.2	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	99	10		55	6	0	31	227	0	63	46	
Queue Length 95th (ft)	157	0		69	19	43	46	287	m0	m67	m61	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	212	255		171	165	228	85	3214	990	147	3309	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.57	0.36		0.41	0.04	0.48	0.40	0.70	0.01	0.44	0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 107 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1383	52	162
Future Volume (vph)	2122	26	54	1383	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3470	1800	0
Flt Permitted				0.581	0.987	
Satd. Flow (perm)	3466	0	0	2020	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				25	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1426	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1486	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	134.0		134.0	134.0	26.0	
Total Split (%)	83.8%		83.8%	83.8%	16.3%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	128.0		128.0	128.0	20.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	128.0			128.0	20.0	
Actuated g/C Ratio	0.80			0.80	0.12	
v/c Ratio	0.82			0.92	1.07	
Control Delay	12.5			28.7	134.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	12.5			28.7	134.3	
LOS	B			C	F	
Approach Delay	12.5			28.7	134.3	
Approach LOS	B			C	F	
Queue Length 50th (ft)	625			386	~279	
Queue Length 95th (ft)	720			m373	#360	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2773			1616	246	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.82			0.92	1.07	

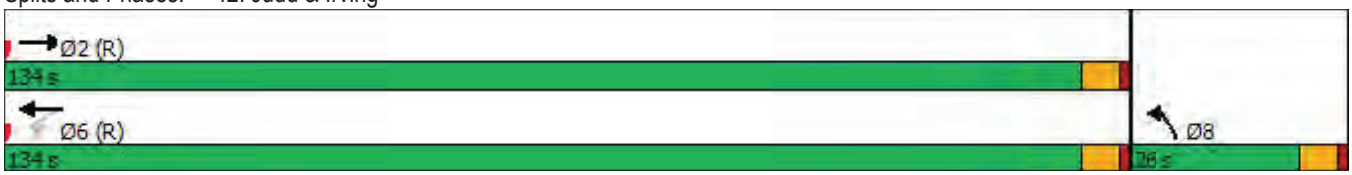
Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 26.4		Intersection LOS: C	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 42: Judd & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	716	290	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.959			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3394	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.192			0.440			0.132		
Satd. Flow (perm)	192	3353	0	358	3394	0	785	4663	0	235	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			52			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	804	299	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1103	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.0		46.5	31.6		44.3	30.4	30.4
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.28	0.28
v/c Ratio	0.92	0.71		0.68	0.96		0.80	0.86		0.61	0.40	0.22
Control Delay	70.4	35.6		28.6	54.1		39.1	43.2		30.9	33.6	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	70.4	35.6		28.6	54.1		39.1	43.2		30.9	33.6	7.1
LOS	E	D		C	D		D	D		C	C	A
Approach Delay		43.3			50.1			42.2			28.9	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	125	241		80	385		166	280		62	114	0
Queue Length 95th (ft)	#272	312		108	#520		#235	#341		112	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	252	1155		310	1146		434	1372		263	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.65	0.96		0.80	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 42.9		Intersection LOS: D	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: River & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	130	850	235	55	1470	800	290	1225	500
Future Volume (vph)	705	755	75	130	850	235	55	1470	800	290	1225	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	143	934	309	64	1670	941	377	1361	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	143	934	309	64	1670	941	377	1361	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	39.0	48.0	10.0	22.0	31.0	14.0	10.0	56.0	22.0	14.0	60.0	39.0
Total Split (%)	27.9%	34.3%	7.1%	15.7%	22.1%	10.0%	7.1%	40.0%	15.7%	10.0%	42.9%	27.9%
Maximum Green (s)	33.0	41.0	4.0	16.0	24.0	8.0	4.0	49.0	16.0	8.0	53.0	33.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	33.0	43.6	54.6	13.4	24.0	39.0	4.0	49.0	69.4	8.0	53.0	93.0
Actuated g/C Ratio	0.24	0.31	0.39	0.10	0.17	0.28	0.03	0.35	0.50	0.06	0.38	0.66
v/c Ratio	1.08	0.51	0.15	0.48	1.05	0.73	0.77	0.98	0.76	2.04	0.74	0.35
Control Delay	106.3	41.3	29.4	64.9	98.7	57.1	124.8	47.3	19.3	510.5	52.5	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.3	41.3	29.4	64.9	98.7	57.1	124.8	47.3	19.3	510.5	52.5	16.7
LOS	F	D	C	E	F	E	F	D	B	F	D	B
Approach Delay		71.3			85.9			39.3			116.1	
Approach LOS		E			F			D			F	
Queue Length 50th (ft)	~423	222	55	64	~338	256	28	479	295	~281	469	155
Queue Length 95th (ft)	#522	274	88	99	#432	297	m#55	#625	273	#320	517	214
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	750	1588	610	357	891	424	83	1706	1282	185	1845	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.51	0.15	0.40	1.05	0.73	0.77	0.98	0.73	2.04	0.74	0.35

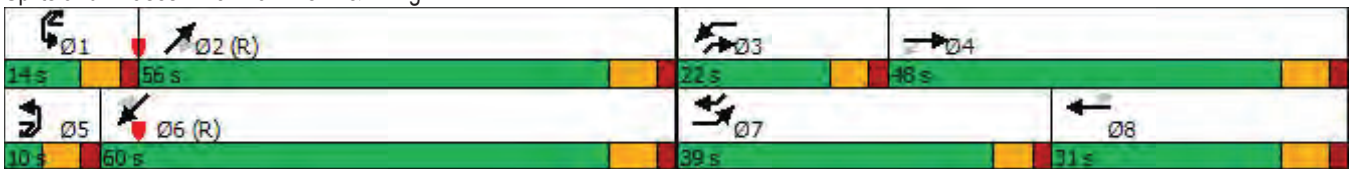
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.04			
Intersection Signal Delay: 76.3		Intersection LOS: E	
Intersection Capacity Utilization 92.6%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	40	140	425	50	565	250	1700	100	100	1435	65
Future Volume (vph)	15	40	140	425	50	565	250	1700	100	100	1435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	225		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.962		0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1681	1702	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.590			0.593	0.603		0.950			0.950		
Satd. Flow (perm)	968	1863	1473	1049	1067	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			197			97			129
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			523			1551			1184	
Travel Time (s)		5.9			11.9			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	43	163	462	54	614	309	1868	109	109	1495	78
Shared Lane Traffic (%)				45%								
Lane Group Flow (vph)	23	43	163	254	262	614	309	1868	109	109	1495	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

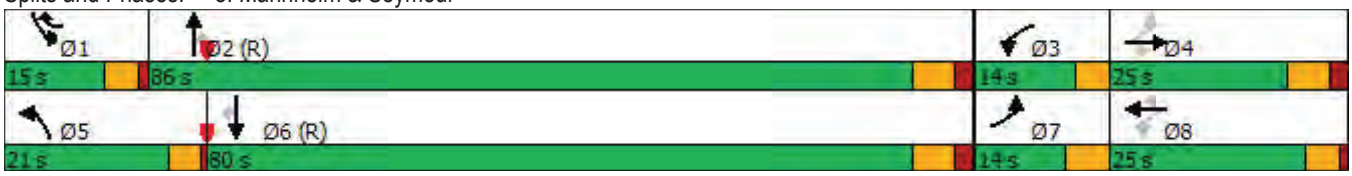
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	14.0	25.0	25.0	14.0	25.0	15.0	21.0	86.0	86.0	15.0	80.0	80.0
Total Split (%)	10.0%	17.9%	17.9%	10.0%	17.9%	10.7%	15.0%	61.4%	61.4%	10.7%	57.1%	57.1%
Maximum Green (s)	9.5	18.5	18.5	10.5	20.5	10.5	17.0	79.5	79.5	10.5	73.5	73.5
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	0.0	2.0	2.0	0.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.5	6.5	3.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	22.6	11.5	11.5	33.2	32.0	38.9	19.1	81.5	81.5	10.1	73.0	73.0
Actuated g/C Ratio	0.16	0.08	0.08	0.24	0.23	0.28	0.14	0.58	0.58	0.07	0.52	0.52
v/c Ratio	0.12	0.28	0.60	0.79	0.84	0.67	0.77	0.64	0.11	0.44	0.61	0.12
Control Delay	42.1	63.4	17.8	66.4	72.9	34.2	71.2	21.6	3.7	67.8	37.0	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	63.4	17.8	66.4	72.9	34.2	71.2	21.6	3.7	67.8	37.0	3.9
LOS	D	E	B	E	E	C	E	C	A	E	D	A
Approach Delay		28.8			50.4			27.4			37.5	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	16	38	0	207	216	192	139	443	5	53	508	12
Queue Length 95th (ft)	30	74	57	#372	#414	280	#185	474	32	87	457	13
Internal Link Dist (ft)		178			443			1471			1104	
Turn Bay Length (ft)	115		115	225		150	145		145	200		150
Base Capacity (vph)	202	246	336	320	314	938	408	2945	975	276	2531	696
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.17	0.49	0.79	0.83	0.65	0.76	0.63	0.11	0.39	0.59	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 114 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 35.5	Intersection LOS: D
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

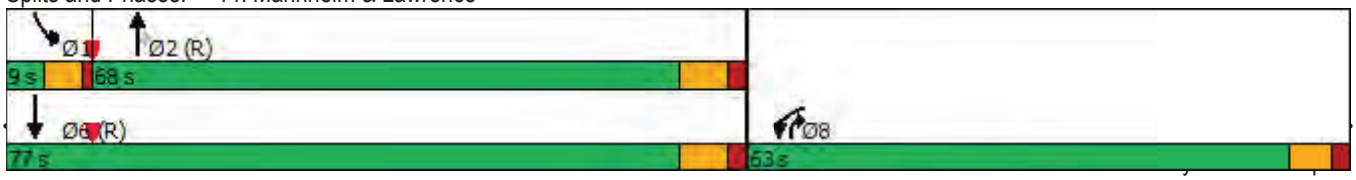
Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	735	735	1780	735	55	1290
Future Volume (vph)	735	735	1780	735	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		544		75		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	835	826	1978	808	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	835	826	1978	808	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	63.0		68.0	63.0	9.0	77.0
Total Split (%)	45.0%		48.6%	45.0%	6.4%	55.0%
Maximum Green (s)	56.5		61.0	56.5	4.0	70.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	53.4	140.0	65.1	126.8	5.3	73.1
Actuated g/C Ratio	0.38	1.00	0.46	0.91	0.04	0.52
v/c Ratio	0.72	0.58	0.86	0.58	0.46	0.52
Control Delay	40.5	1.7	31.6	2.8	78.2	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	1.7	31.6	2.8	78.2	23.4
LOS	D	A	C	A	E	C
Approach Delay	21.2		23.2			25.6
Approach LOS	C		C			C
Queue Length 50th (ft)	319	0	297	16	26	304
Queue Length 95th (ft)	380	0	502	39	#59	349
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	1232	1422	2295	1408	125	2599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.58	0.86	0.57	0.46	0.52

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	740	190	55	1255	240	115
Future Volume (vph)	740	190	55	1255	240	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.961					0.850
Flt Protected				0.997	0.950	
Satd. Flow (prot)	3264	0	0	3362	1703	1495
Flt Permitted				0.769	0.950	
Satd. Flow (perm)	3264	0	0	2593	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	79					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	787	279	79	1321	289	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1066	0	0	1400	289	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	71.0		7.0	78.0	32.0	32.0
Total Split (%)	64.5%		6.4%	70.9%	29.1%	29.1%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	65.0		3.5	72.0	26.0	26.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	74.3			74.3	23.7	23.7
Actuated g/C Ratio	0.68			0.68	0.22	0.22
v/c Ratio	0.48			0.80	0.79	0.50
Control Delay	9.0			13.8	56.7	43.1
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	9.0			13.8	56.7	43.1
LOS	A			B	E	D
Approach Delay	9.0			13.8	51.9	
Approach LOS	A			B	D	
Queue Length 50th (ft)	168			484	189	97
Queue Length 95th (ft)	215			m507	259	126
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2231			1752	402	353
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.48			0.80	0.72	0.45

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 17.9		Intersection LOS: B	
Intersection Capacity Utilization 91.1%		ICU Level of Service F	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 18: 25th & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	979	209	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	979	209	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.973			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3329	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3329	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		22			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1100	238	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	87.8	9.8	3.5	18.9	69.3		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	87.8	9.8	3.5	18.9	69.3		92.2	77.0		68.1	112.8	
LOS	F	A	A	B	E		F	E		E	F	
Approach Delay		18.0			66.8			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	86	84	37	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#200	m100	m32	49	#792		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1321		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.6		Intersection LOS: E	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1495	30	295	320	125	35	195	75
Future Volume (vph)	130	1070	180	130	1495	30	295	320	125	35	195	75
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.951	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3110	0
Flt Permitted	0.060			0.126			0.228				0.773	
Satd. Flow (perm)	103	3410	1383	217	3195	0	403	3280	0	0	2416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177		3			28			50	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1557	53	339	533	151	45	229	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1610	0	339	684	0	0	408	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	11.0	72.0		15.0	76.0		26.0	53.0		27.0	27.0	
Total Split (%)	7.9%	51.4%		10.7%	54.3%		18.6%	37.9%		19.3%	19.3%	
Maximum Green (s)	7.5	66.0		11.5	70.0		22.5	47.0		21.0	21.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	76.8	66.8	92.8	82.9	70.0		49.5	47.0			21.0	
Actuated g/C Ratio	0.55	0.48	0.66	0.59	0.50		0.35	0.34			0.15	
v/c Ratio	1.11	0.71	0.26	0.70	1.01		0.98	0.61			1.01	
Control Delay	140.9	22.9	1.7	34.8	41.5		81.3	40.0			98.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	140.9	22.9	1.7	34.8	41.5		81.3	40.0			98.4	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		31.1			40.9			53.6			98.4	
Approach LOS		C			D			D			F	
Queue Length 50th (ft)	~113	223	9	77	~493		249	262			~178	
Queue Length 95th (ft)	m#240	250	13	m81	m#463		#409	194			#265	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	138	1626	976	245	1599		347	1119			404	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	1.11	0.71	0.26	0.67	1.01		0.98	0.61			1.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 45.4		Intersection LOS: D	
Intersection Capacity Utilization 93.0%		ICU Level of Service F	

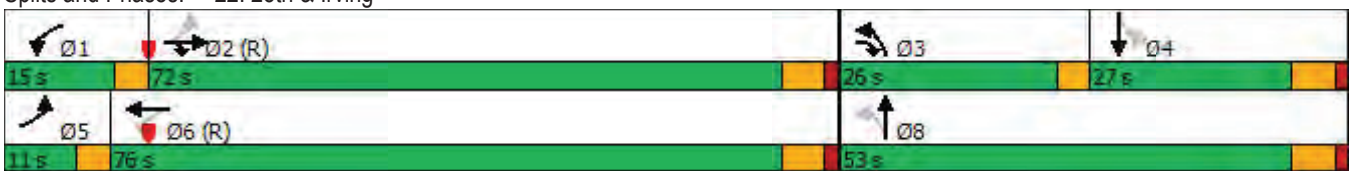
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	45	30	49	310	35	270	138	1887	110	290	1639	77
Future Volume (vph)	45	30	49	310	35	270	138	1887	110	290	1639	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2701	1863	1277	3433	1863	1583	2918	4887	1583	3433	4933	1382
Flt Permitted	0.732			0.506			0.077			0.052		
Satd. Flow (perm)	2081	1863	1277	1829	1863	1583	237	4887	1583	188	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			213			140			140
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	76	33	96	337	38	293	276	2007	120	315	1762	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	33	96	337	38	293	276	2007	120	315	1762	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	5.0	5.0	3.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	9.5	15.0	15.0	9.5	25.0	25.0	8.0	22.0	22.0	9.5	22.0	22.0
Total Split (s)	10.0	19.0	19.0	24.0	33.0	33.0	20.0	77.0	77.0	20.0	77.0	77.0
Total Split (%)	7.1%	13.6%	13.6%	17.1%	23.6%	23.6%	14.3%	55.0%	55.0%	14.3%	55.0%	55.0%
Maximum Green (s)	5.5	12.0	12.0	19.5	26.0	26.0	15.0	70.0	70.0	15.5	70.0	70.0
Yellow Time (s)	3.5	5.0	5.0	3.5	5.0	5.0	4.0	5.0	5.0	3.5	5.0	5.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	5.0	7.0	7.0	4.5	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0	5.0	3.0	3.0	3.0	4.0	7.0	7.0	3.0	7.0	7.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	17.9	9.9	9.9	33.7	21.2	21.2	92.3	77.2	77.2	92.4	76.8	76.8
Actuated g/C Ratio	0.13	0.07	0.07	0.24	0.15	0.15	0.66	0.55	0.55	0.66	0.55	0.55
v/c Ratio	0.26	0.25	0.44	0.53	0.14	0.70	0.68	0.74	0.13	0.74	0.65	0.12
Control Delay	43.7	65.7	8.7	47.5	50.8	25.0	37.5	13.6	0.7	45.5	19.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.7	65.7	8.7	47.5	50.8	25.0	37.5	13.6	0.7	45.5	19.9	1.4
LOS	D	E	A	D	D	C	D	B	A	D	B	A
Approach Delay		30.8			37.9			15.7			22.7	
Approach LOS		C			D			B			C	
Queue Length 50th (ft)	27	29	0	134	30	66	59	479	3	101	273	0
Queue Length 95th (ft)	30	64	0	172	63	167	26	m513	m6	151	481	5
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250		250	200		200
Base Capacity (vph)	290	159	237	663	345	467	451	2695	935	486	2705	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.21	0.41	0.51	0.11	0.63	0.61	0.74	0.13	0.65	0.65	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 21.8		Intersection LOS: C	
Intersection Capacity Utilization 73.8%		ICU Level of Service D	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

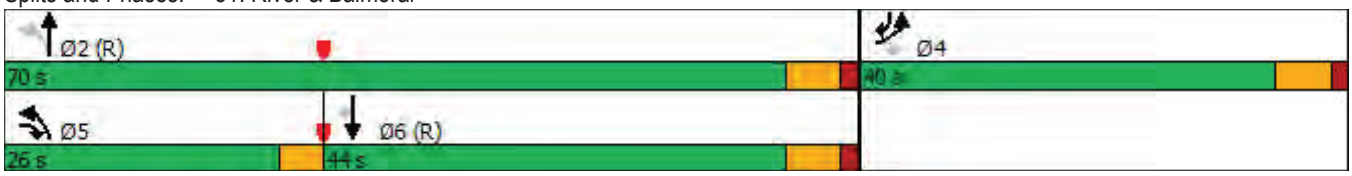
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	381	936	464	185
Future Volume (vph)	295	139	381	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.408			
Satd. Flow (perm)	3224	1468	731	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	405	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	405	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	41.0	83.7	81.2	59.5	82.3
Actuated g/C Ratio	0.15	0.37	0.76	0.74	0.54	0.75
v/c Ratio	0.66	0.28	0.56	0.37	0.28	0.18
Control Delay	50.2	5.6	7.9	6.0	15.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.6	7.9	6.0	15.7	1.2
LOS	D	A	A	A	B	A
Approach Delay	34.5			6.5	11.4	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	14	74	115	98	0
Queue Length 95th (ft)	151	34	137	177	169	18
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	699	762	2724	1911	1409
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.53	0.37	0.28	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	2110	20	90	1260	35
Future Volume (vph)	45	5	25	40	5	105	45	2110	20	90	1260	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4798	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4798	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		6	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	2198	22	106	1326	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	2198	22	106	1384	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.68	0.02	0.65	0.42	
Control Delay	63.9	33.8		57.4	60.4	22.3	85.6	8.5	0.1	58.3	14.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	85.6	8.5	0.1	58.3	14.5	
LOS	E	C		E	E	C	F	A	A	E	B	
Approach Delay		52.9			34.2			10.5			17.6	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	58	9		42	5	0	57	199	0	94	175	
Queue Length 95th (ft)	72	14		70	20	61	85	286	m0	m141	252	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3309	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.68	0.02	0.57	0.42	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 66.6%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2080	181	28
Future Volume (vph)	1513	12	14	2080	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2189	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2205	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	105.0		105.0	105.0	35.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	99.0		99.0	99.0	29.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	102.2			102.2	25.8	
Actuated g/C Ratio	0.73			0.73	0.18	
v/c Ratio	0.62			0.95	0.80	
Control Delay	10.9			20.0	70.6	
Queue Delay	0.0			0.0	0.0	
Total Delay	10.9			20.0	70.6	
LOS	B			B	E	
Approach Delay	10.9			20.0	70.6	
Approach LOS	B			B	E	
Queue Length 50th (ft)	357			480	240	
Queue Length 95th (ft)	438			m485	272	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2628			2323	395	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.95	0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 89.0%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

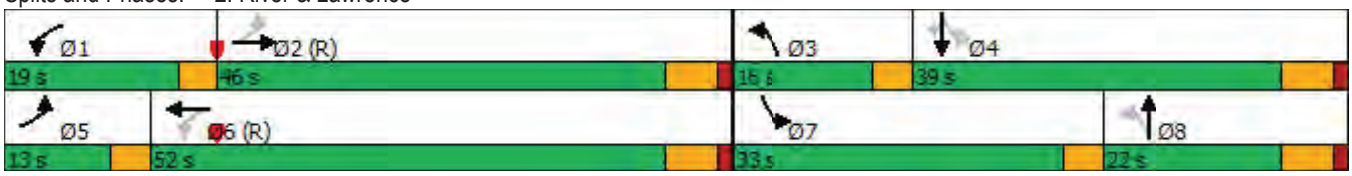
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	746	86	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.984			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3490	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.169			0.091			0.238			0.197		
Satd. Flow (perm)	289	3449	0	171	3490	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			13			96				227
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	867	106	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	973	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	13.0	46.0		19.0	52.0		16.0	22.0		33.0	39.0	39.0
Total Split (%)	10.8%	38.3%		15.8%	43.3%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	9.5	40.0		15.5	46.0		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.7	40.3		61.2	46.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.43	0.34		0.51	0.39		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.52	0.91		0.89	0.72		0.85	0.93		0.97	0.91	0.43
Control Delay	21.2	44.0		61.0	34.5		59.1	64.5		66.1	56.4	8.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.2	44.0		61.0	34.5		59.1	64.5		66.1	56.4	8.3
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		41.8			40.0			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	31	417		141	330		103	170		307	361	12
Queue Length 95th (ft)	m50	#543		#256	382		#230	#234		#522	#484	64
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	232	1179		296	1357		247	735		496	994	582
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.50	0.91		0.86	0.72		0.84	0.93		0.96	0.91	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.6		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	125	680	250	55	1090	960	345	2050	770
Future Volume (vph)	635	1080	100	125	680	250	55	1090	960	345	2050	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3099	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	144	810	298	60	1198	1157	397	2135	885
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	144	810	298	60	1198	1157	397	2135	885
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0	10.0	25.0	10.0
Total Split (s)	29.0	46.0	10.0	18.0	35.0	26.0	10.0	50.0	18.0	26.0	66.0	29.0
Total Split (%)	20.7%	32.9%	7.1%	12.9%	25.0%	18.6%	7.1%	35.7%	12.9%	18.6%	47.1%	20.7%
Maximum Green (s)	23.0	39.0	4.0	12.0	28.0	20.0	4.0	43.0	12.0	20.0	59.0	23.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	23.0	38.3	49.8	12.0	27.3	53.9	4.4	44.1	63.1	19.5	59.2	89.2
Actuated g/C Ratio	0.16	0.27	0.36	0.09	0.20	0.38	0.03	0.32	0.45	0.14	0.42	0.64
v/c Ratio	1.27	0.93	0.22	0.54	0.81	0.53	0.62	0.76	0.97	0.89	1.00	0.51
Control Delay	181.2	61.5	32.8	69.6	61.2	37.2	75.7	48.1	55.4	62.4	51.5	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	181.2	61.5	32.8	69.6	61.2	37.2	75.7	48.1	55.4	62.4	51.5	25.8
LOS	F	E	C	E	E	D	E	D	E	E	D	C
Approach Delay		97.3			56.5			52.3			46.1	
Approach LOS		F			E			D			D	
Queue Length 50th (ft)	~393	438	76	65	259	206	29	260	625	175	~731	390
Queue Length 95th (ft)	#518	426	115	99	286	273	m#43	356	#651	m212	#847	447
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	527	1476	547	265	1020	564	96	1578	1197	459	2138	1733
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	0.91	0.22	0.54	0.79	0.53	0.63	0.76	0.97	0.86	1.00	0.51

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 61.0		Intersection LOS: E	
Intersection Capacity Utilization 93.2%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	25	300	285	40	590	70	1335	75	140	2145	25
Future Volume (vph)	40	25	300	285	40	590	70	1335	75	140	2145	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	225		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.963		0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1681	1704	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.302			0.740	0.760		0.950			0.950		
Satd. Flow (perm)	495	1863	1473	1310	1345	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94			307			144			109
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			523			1551			1184	
Travel Time (s)		5.9			11.9			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	49	27	361	310	43	641	80	1435	82	152	2466	28
Shared Lane Traffic (%)				44%								
Lane Group Flow (vph)	49	27	361	174	179	641	80	1435	82	152	2466	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

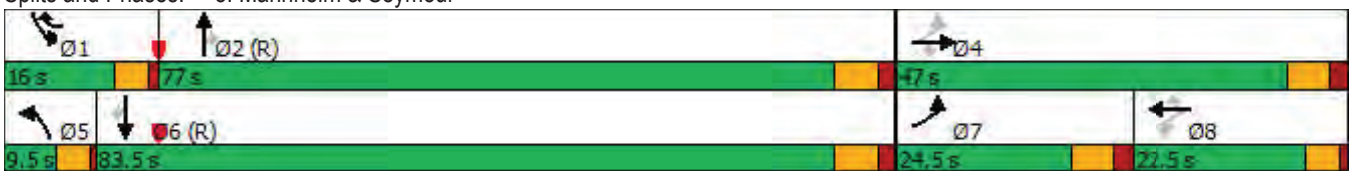
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	9.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	47.0	47.0	22.5	22.5	16.0	9.5	77.0	77.0	16.0	83.5	83.5
Total Split (%)	17.5%	33.6%	33.6%	16.1%	16.1%	11.4%	6.8%	55.0%	55.0%	11.4%	59.6%	59.6%
Maximum Green (s)	18.0	40.5	40.5	18.0	18.0	11.5	5.5	70.5	70.5	11.5	77.0	77.0
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)				7.0	7.0							
Flash Dont Walk (s)				11.0	11.0							
Pedestrian Calls (#/hr)				0	0							
Act Effct Green (s)	37.4	37.4	37.4	24.8	24.8	40.1	5.7	74.3	74.3	10.8	79.9	79.9
Actuated g/C Ratio	0.27	0.27	0.27	0.18	0.18	0.29	0.04	0.53	0.53	0.08	0.57	0.57
v/c Ratio	0.23	0.05	0.78	0.75	0.75	0.63	0.67	0.54	0.09	0.58	0.92	0.04
Control Delay	39.6	36.4	46.9	75.3	75.0	25.0	91.8	23.4	0.2	89.2	17.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	36.4	46.9	75.3	75.0	25.0	91.8	23.4	0.2	89.2	17.3	0.1
LOS	D	D	D	E	E	C	F	C	A	F	B	A
Approach Delay		45.5			42.8			25.7			21.3	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	33	18	224	160	164	149	37	325	0	72	167	0
Queue Length 95th (ft)	61	42	304	#303	#309	230	#75	372	0	107	368	m0
Internal Link Dist (ft)		178			443			1471			1104	
Turn Bay Length (ft)	115		115	225		150	145		145	200		150
Base Capacity (vph)	268	538	492	232	238	1030	120	2643	907	281	2674	719
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.05	0.73	0.75	0.75	0.62	0.67	0.54	0.09	0.54	0.92	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 135 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 28.1	Intersection LOS: C
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1952	333	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	84.5	16.0	9.5	94.0	16.0	16.0
Total Split (%)	76.8%	14.5%	8.6%	85.5%	14.5%	14.5%
Maximum Green (s)	78.0	10.0	5.0	87.5	10.0	10.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	60.1	81.3	5.2	63.2	10.3	10.3
Actuated g/C Ratio	0.70	0.94	0.06	0.73	0.12	0.12
v/c Ratio	0.78	0.24	0.13	0.63	0.35	0.15
Control Delay	11.7	0.5	46.9	6.7	41.7	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	0.5	46.9	6.7	41.7	18.9
LOS	B	A	D	A	D	B
Approach Delay	10.1			7.2	37.8	
Approach LOS	B			A	D	
Queue Length 50th (ft)	255	0	4	185	25	0
Queue Length 95th (ft)	493	9	11	226	72	11
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	3249	1400	151	3354	360	177
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.24	0.13	0.49	0.35	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

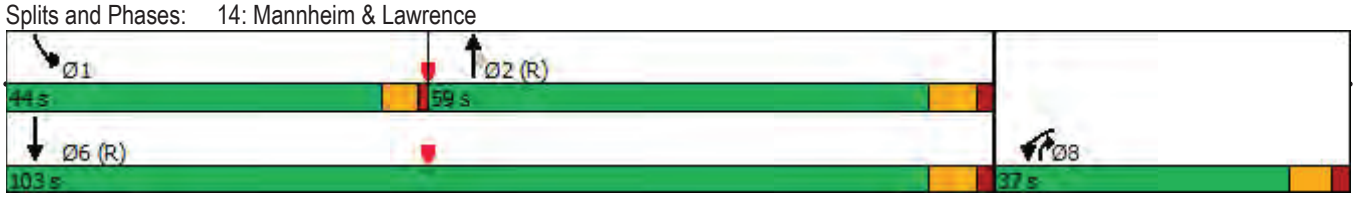
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	715	450	1230	735	850	2335
Future Volume (vph)	715	450	1230	735	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		381		7		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	803	511	1281	799	1012	2684
Shared Lane Traffic (%)						
Lane Group Flow (vph)	803	511	1281	799	1012	2684
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	37.0		59.0	37.0	44.0	103.0
Total Split (%)	26.4%		42.1%	26.4%	31.4%	73.6%
Maximum Green (s)	30.5		52.0	30.5	39.0	96.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	30.5	140.0	52.0	89.5	39.0	96.0
Actuated g/C Ratio	0.22	1.00	0.37	0.64	0.28	0.69
v/c Ratio	1.21	0.36	0.70	0.81	1.11	0.79
Control Delay	153.1	0.7	51.6	23.7	109.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	153.1	0.7	51.6	23.7	109.5	17.2
LOS	F	A	D	C	F	B
Approach Delay	93.8		40.9			42.5
Approach LOS	F		D			D
Queue Length 50th (ft)	~458	0	322	239	~539	563
Queue Length 95th (ft)	#576	0	393	351	#599	575
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	665	1422	1832	985	915	3414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.36	0.70	0.81	1.11	0.79

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 8 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 51.5 Intersection LOS: D
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1135	405	115	940	170	105
Future Volume (vph)	1135	405	115	940	170	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.959					0.850
Flt Protected				0.995	0.950	
Satd. Flow (prot)	3258	0	0	3354	1703	1495
Flt Permitted				0.524	0.950	
Satd. Flow (perm)	3258	0	0	1766	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	94					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1220	455	129	1044	183	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1675	0	0	1173	183	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	85.0		13.0	98.0	22.0	22.0
Total Split (%)	70.8%		10.8%	81.7%	18.3%	18.3%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	79.0		9.5	92.0	16.0	16.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	91.5			91.5	16.5	16.5
Actuated g/C Ratio	0.76			0.76	0.14	0.14
v/c Ratio	0.67			0.87	0.78	0.74
Control Delay	8.1			16.7	72.9	71.5
Queue Delay	0.3			0.0	0.0	0.0
Total Delay	8.3			16.7	72.9	71.5
LOS	A			B	E	E
Approach Delay	8.3			16.7	72.3	
Approach LOS	A			B	E	
Queue Length 50th (ft)	281			191	137	113
Queue Length 95th (ft)	318			260	#260	140
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2505			1358	239	209
Starvation Cap Reductn	273			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.75			0.86	0.77	0.73

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 98.1%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 18: 25th & Lawrence

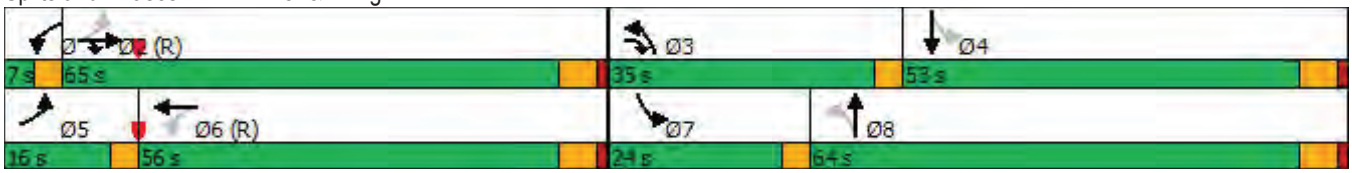
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	708	37	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	708	37	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.991			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3390	0	1518	3296	0	1589	3315	0
Flt Permitted	0.154			0.079			0.079			0.300		
Satd. Flow (perm)	258	3433	1370	145	3390	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		4			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	745	45	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	790	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Maximum Green (s)	12.5	59.0		3.5	50.0		31.5	58.0		20.5	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.72	0.95	0.66	0.61	0.74		1.03	0.61		0.59	1.05	
Control Delay	37.4	36.3	10.8	60.3	53.7		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	36.3	10.8	60.3	53.7		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.1			54.1			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	47	561	215	32	389		~343	343		99	~613	
Queue Length 95th (ft)	m57	m595	m239	#73	468		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	214	1295	835	85	1070		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.71	0.95	0.66	0.61	0.74		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.7		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	160	180	1135	65	275	250	140	155	340	60
Future Volume (vph)	130	1340	160	180	1135	65	275	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.991			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3184	0	1678	3187	0	0	3217	0
Flt Permitted	0.061			0.061			0.192				0.692	
Satd. Flow (perm)	105	3410	1383	105	3184	0	339	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112		5			85			11	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	174	217	1207	77	296	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	174	217	1284	0	296	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	21.0	72.0		20.4	71.4		14.6	67.6		53.0	53.0	
Total Split (%)	13.1%	45.0%		12.8%	44.6%		9.1%	42.3%		33.1%	33.1%	
Maximum Green (s)	17.5	66.0		16.9	65.4		11.1	61.6		47.0	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	86.0	66.0	80.6	84.8	65.4		64.1	61.6			47.0	
Actuated g/C Ratio	0.54	0.41	0.50	0.53	0.41		0.40	0.38			0.29	
v/c Ratio	0.97	0.97	0.23	1.00	0.98		1.30	0.39			1.02	
Control Delay	88.5	53.6	7.5	119.0	51.2		195.2	30.1			93.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	88.5	53.6	7.5	119.0	51.2		195.2	30.1			93.5	
LOS	F	D	A	F	D		F	C			F	
Approach Delay		53.3			61.0			91.5			93.5	
Approach LOS		D			E			F			F	
Queue Length 50th (ft)	186	673	20	170	661		~310	164			~393	
Queue Length 95th (ft)	166	m#874	m46	m#272	m#810		#528	178			#475	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	223	1406	752	217	1304		228	1279			671	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.97	0.97	0.23	1.00	0.98		1.30	0.39			1.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.30			
Intersection Signal Delay: 68.0		Intersection LOS: E	
Intersection Capacity Utilization 94.5%		ICU Level of Service F	

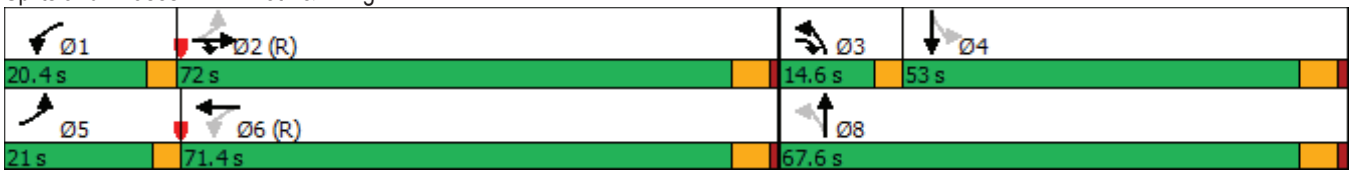
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	86	30	80	415	25	90	80	1599	140	260	2529	50
Future Volume (vph)	86	30	80	415	25	90	80	1599	140	260	2529	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2724	1863	1225	3433	1863	1583	2367	4979	1583	3433	4933	1259
Flt Permitted	0.740			0.490			0.051			0.086		
Satd. Flow (perm)	2121	1863	1225	1771	1863	1583	127	4979	1583	311	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125			152			125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Adj. Flow (vph)	134	33	100	451	27	98	87	1666	152	283	2581	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	33	100	451	27	98	87	1666	152	283	2581	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	15.0	15.0	8.0	15.0	15.0
Minimum Split (s)	15.0	15.0	15.0	12.0	25.0	25.0	8.0	22.0	22.0	15.0	22.0	22.0
Total Split (s)	15.0	20.0	20.0	20.0	25.0	25.0	10.0	83.0	83.0	17.0	90.0	90.0
Total Split (%)	10.7%	14.3%	14.3%	14.3%	17.9%	17.9%	7.1%	59.3%	59.3%	12.1%	64.3%	64.3%
Maximum Green (s)	8.0	13.0	13.0	13.0	18.0	18.0	5.0	76.0	76.0	10.0	83.0	83.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	4.0	7.0	7.0	5.0	7.0	7.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	18.0	10.0	10.0	28.0	15.0	15.0	87.1	78.1	78.1	94.9	84.0	84.0
Actuated g/C Ratio	0.13	0.07	0.07	0.20	0.11	0.11	0.62	0.56	0.56	0.68	0.60	0.60
v/c Ratio	0.44	0.25	0.49	0.89	0.14	0.35	0.46	0.60	0.16	0.62	0.87	0.09
Control Delay	50.7	65.4	13.3	71.0	57.5	7.5	23.8	16.3	4.0	15.5	31.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	65.4	13.3	71.0	57.5	7.5	23.8	16.3	4.0	15.5	31.1	0.5
LOS	D	E	B	E	E	A	C	B	A	B	C	A
Approach Delay		38.5			59.5			15.7			28.8	
Approach LOS		D			E			B			C	
Queue Length 50th (ft)	52	29	0	193	23	0	3	346	32	42	810	0
Queue Length 95th (ft)	56	64	18	#259	53	32	m10	m357	m35	m55	m808	m0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250		250	200		200
Base Capacity (vph)	307	172	227	508	239	312	190	2778	950	454	2959	805
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.19	0.44	0.89	0.11	0.31	0.46	0.60	0.16	0.62	0.87	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 24 (17%), Referenced to phase 2:NETL and 6:SWTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	

Analysis Period (min) 15

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

m Volume for 95th percentile queue is metered by upstream signal.

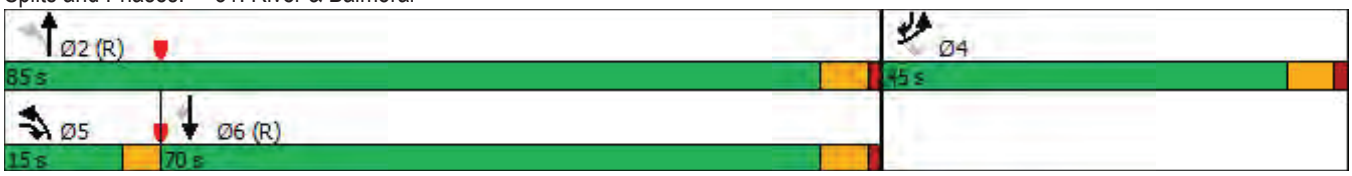
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Maximum Green (s)	39.0	11.5	11.5	79.0	64.0	39.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1932	10	55	1948	20
Future Volume (vph)	110	5	70	45	5	90	20	1932	10	55	1948	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4845	0
Flt Permitted	0.541			0.698			0.950			0.950		
Satd. Flow (perm)	836	1479	0	1145	1933	1455	1203	4933	1459	1530	4845	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				113			113		4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	2247	11	65	2072	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	2247	11	65	2112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	16.0	23.0		11.0	18.0	18.0	14.2	88.0	88.0	18.0	91.8	
Total Split (%)	11.4%	16.4%		7.9%	12.9%	12.9%	10.1%	62.9%	62.9%	12.9%	65.6%	
Maximum Green (s)	12.5	17.0		7.5	12.0	12.0	9.7	82.0	82.0	13.5	85.8	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	26.2	14.9		18.0	8.2	8.2	8.6	91.2	91.2	10.8	95.6	
Actuated g/C Ratio	0.19	0.11		0.13	0.06	0.06	0.06	0.65	0.65	0.08	0.68	
v/c Ratio	0.57	0.40		0.41	0.06	0.58	0.46	0.70	0.01	0.55	0.64	
Control Delay	61.1	20.7		56.1	61.8	22.1	78.5	12.7	0.0	86.4	2.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.1	20.7		56.1	61.8	22.1	78.5	12.7	0.0	86.4	2.3	
LOS	E	C		E	E	C	E	B	A	F	A	
Approach Delay		43.7			36.3			13.6			4.8	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)	99	10		55	6	0	32	245	0	63	34	
Queue Length 95th (ft)	157	0		69	19	43	47	301	m0	m69	m50	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	212	255		171	165	228	85	3214	990	147	3309	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.57	0.36		0.41	0.04	0.48	0.40	0.70	0.01	0.44	0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 107 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

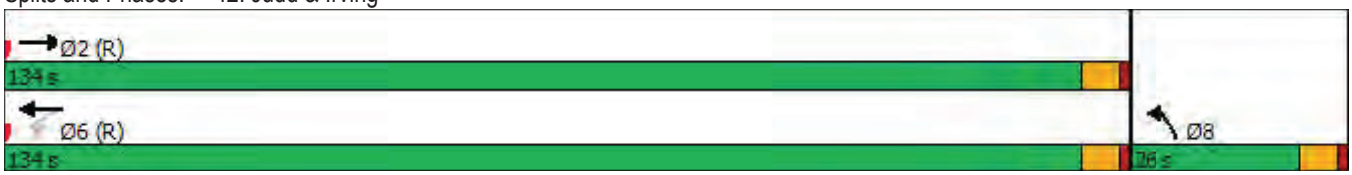
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1508	52	162
Future Volume (vph)	2122	26	54	1508	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3469	1800	0
Flt Permitted				0.586	0.987	
Satd. Flow (perm)	3466	0	0	2037	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				25	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1555	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1615	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	134.0		134.0	134.0	26.0	
Total Split (%)	83.8%		83.8%	83.8%	16.3%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	128.0		128.0	128.0	20.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	128.0			128.0	20.0	
Actuated g/C Ratio	0.80			0.80	0.12	
v/c Ratio	0.82			0.99	1.07	
Control Delay	12.5			39.7	134.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	12.5			39.7	134.3	
LOS	B			D	F	
Approach Delay	12.5			39.7	134.3	
Approach LOS	B			D	F	
Queue Length 50th (ft)	625			412	~279	
Queue Length 95th (ft)	720			m#434	#360	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2773			1629	246	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.82			0.99	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 30.8		Intersection LOS: C	
Intersection Capacity Utilization 103.8%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 42: Judd & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Future Volume (vph)	212	589	146	158	571	365	293	903	144	134	347	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.968			0.945			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3353	0	1770	3345	0	1694	4663	0	1694	3465	1312
Flt Permitted	0.108			0.191			0.429			0.134		
Satd. Flow (perm)	192	3353	0	356	3345	0	765	4663	0	239	3465	1312
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			114			45				99
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		63.1			25.7			50.1			6.1	
Peak Hour Factor	0.91	0.91	0.84	0.78	0.89	0.97	0.84	0.94	0.67	0.90	0.91	0.74
Heavy Vehicles (%)	7%	4%	5%	2%	2%	2%	3%	5%	3%	3%	6%	19%
Adj. Flow (vph)	233	647	174	203	642	376	349	961	215	149	381	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	821	0	203	1018	0	349	1176	0	149	381	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	37.0	37.0
Total Split (s)	15.0	42.0		15.0	42.0		16.0	37.0		16.0	37.0	37.0
Total Split (%)	13.6%	38.2%		13.6%	38.2%		14.5%	33.6%		14.5%	33.6%	33.6%
Maximum Green (s)	11.5	36.0		11.5	36.0		12.5	31.0		12.5	31.0	31.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	51.3	37.2		49.4	36.1		46.4	31.6		43.7	29.9	29.9
Actuated g/C Ratio	0.47	0.34		0.45	0.33		0.42	0.29		0.40	0.27	0.27
v/c Ratio	0.92	0.71		0.68	0.87		0.81	0.86		0.61	0.41	0.22
Control Delay	68.8	31.1		28.7	40.0		39.4	43.2		30.9	34.0	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	68.8	31.1		28.7	40.0		39.4	43.2		30.9	34.0	7.1
LOS	E	C		C	D		D	D		C	C	A
Approach Delay		39.4			38.1			42.3			29.1	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	88	271		80	319		166	280		62	114	0
Queue Length 95th (ft)	#277	216		108	#402		#240	#341		111	159	21
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	253	1155		309	1173		433	1372		262	976	440
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.71		0.66	0.87		0.81	0.86		0.57	0.39	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 30 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 38.6		Intersection LOS: D	
Intersection Capacity Utilization 84.6%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 2: River & Lawrence

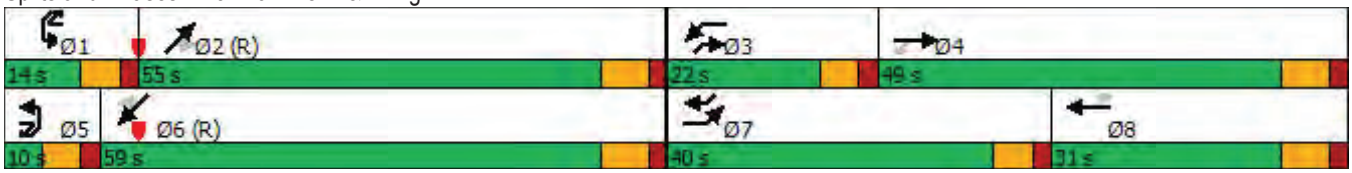
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	705	755	75	30	850	125	55	1470	800	290	1225	500
Future Volume (vph)	705	755	75	30	850	125	55	1470	800	290	1225	500
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3183	5103	1566	3127	5200	1524	2918	4875	2493	3242	4875	2695
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			8.1			27.1	
Peak Hour Factor	0.87	0.93	0.80	0.91	0.91	0.76	0.86	0.88	0.85	0.77	0.90	0.80
Heavy Vehicles (%)	10%	7%	10%	12%	5%	6%	20%	12%	14%	8%	12%	9%
Adj. Flow (vph)	810	812	94	33	934	164	64	1670	941	377	1361	625
Shared Lane Traffic (%)												
Lane Group Flow (vph)	810	812	94	33	934	164	64	1670	941	377	1361	625
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	40.0	49.0	10.0	22.0	31.0	14.0	10.0	55.0	22.0	14.0	59.0	40.0
Total Split (%)	28.6%	35.0%	7.1%	15.7%	22.1%	10.0%	7.1%	39.3%	15.7%	10.0%	42.1%	28.6%
Maximum Green (s)	34.0	42.0	4.0	16.0	24.0	8.0	4.0	48.0	16.0	8.0	52.0	34.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	34.0	45.9	56.9	12.1	24.0	39.0	4.0	48.0	67.1	8.0	52.0	93.0
Actuated g/C Ratio	0.24	0.33	0.41	0.09	0.17	0.28	0.03	0.34	0.48	0.06	0.37	0.66
v/c Ratio	1.05	0.49	0.15	0.12	1.05	0.39	0.77	1.00	0.79	2.04	0.75	0.35
Control Delay	96.2	39.3	28.0	58.5	98.7	44.1	125.6	52.5	22.3	509.7	51.7	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.2	39.3	28.0	58.5	98.7	44.1	125.6	52.5	22.3	509.7	51.7	17.4
LOS	F	D	C	E	F	D	F	D	C	F	D	B
Approach Delay		65.5			89.6			43.6			115.7	
Approach LOS		E			F			D			F	
Queue Length 50th (ft)	~412	213	53	14	~338	121	28	565	433	~282	470	175
Queue Length 95th (ft)	#510	271	87	31	#432	157	m#56	#635	275	#319	516	217
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330	240		335	380		465	350		450
Base Capacity (vph)	773	1672	636	357	891	424	83	1671	1264	185	1810	1790
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.49	0.15	0.09	1.05	0.39	0.77	1.00	0.74	2.04	0.75	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 136 (97%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 140			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.04			
Intersection Signal Delay: 76.6		Intersection LOS: E	
Intersection Capacity Utilization 92.6%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	65	140	425	50	565	250	1700	100	70	1135	65
Future Volume (vph)	15	65	140	425	50	565	250	1700	100	70	1135	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	225		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.962		0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1681	1702	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.590			0.565	0.574		0.950			0.950		
Satd. Flow (perm)	968	1863	1473	1000	1016	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			179			113			144
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			523			1551			1184	
Travel Time (s)		5.9			11.9			26.4			20.2	
Peak Hour Factor	0.66	0.92	0.86	0.92	0.92	0.92	0.81	0.91	0.92	0.92	0.96	0.83
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	23	71	163	462	54	614	309	1868	109	76	1182	78
Shared Lane Traffic (%)				45%								
Lane Group Flow (vph)	23	71	163	254	262	614	309	1868	109	76	1182	78
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	20	100	20	36	256	20	20	256	20
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	20	6	20	36	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm

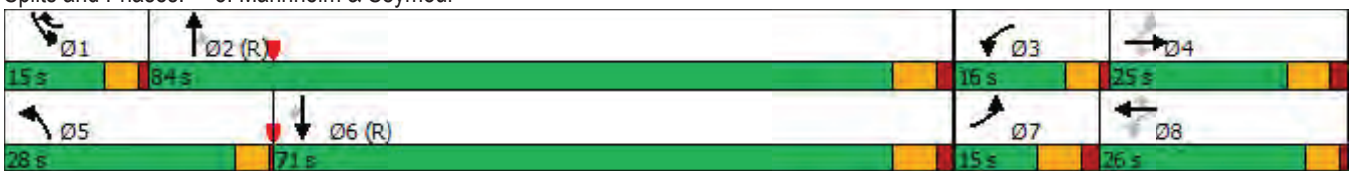
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	14.5	14.5	14.5	9.5	22.5	9.5	7.0	26.5	26.5	9.5	26.5	26.5
Total Split (s)	15.0	25.0	25.0	16.0	26.0	15.0	28.0	84.0	84.0	15.0	71.0	71.0
Total Split (%)	10.7%	17.9%	17.9%	11.4%	18.6%	10.7%	20.0%	60.0%	60.0%	10.7%	50.7%	50.7%
Maximum Green (s)	8.5	18.5	18.5	11.5	21.5	10.5	24.0	77.5	77.5	10.5	64.5	64.5
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	21.6	12.8	12.8	34.8	34.8	39.9	19.7	79.7	79.7	9.2	69.7	69.7
Actuated g/C Ratio	0.15	0.09	0.09	0.25	0.25	0.28	0.14	0.57	0.57	0.07	0.50	0.50
v/c Ratio	0.12	0.42	0.58	0.78	0.79	0.67	0.75	0.66	0.11	0.34	0.51	0.12
Control Delay	42.3	66.4	16.5	63.6	64.6	35.2	69.2	22.7	2.6	59.8	40.4	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	66.4	16.5	63.6	64.6	35.2	69.2	22.7	2.6	59.8	40.4	8.1
LOS	D	E	B	E	E	D	E	C	A	E	D	A
Approach Delay		32.6			48.4			28.1			39.6	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	16	63	0	207	214	208	141	435	0	37	412	16
Queue Length 95th (ft)	30	109	57	#377	#393	287	165	484	26	67	450	31
Internal Link Dist (ft)		178			443			1471			1104	
Turn Bay Length (ft)	115		115	225		150	145		145	200		150
Base Capacity (vph)	188	246	336	327	334	957	504	2858	956	272	2334	659
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.29	0.49	0.78	0.78	0.64	0.61	0.65	0.11	0.28	0.51	0.12

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 113 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 36.0	Intersection LOS: D
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1470	210	15	1365	300	5
Future Volume (vph)	1470	210	15	1365	300	5
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		233				15
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.92	0.90	0.41	0.88	0.84	0.33
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1598	233	37	1551	357	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	233	37	1551	357	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	73.0	27.0	10.0	83.0	27.0	27.0
Total Split (%)	66.4%	24.5%	9.1%	75.5%	24.5%	24.5%
Maximum Green (s)	66.5	21.0	5.5	76.5	21.0	21.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	50.3	78.1	5.8	55.5	17.8	17.8
Actuated g/C Ratio	0.58	0.90	0.07	0.64	0.21	0.21
v/c Ratio	0.76	0.17	0.22	0.67	0.57	0.05
Control Delay	17.3	0.5	48.8	11.2	37.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	0.5	48.8	11.2	37.3	16.8
LOS	B	A	D	B	D	B
Approach Delay	15.1			12.1	36.5	
Approach LOS	B			B	D	
Queue Length 50th (ft)	376	0	10	260	95	0
Queue Length 95th (ft)	478	8	13	322	156	1
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	2894	1353	169	3082	769	340
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.17	0.22	0.50	0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	495	735	1770	735	55	1290
Future Volume (vph)	495	735	1770	735	55	1290
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		413		132		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.88	0.89	0.90	0.91	0.96	0.95
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	563	826	1967	808	57	1358
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	826	1967	808	57	1358
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	47.0		83.0	47.0	10.0	93.0
Total Split (%)	33.6%		59.3%	33.6%	7.1%	66.4%
Maximum Green (s)	40.5		76.0	40.5	5.0	86.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	37.9	140.0	80.0	126.2	6.0	88.6
Actuated g/C Ratio	0.27	1.00	0.57	0.90	0.04	0.63
v/c Ratio	0.68	0.58	0.70	0.58	0.41	0.43
Control Delay	49.9	1.7	17.7	2.3	74.9	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	1.7	17.7	2.3	74.9	13.8
LOS	D	A	B	A	E	B
Approach Delay	21.3		13.2			16.3
Approach LOS	C		B			B
Queue Length 50th (ft)	230	0	404	17	26	228
Queue Length 95th (ft)	287	0	489	41	51	261
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	883	1422	2817	1406	139	3149
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.58	0.70	0.57	0.41	0.43

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 40 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 58.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 14: Mannheim & Lawrence

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	695	190	55	740	185	115
Future Volume (vph)	695	190	55	740	185	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.959					0.850
Flt Protected				0.995	0.950	
Satd. Flow (prot)	3258	0	0	3354	1703	1495
Flt Permitted				0.735	0.950	
Satd. Flow (perm)	3258	0	0	2478	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	89					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.94	0.68	0.70	0.95	0.83	0.72
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	739	279	79	779	223	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1018	0	0	858	223	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	72.0		7.0	79.0	31.0	31.0
Total Split (%)	65.5%		6.4%	71.8%	28.2%	28.2%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	66.0		3.5	73.0	25.0	25.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	76.3			76.3	21.7	21.7
Actuated g/C Ratio	0.69			0.69	0.20	0.20
v/c Ratio	0.45			0.50	0.67	0.54
Control Delay	8.1			7.6	49.9	45.7
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	8.1			7.6	49.9	45.7
LOS	A			A	D	D
Approach Delay	8.1			7.6	48.2	
Approach LOS	A			A	D	
Queue Length 50th (ft)	132			103	147	103
Queue Length 95th (ft)	219			m77	190	121
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2287			1738	400	351
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.45			0.49	0.56	0.46

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 72.6%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 18: 25th & Lawrence

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Future Volume (vph)	137	531	399	53	959	229	334	1015	21	68	484	24
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.971			0.996			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3322	0	1518	3334	0	1589	3284	0
Flt Permitted	0.068			0.416			0.151			0.174		
Satd. Flow (perm)	114	3433	1370	764	3322	0	241	3334	0	291	3284	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128		25			2			4	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.82	0.91	0.84	0.78	0.89	0.88	0.83	0.89	0.75	0.81	0.89	0.67
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	167	584	475	68	1078	260	402	1140	28	84	544	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	584	475	68	1338	0	402	1168	0	84	580	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		2.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	15.0	68.0		8.0	61.0		35.0	54.0		10.0	29.0	
Total Split (%)	10.7%	48.6%		5.7%	43.6%		25.0%	38.6%		7.1%	20.7%	
Maximum Green (s)	11.5	62.0		4.5	55.0		31.5	48.0		5.5	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	72.5	63.6	98.6	62.0	55.0		60.5	48.0		30.0	23.0	
Actuated g/C Ratio	0.52	0.45	0.70	0.44	0.39		0.43	0.34		0.21	0.16	
v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	
Control Delay	86.5	10.4	3.9	18.9	69.4		92.2	77.0		68.1	112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	86.5	10.4	3.9	18.9	69.4		92.2	77.0		68.1	112.8	
LOS	F	B	A	B	E		F	E		E	F	
Approach Delay		18.3			66.9			80.9			107.1	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	85	100	130	30	~649		~342	~592		46	~305	
Queue Length 95th (ft)	m#199	m99	m33	49	#791		#476	#718		#89	#421	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	180	1559	1002	369	1320		391	1144		113	542	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.37	0.47	0.18	1.01		1.03	1.02		0.74	1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 64.7		Intersection LOS: E	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Future Volume (vph)	130	1070	180	130	1430	30	305	320	125	35	195	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.995			0.967			0.943	
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1636	3410	1383	1636	3195	0	1678	3280	0	0	3072	0
Flt Permitted	0.061			0.127			0.202				0.781	
Satd. Flow (perm)	105	3410	1383	219	3195	0	357	3280	0	0	2411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203		3			28			81	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		32.8			77.7			20.5			17.3	
Peak Hour Factor	0.85	0.93	0.72	0.79	0.96	0.57	0.87	0.60	0.83	0.77	0.85	0.56
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	153	1151	250	165	1490	53	351	533	151	45	229	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	1151	250	165	1543	0	351	684	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		21.0	21.0	
Total Split (s)	14.0	70.0		17.0	73.0		25.0	53.0		28.0	28.0	
Total Split (%)	10.0%	50.0%		12.1%	52.1%		17.9%	37.9%		20.0%	20.0%	
Maximum Green (s)	10.5	64.0		13.5	67.0		21.5	47.0		22.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	79.0	66.0	91.0	81.0	67.0		49.5	47.0			22.0	
Actuated g/C Ratio	0.56	0.47	0.65	0.58	0.48		0.35	0.34			0.16	
v/c Ratio	0.88	0.72	0.26	0.68	1.01		1.07	0.61			0.99	
Control Delay	82.9	23.6	1.4	33.4	44.1		105.3	40.0			88.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	82.9	23.6	1.4	33.4	44.1		105.3	40.0			88.6	
LOS	F	C	A	C	D		F	D			F	
Approach Delay		25.8			43.1			62.1			88.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	108	227	6	80	~534		~283	262			180	
Queue Length 95th (ft)	#207	254	10	m82	m#491		#456	194			#267	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	173	1607	970	266	1530		329	1119			447	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.88	0.72	0.26	0.62	1.01		1.07	0.61			0.99	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 123 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 45.8		Intersection LOS: D	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	

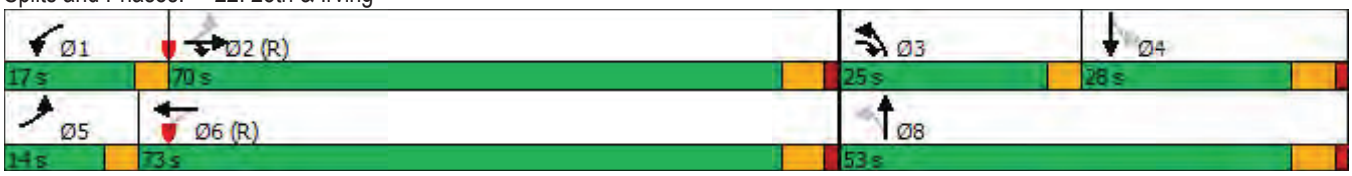
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	0	69	310	35	270	138	1887	0	0	1689	77
Future Volume (vph)	55	0	69	310	35	270	138	1887	0	0	1689	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2701	0	1277	3433	1863	1583	2918	4887	0	0	4933	1382
Flt Permitted	0.732			0.950			0.065					
Satd. Flow (perm)	2081	0	1277	3433	1863	1583	200	4887	0	0	4933	1382
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			105						140
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.59	0.92	0.51	0.92	0.92	0.92	0.50	0.94	0.92	0.92	0.93	0.76
Heavy Vehicles (%)	21%	2%	18%	2%	2%	2%	16%	8%	2%	2%	7%	13%
Adj. Flow (vph)	93	0	135	337	38	293	276	2007	0	0	1816	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	0	135	337	38	293	276	2007	0	0	1816	101
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	5.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	9.5		15.0	9.5	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	10.0		24.0	19.0	33.0	33.0	20.0	97.0			77.0	77.0
Total Split (%)	7.1%		17.1%	13.6%	23.6%	23.6%	14.3%	69.3%			55.0%	55.0%
Maximum Green (s)	5.5		17.0	14.5	26.0	26.0	15.0	90.0			70.0	70.0
Yellow Time (s)	3.5		5.0	3.5	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	1.0		2.0	1.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5		7.0	4.5	7.0	7.0	5.0	7.0			7.0	7.0
Lead/Lag	Lead		Lag	Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0		5.0	3.0	3.0	3.0	4.0	7.0			7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	21.4		13.4	34.6	22.1	22.1	95.9	93.9			75.9	75.9
Actuated g/C Ratio	0.15		0.10	0.25	0.16	0.16	0.68	0.67			0.54	0.54
v/c Ratio	0.27		0.54	0.40	0.13	0.87	0.71	0.61			0.68	0.12
Control Delay	43.1		16.5	44.9	49.9	61.0	44.8	2.6			21.4	1.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	43.1		16.5	44.9	49.9	61.0	44.8	2.6			21.4	1.2
LOS	D		B	D	D	E	D	A			C	A
Approach Delay		27.4			52.2			7.7			20.3	
Approach LOS		C			D			A			C	
Queue Length 50th (ft)	34		0	131	30	172	62	50			526	2
Queue Length 95th (ft)	36		0	172	63	#299	31	m50			596	6
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	341		278	848	345	379	428	3278			2672	813
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.27		0.49	0.40	0.11	0.77	0.64	0.61			0.68	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 41 (29%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 69.7%		ICU Level of Service C	

Analysis Period (min) 15

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

m Volume for 95th percentile queue is metered by upstream signal.

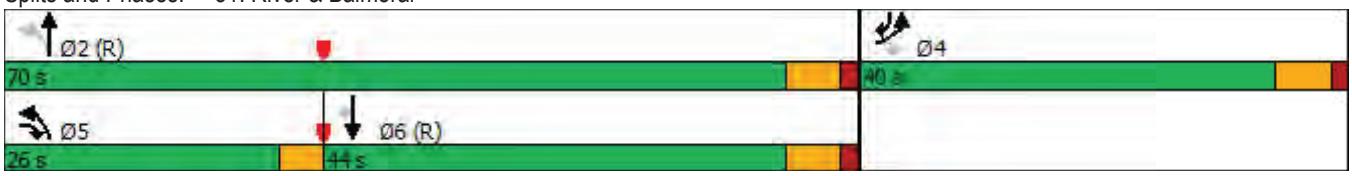
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	139	431	936	464	185
Future Volume (vph)	295	139	431	936	464	185
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3224	1468	1703	3689	3532	1538
Flt Permitted	0.950		0.403			
Satd. Flow (perm)	3224	1468	722	3689	3532	1538
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		146				220
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.91	0.79	0.94	0.92	0.88	0.84
Heavy Vehicles (%)	5%	10%	6%	3%	4%	5%
Adj. Flow (vph)	324	176	459	1017	527	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	324	176	459	1017	527	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	40.0	26.0	26.0	70.0	44.0	40.0
Total Split (%)	36.4%	23.6%	23.6%	63.6%	40.0%	36.4%
Maximum Green (s)	34.0	22.5	22.5	64.0	38.0	34.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	16.8	43.3	83.7	81.2	57.2	80.0
Actuated g/C Ratio	0.15	0.39	0.76	0.74	0.52	0.73
v/c Ratio	0.66	0.26	0.63	0.37	0.29	0.19
Control Delay	50.2	5.1	8.9	6.0	17.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	5.1	8.9	6.0	17.3	1.3
LOS	D	A	A	A	B	A
Approach Delay	34.3			6.9	12.6	
Approach LOS	C			A	B	
Queue Length 50th (ft)	112	13	87	115	103	0
Queue Length 95th (ft)	151	31	161	177	181	21
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	996	711	766	2724	1836	1384
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.60	0.37	0.29	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	5	25	40	5	105	45	2110	20	90	1260	35
Future Volume (vph)	45	5	25	40	5	105	45	2110	20	90	1260	35
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.887				0.850			0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1498	0	1558	1933	1455	1203	4933	1459	1530	4798	0
Flt Permitted	0.754			0.731			0.950			0.950		
Satd. Flow (perm)	1165	1498	0	1199	1933	1455	1203	4933	1459	1530	4798	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				113			86		6	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		26.5			10.3			20.2			8.0	
Peak Hour Factor	0.64	0.50	0.84	0.79	0.88	0.93	0.72	0.96	0.92	0.85	0.95	0.60
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	70	10	30	51	6	113	63	2198	22	106	1326	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	40	0	51	6	113	63	2198	22	106	1384	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	16.0		9.5	41.0	41.0	9.5	47.0	47.0	9.5	28.0	
Total Split (s)	10.0	41.0		10.0	41.0	41.0	20.0	69.0	69.0	20.0	69.0	
Total Split (%)	7.1%	29.3%		7.1%	29.3%	29.3%	14.3%	49.3%	49.3%	14.3%	49.3%	
Maximum Green (s)	6.5	35.0		6.5	35.0	35.0	15.5	63.0	63.0	15.5	63.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	16.3	8.6		16.3	8.6	8.6	12.6	91.9	91.9	15.0	96.5	
Actuated g/C Ratio	0.12	0.06		0.12	0.06	0.06	0.09	0.66	0.66	0.11	0.69	
v/c Ratio	0.47	0.33		0.33	0.05	0.58	0.58	0.68	0.02	0.65	0.42	
Control Delay	63.9	33.8		57.4	60.4	22.3	86.5	7.9	0.1	60.1	14.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.9	33.8		57.4	60.4	22.3	86.5	7.9	0.1	60.1	14.1	
LOS	E	C		E	E	C	F	A	A	E	B	
Approach Delay		52.9			34.2			10.0			17.4	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	58	9		42	5	0	56	177	0	103	142	
Queue Length 95th (ft)	72	14		70	20	61	82	249	m0	m137	226	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	150	397		156	483	448	138	3237	987	185	3309	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.10		0.33	0.01	0.25	0.46	0.68	0.02	0.57	0.42	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 120 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 66.6%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1513	12	14	2060	181	28
Future Volume (vph)	1513	12	14	2060	181	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.981	
Flt Protected					0.959	
Satd. Flow (prot)	3599	0	0	3436	1890	0
Flt Permitted				0.926	0.959	
Satd. Flow (perm)	3599	0	0	3182	1890	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				5	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.50	0.88	0.95	0.75	0.70
Heavy Vehicles (%)	0%	7%	14%	5%	1%	0%
Adj. Flow (vph)	1593	24	16	2168	241	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1617	0	0	2184	281	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	36.0	
Total Split (s)	104.0		104.0	104.0	36.0	
Total Split (%)	74.3%		74.3%	74.3%	25.7%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	98.0		98.0	98.0	30.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	101.8			101.8	26.2	
Actuated g/C Ratio	0.73			0.73	0.19	
v/c Ratio	0.62			0.94	0.79	
Control Delay	11.2			20.1	69.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	11.2			20.1	69.0	
LOS	B			C	E	
Approach Delay	11.2			20.1	69.0	
Approach LOS	B			C	E	
Queue Length 50th (ft)	357			491	240	
Queue Length 95th (ft)	451			m481	270	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2617			2314	408	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.62			0.94	0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 108 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 88.5%		ICU Level of Service E	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

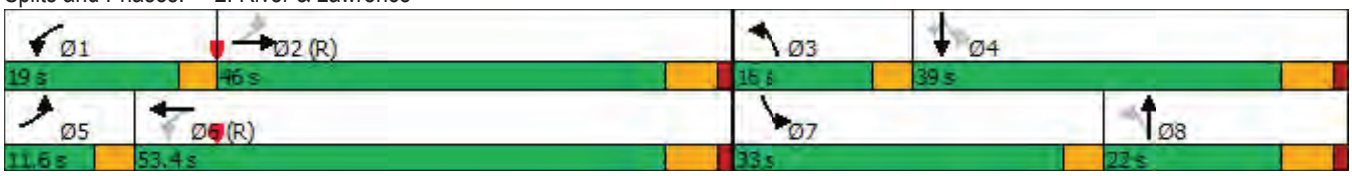
Splits and Phases: 41: Judd & Irving

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Future Volume (vph)	108	784	199	218	646	186	184	378	211	437	817	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	11	11	11
Storage Length (ft)	175		0	230		0	185		300	150		240
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	1.00
Frt		0.969			0.965			0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	3449	0	1787	3431	0	1711	4667	0	1745	3566	1501
Flt Permitted	0.174			0.091			0.238			0.197		
Satd. Flow (perm)	298	3449	0	171	3431	0	429	4667	0	362	3566	1501
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			40			96				228
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		3238			1321			2942			360	
Travel Time (s)		49.1			20.0			50.1			6.1	
Peak Hour Factor	0.92	0.92	0.90	0.85	0.86	0.81	0.89	0.86	0.86	0.92	0.90	0.85
Heavy Vehicles (%)	11%	1%	3%	1%	2%	0%	2%	2%	1%	0%	3%	4%
Adj. Flow (vph)	117	852	221	256	751	230	207	440	245	475	908	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	1073	0	256	981	0	207	685	0	475	908	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.04	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left			Left			Left			Left		Right
Leading Detector (ft)	36	256		36	256		36	256		36	256	36
Trailing Detector (ft)	0	250		0	250		0	250		0	250	0
Detector 1 Position(ft)	0	250		0	250		0	250		0	250	0
Detector 1 Size(ft)	36	6		36	6		36	6		36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	38.0	38.0
Total Split (s)	11.6	46.0		19.0	53.4		16.0	22.0		33.0	39.0	39.0
Total Split (%)	9.7%	38.3%		15.8%	44.5%		13.3%	18.3%		27.5%	32.5%	32.5%
Maximum Green (s)	8.1	40.0		15.5	47.4		12.5	16.0		29.5	33.0	33.0
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	4.5
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	7.0
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	None
Walk Time (s)											7.0	7.0
Flash Dont Walk (s)											24.0	24.0
Pedestrian Calls (#/hr)											0	0
Act Effct Green (s)	50.7	40.3		61.2	47.4		31.6	16.8		51.8	33.5	33.5
Actuated g/C Ratio	0.42	0.34		0.51	0.40		0.26	0.14		0.43	0.28	0.28
v/c Ratio	0.55	0.91		0.89	0.71		0.85	0.93		0.97	0.91	0.43
Control Delay	22.0	43.2		61.0	32.7		59.1	64.5		66.1	56.4	8.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	22.0	43.2		61.0	32.7		59.1	64.5		66.1	56.4	8.2
LOS	C	D		E	C		E	E		E	E	A
Approach Delay		41.1			38.6			63.2			51.9	
Approach LOS		D			D			E			D	
Queue Length 50th (ft)	31	417		141	319		103	170		307	361	11
Queue Length 95th (ft)	m48	#543		#256	371		#230	#234		#522	#484	63
Internal Link Dist (ft)		3158			1241			2862			280	
Turn Bay Length (ft)	175			230			185			150		240
Base Capacity (vph)	216	1179		296	1379		247	735		496	994	583
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.54	0.91		0.86	0.71		0.84	0.93		0.96	0.91	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 48.0		Intersection LOS: D	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: River & Lawrence



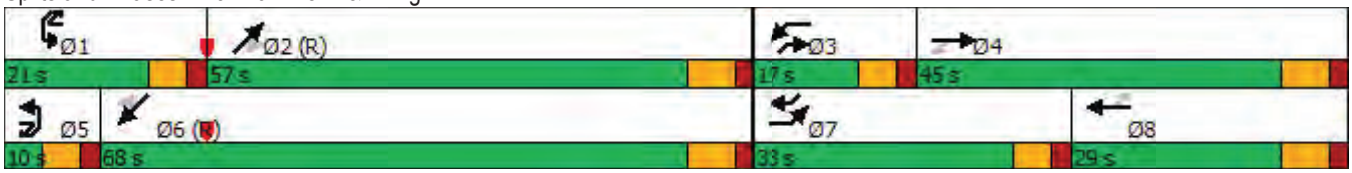
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	635	1080	100	0	680	110	55	1090	960	345	2050	770
Future Volume (vph)	635	1080	100	0	680	110	55	1090	960	345	2050	770
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	13
Storage Length (ft)	375		330	240		335	380		465	350		450
Storage Lanes	2		1	2		1	2		2	2		2
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.88	0.97	0.91	0.88
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3213	5301	1538	3262	5103	1455	3045	5009	2656	3213	5056	2720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			40			50	
Link Distance (ft)		763			705			594			1987	
Travel Time (s)		13.0			12.0			10.1			27.1	
Peak Hour Factor	0.95	0.80	0.83	0.87	0.84	0.84	0.92	0.91	0.83	0.87	0.96	0.87
Heavy Vehicles (%)	9%	3%	12%	13%	7%	11%	15%	9%	7%	9%	8%	8%
Adj. Flow (vph)	668	1350	120	0	810	131	60	1198	1157	397	2135	885
Shared Lane Traffic (%)												
Lane Group Flow (vph)	668	1350	120	0	810	131	60	1198	1157	397	2135	885
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.94	0.92	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left		Right	Left		Right	Left		Right
Leading Detector (ft)	36	256	36	36	256	36	36	256	36	36	256	36
Trailing Detector (ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	250	0	0	250	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	36	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0	4.0	15.0	4.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0	10.0	22.0	10.0
Total Split (s)	33.0	45.0	10.0	17.0	29.0	21.0	10.0	57.0	17.0	21.0	68.0	33.0
Total Split (%)	23.6%	32.1%	7.1%	12.1%	20.7%	15.0%	7.1%	40.7%	12.1%	15.0%	48.6%	23.6%
Maximum Green (s)	27.0	38.0	4.0	11.0	22.0	15.0	4.0	50.0	11.0	15.0	61.0	27.0
Yellow Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0	3.0	7.0	3.0
Minimum Gap (s)	0.2	3.0	0.2	0.2	3.0	0.2	0.2	4.0	0.2	0.2	4.0	0.2
Time Before Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Time To Reduce (s)	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	27.0	38.0	49.0		22.0	44.0	4.0	50.0	68.0	15.0	61.0	95.0
Actuated g/C Ratio	0.19	0.27	0.35		0.16	0.31	0.03	0.36	0.49	0.11	0.44	0.68
v/c Ratio	1.08	0.94	0.22		1.01	0.29	0.69	0.67	0.90	1.15	0.97	0.48
Control Delay	111.7	62.9	33.5		92.5	38.3	87.1	49.0	37.8	143.6	45.8	7.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.7	62.9	33.5		92.5	38.3	87.1	49.0	37.8	143.6	45.8	7.1
LOS	F	E	C		F	D	F	D	D	F	D	A
Approach Delay		76.5			84.9			44.6			47.2	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~348	442	77		~277	90	29	291	275	~225	582	100
Queue Length 95th (ft)	#473	431	116		#330	137	m#43	346	399	m#273	#799	m140
Internal Link Dist (ft)		683			625			514			1907	
Turn Bay Length (ft)	375		330			335	380		465	350		450
Base Capacity (vph)	619	1438	538		801	457	87	1788	1290	344	2202	1845
Starvation Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.94	0.22		1.01	0.29	0.69	0.67	0.90	1.15	0.97	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 109 (78%), Referenced to phase 2:NET and 6:SWT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 57.5		Intersection LOS: E	
Intersection Capacity Utilization 93.2%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Mannheim & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	35	300	285	40	590	70	1335	70	165	1960	25
Future Volume (vph)	50	35	300	285	40	590	70	1335	70	165	1960	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	12	11	12	12	12	11	11	12	12	11	12
Storage Length (ft)	115		115	225		150	145		145	200		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.963		0.950			0.950		
Satd. Flow (prot)	1558	1863	1473	1681	1704	2787	2943	4979	1583	3433	4686	1179
Flt Permitted	0.411			0.732	0.753		0.950			0.950		
Satd. Flow (perm)	674	1863	1473	1295	1333	2787	2943	4979	1583	3433	4686	1179
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			511			113			94
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		258			523			1551			1184	
Travel Time (s)		5.9			11.9			26.4			20.2	
Peak Hour Factor	0.82	0.92	0.83	0.92	0.92	0.92	0.87	0.93	0.92	0.92	0.87	0.88
Heavy Vehicles (%)	12%	2%	6%	2%	2%	2%	15%	6%	2%	2%	7%	37%
Adj. Flow (vph)	61	38	361	310	43	641	80	1435	76	179	2253	28
Shared Lane Traffic (%)				44%								
Lane Group Flow (vph)	61	38	361	174	179	641	80	1435	76	179	2253	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.04	1.00	1.00	1.00	1.04	0.98	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left		Right	Left		Right
Leading Detector (ft)	36	100	36	36	100	36	36	256	20	36	256	36
Trailing Detector (ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	250	0	0	250	0
Detector 1 Size(ft)	36	6	36	36	6	36	36	6	20	36	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	5.0	5.0	5.0	3.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	24.5	24.5	24.5	22.5	22.5	22.5	9.5	26.5	26.5	9.5	26.5	26.5
Total Split (s)	24.5	50.5	50.5	26.0	26.0	26.0	9.6	72.3	72.3	17.2	79.9	79.9
Total Split (%)	17.5%	36.1%	36.1%	18.6%	18.6%	18.6%	6.9%	51.6%	51.6%	12.3%	57.1%	57.1%
Maximum Green (s)	18.0	44.0	44.0	21.5	21.5	21.5	5.6	65.8	65.8	12.7	73.4	73.4
Yellow Time (s)	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	4.5	4.5	4.5	4.0	6.5	6.5	4.5	6.5	6.5
Lead/Lag	Lag			Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	5.0	5.0	5.0	3.0	3.0	3.0	3.0	7.0	7.0	3.0	7.0	7.0
Minimum Gap (s)	0.2	0.2	0.2	3.0	3.0	3.0	0.2	4.0	4.0	3.0	4.0	4.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)				7.0	7.0	7.0						
Flash Dont Walk (s)				11.0	11.0	11.0						
Pedestrian Calls (#/hr)				0	0	0						
Act Effct Green (s)	36.0	34.4	34.4	21.7	21.7	21.7	8.0	61.9	61.9	26.2	80.6	80.6
Actuated g/C Ratio	0.26	0.25	0.25	0.16	0.16	0.16	0.06	0.44	0.44	0.19	0.58	0.58
v/c Ratio	0.25	0.08	0.81	0.87	0.87	0.74	0.48	0.65	0.10	0.28	0.84	0.04
Control Delay	43.8	37.5	48.5	95.0	94.0	17.6	73.2	33.2	1.5	26.4	10.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	37.5	48.5	95.0	94.0	17.6	73.2	33.2	1.5	26.4	10.8	0.1
LOS	D	D	D	F	F	B	E	C	A	C	B	A
Approach Delay		47.0			44.9			33.7			11.9	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)	44	27	226	165	170	60	36	387	0	50	120	0
Queue Length 95th (ft)	69	52	278	#311	#317	140	#74	430	11	104	194	m0
Internal Link Dist (ft)		178			443			1471			1104	
Turn Bay Length (ft)	115		115	225		150	145		145	200		150
Base Capacity (vph)	320	585	537	200	206	863	168	2425	828	642	2697	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.06	0.67	0.87	0.87	0.74	0.48	0.59	0.09	0.28	0.84	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 127 (91%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 27.1	Intersection LOS: C
Intersection Capacity Utilization 80.0%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 8: Mannheim & Seymour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1815	320	10	1570	110	15
Future Volume (vph)	1815	320	10	1570	110	15
Ideal Flow (vphpl)	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	13
Storage Length (ft)		360	375		295	295
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3619	1468	2537	3585	3019	1294
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3619	1468	2537	3585	3019	1294
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		333				26
Link Speed (mph)	55			55	30	
Link Distance (ft)	1039			990	1176	
Travel Time (s)	12.9			12.3	26.7	
Peak Hour Factor	0.93	0.96	0.50	0.95	0.88	0.58
Heavy Vehicles (%)	5%	10%	38%	6%	16%	29%
Adj. Flow (vph)	1952	333	20	1653	125	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1952	333	20	1653	125	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	1.00	1.00	0.94	1.00	0.96
Turning Speed (mph)		9	15		15	9
Number of Detectors	1	1	1	1	1	1
Detector Template		Right	Left		Left	Right
Leading Detector (ft)	256	36	36	256	36	36
Trailing Detector (ft)	250	0	0	250	0	0
Detector 1 Position(ft)	250	0	0	250	0	0
Detector 1 Size(ft)	6	36	36	6	36	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	25.0	10.0	5.0	25.0	10.0	10.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	31.5	16.0	9.5	31.5	16.0	16.0
Total Split (s)	84.5	16.0	9.5	94.0	16.0	16.0
Total Split (%)	76.8%	14.5%	8.6%	85.5%	14.5%	14.5%
Maximum Green (s)	78.0	10.0	5.0	87.5	10.0	10.0
Yellow Time (s)	4.5	4.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	1.5	1.0	2.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.0	4.5	6.5	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0	5.0	3.0	7.0	5.0	5.0
Minimum Gap (s)	4.0	0.2	0.2	4.0	0.2	0.2
Time Before Reduce (s)	25.0	0.0	0.0	25.0	0.0	0.0
Time To Reduce (s)	20.0	0.0	0.0	20.0	0.0	0.0
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	60.1	81.3	5.2	63.2	10.3	10.3
Actuated g/C Ratio	0.70	0.94	0.06	0.73	0.12	0.12
v/c Ratio	0.78	0.24	0.13	0.63	0.35	0.15
Control Delay	11.7	0.5	46.9	6.7	41.7	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	0.5	46.9	6.7	41.7	18.9
LOS	B	A	D	A	D	B
Approach Delay	10.1			7.2	37.8	
Approach LOS	B			A	D	
Queue Length 50th (ft)	255	0	4	185	25	0
Queue Length 95th (ft)	493	9	11	226	72	11
Internal Link Dist (ft)	959			910	1096	
Turn Bay Length (ft)		360	375		295	295
Base Capacity (vph)	3249	1400	151	3354	360	177
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.24	0.13	0.49	0.35	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Seymour & Irving

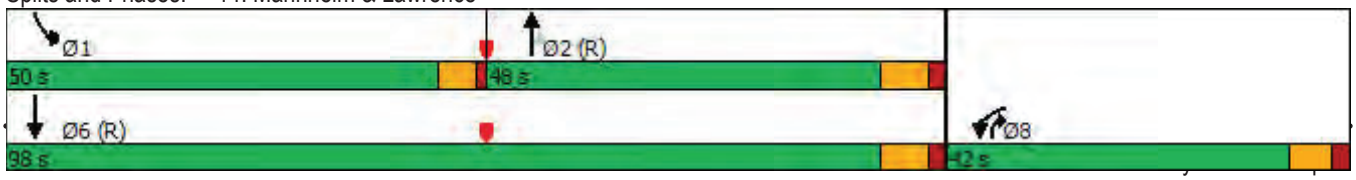
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	610	450	1235	720	850	2335
Future Volume (vph)	610	450	1235	720	850	2335
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	10	10	11	12	11	11
Storage Length (ft)	0	275		350	495	
Storage Lanes	2	1		1	2	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3054	1422	4933	1538	3286	4979
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3054	1422	4933	1538	3286	4979
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		447		15		
Link Speed (mph)	35		50			50
Link Distance (ft)	855		1650			779
Travel Time (s)	16.7		22.5			10.6
Peak Hour Factor	0.89	0.88	0.96	0.92	0.84	0.87
Heavy Vehicles (%)	7%	6%	7%	5%	3%	6%
Adj. Flow (vph)	685	511	1286	783	1012	2684
Shared Lane Traffic (%)						
Lane Group Flow (vph)	685	511	1286	783	1012	2684
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		22			22
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.98	1.00	1.04	0.98
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right		Right	Left	
Leading Detector (ft)	36	36	256	36	36	256
Trailing Detector (ft)	0	0	250	0	0	250
Detector 1 Position(ft)	0	0	250	0	0	250
Detector 1 Size(ft)	36	36	6	36	36	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	Free	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		Free		2		
Detector Phase	8		2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0		15.0	8.0	4.0	15.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	14.5		22.0	14.5	9.0	22.0
Total Split (s)	42.0		48.0	42.0	50.0	98.0
Total Split (%)	30.0%		34.3%	30.0%	35.7%	70.0%
Maximum Green (s)	35.5		41.0	35.5	45.0	91.0
Yellow Time (s)	4.5		5.0	4.5	4.0	5.0
All-Red Time (s)	2.0		2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		7.0	6.5	5.0	7.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		7.0	5.0	4.0	7.0
Recall Mode	None		C-Min	None	None	C-Min
Act Effct Green (s)	35.5	140.0	41.1	83.6	44.9	91.0
Actuated g/C Ratio	0.25	1.00	0.29	0.60	0.32	0.65
v/c Ratio	0.89	0.36	0.89	0.85	0.96	0.83
Control Delay	64.6	0.7	51.0	32.0	66.1	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.6	0.7	51.0	32.0	66.1	21.6
LOS	E	A	D	C	E	C
Approach Delay	37.3		43.8			33.8
Approach LOS	D		D			C
Queue Length 50th (ft)	311	0	321	687	465	638
Queue Length 95th (ft)	#406	0	420	875	#530	651
Internal Link Dist (ft)	775		1570			699
Turn Bay Length (ft)		275		350	495	
Base Capacity (vph)	774	1422	1446	924	1056	3236
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.36	0.89	0.85	0.96	0.83

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 137 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 37.4 Intersection LOS: D
Intersection Capacity Utilization 79.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Mannheim & Lawrence



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1135	405	115	810	195	105
Future Volume (vph)	1135	405	115	810	195	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.959					0.850
Flt Protected				0.994	0.950	
Satd. Flow (prot)	3258	0	0	3350	1703	1495
Flt Permitted				0.513	0.950	
Satd. Flow (perm)	3258	0	0	1729	1703	1495
Right Turn on Red		Yes				No
Satd. Flow (RTOR)	100					
Link Speed (mph)	35			35	30	
Link Distance (ft)	855			3238	677	
Travel Time (s)	16.7			63.1	15.4	
Peak Hour Factor	0.93	0.89	0.89	0.90	0.93	0.69
Heavy Vehicles (%)	3%	2%	8%	7%	6%	8%
Adj. Flow (vph)	1220	455	129	900	210	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1675	0	0	1029	210	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	1
Detector Template			Left		Left	Right
Leading Detector (ft)	256		20	256	36	36
Trailing Detector (ft)	250		0	250	0	0
Detector 1 Position(ft)	250		0	250	0	0
Detector 1 Size(ft)	6		20	6	36	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		3.0	15.0	5.0	5.0
Minimum Split (s)	21.0		6.5	21.0	11.0	11.0
Total Split (s)	87.5		6.5	94.0	26.0	26.0
Total Split (%)	72.9%		5.4%	78.3%	21.7%	21.7%

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	81.5		3.0	88.0	20.0	20.0
Yellow Time (s)	4.5		3.5	4.5	4.5	4.5
All-Red Time (s)	1.5		0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0			6.0	6.0	6.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		3.0	7.0	5.0	5.0
Recall Mode	C-Min		None	C-Min	None	None
Act Effct Green (s)	89.0			89.0	19.0	19.0
Actuated g/C Ratio	0.74			0.74	0.16	0.16
v/c Ratio	0.69			0.94dl	0.78	0.64
Control Delay	9.5			10.7	68.4	60.2
Queue Delay	0.3			0.0	0.0	0.0
Total Delay	9.8			10.7	68.4	60.2
LOS	A			B	E	E
Approach Delay	9.8			10.7	65.0	
Approach LOS	A			B	E	
Queue Length 50th (ft)	311			104	155	110
Queue Length 95th (ft)	375			410	#266	134
Internal Link Dist (ft)	775			3158	597	
Turn Bay Length (ft)						
Base Capacity (vph)	2441			1283	285	250
Starvation Cap Reductn	237			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.76			0.80	0.74	0.61

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 56 (47%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			

Splits and Phases: 18: 25th & Lawrence

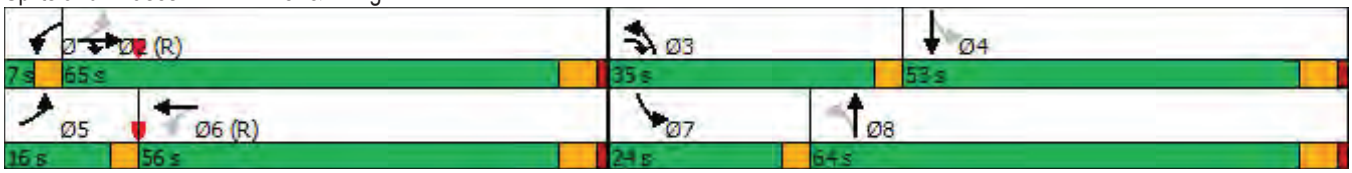
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Future Volume (vph)	120	1094	505	47	683	62	315	640	47	154	870	22
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	12	10	11	12	10	11	12
Storage Length (ft)	160		240	160		0	215		50	200		50
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.989			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1589	3433	1370	1745	3373	0	1518	3296	0	1589	3315	0
Flt Permitted	0.151			0.079			0.079			0.300		
Satd. Flow (perm)	253	3433	1370	145	3373	0	126	3296	0	502	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		7			5			2	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		3987			736			1030			2002	
Travel Time (s)		68.0			12.5			17.6			34.1	
Peak Hour Factor	0.79	0.89	0.91	0.90	0.95	0.82	0.90	0.87	0.84	0.85	0.88	0.61
Heavy Vehicles (%)	6%	7%	10%	0%	2%	2%	11%	4%	14%	6%	4%	25%
Adj. Flow (vph)	152	1229	555	52	719	76	350	736	56	181	989	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	1229	555	52	795	0	350	792	0	181	1025	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.98	1.09	1.04	1.04	1.00	1.09	1.04	1.00	1.09	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		36	256	
Trailing Detector (ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Position(ft)	0	250	0	0	250		0	250		0	250	
Detector 1 Size(ft)	36	6	36	36	6		36	6		36	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	2 3	1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	21.0		6.5	51.0		6.5	21.0		6.5	21.0	
Total Split (s)	16.0	65.0		7.0	56.0		35.0	64.0		24.0	53.0	
Total Split (%)	10.0%	40.6%		4.4%	35.0%		21.9%	40.0%		15.0%	33.1%	
Maximum Green (s)	12.5	59.0		3.5	50.0		31.5	58.0		20.5	47.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		5.0	7.0		3.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)					7.0							
Flash Dont Walk (s)					38.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	68.5	60.4	95.4	56.4	50.4		84.5	63.2		64.8	47.0	
Actuated g/C Ratio	0.43	0.38	0.60	0.35	0.32		0.53	0.40		0.40	0.29	
v/c Ratio	0.73	0.95	0.66	0.61	0.75		1.03	0.61		0.59	1.05	
Control Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.9	36.6	10.5	60.3	53.8		104.1	41.3		30.3	96.5	
LOS	D	D	B	E	D		F	D		C	F	
Approach Delay		29.3			54.2			60.5			86.6	
Approach LOS		C			D			E			F	
Queue Length 50th (ft)	50	555	200	32	392		~343	343		99	~613	
Queue Length 95th (ft)	m60	m#599	m223	#73	472		#554	418		138	#724	
Internal Link Dist (ft)		3907			656			950			1922	
Turn Bay Length (ft)	160		240	160			215			200		
Base Capacity (vph)	212	1295	835	85	1066		340	1305		358	975	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.72	0.95	0.66	0.61	0.75		1.03	0.61		0.51	1.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 77 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 53.8		Intersection LOS: D	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: River & Irving



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Future Volume (vph)	130	1340	145	180	1045	65	265	250	140	155	340	60
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	12	11	11	12	12	11	12
Storage Length (ft)	230		230	200		0	110		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95
Frt			0.850		0.990			0.945			0.979	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1636	3410	1383	1636	3181	0	1678	3187	0	0	3217	0
Flt Permitted	0.080			0.060			0.198				0.692	
Satd. Flow (perm)	138	3410	1383	103	3181	0	350	3187	0	0	2258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		5			85			12	
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1685			3987			904			763	
Travel Time (s)		28.7			68.0			20.5			17.3	
Peak Hour Factor	0.60	0.98	0.92	0.83	0.94	0.84	0.93	0.79	0.76	0.82	0.85	0.63
Heavy Vehicles (%)	3%	4%	9%	3%	5%	3%	4%	2%	6%	3%	4%	11%
Adj. Flow (vph)	217	1367	158	217	1112	77	285	316	184	189	400	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1367	158	217	1189	0	285	500	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.02	1.09	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	
Detector Template	Left		Right	Left			Left			Left		
Leading Detector (ft)	36	256	36	36	256		36	256		20	256	
Trailing Detector (ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Position(ft)	0	250	0	0	250		0	0		0	0	
Detector 1 Size(ft)	36	6	36	36	6		36	36		20	36	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	pt+ov	pm+pt	NA		pm+pt	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	2 3	1	6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2	2 3	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		2.5	15.0		3.0	8.0		8.0	8.0	
Minimum Split (s)	6.5	36.0		6.5	35.0		6.5	36.0		36.0	36.0	
Total Split (s)	20.2	72.0		20.4	72.2		13.6	67.6		54.0	54.0	
Total Split (%)	12.6%	45.0%		12.8%	45.1%		8.5%	42.3%		33.8%	33.8%	
Maximum Green (s)	16.7	66.0		16.9	66.2		10.1	61.6		48.0	48.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	7.0		3.0	7.0		3.0	7.0		7.0	7.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		23.0			22.0			23.0		23.0	23.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	85.1	66.0	79.6	85.7	66.3		64.1	61.6			48.0	
Actuated g/C Ratio	0.53	0.41	0.50	0.54	0.41		0.40	0.38			0.30	
v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	
Control Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	77.9	54.1	8.3	117.8	37.3		186.1	30.1			88.1	
LOS	E	D	A	F	D		F	C			F	
Approach Delay		52.9			49.7			86.8			88.1	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	174	673	18	168	576		~291	164			373	
Queue Length 95th (ft)	154	m#890	m43	m#269	m630		#504	178			#466	
Internal Link Dist (ft)		1605			3907			824			683	
Turn Bay Length (ft)	230		230	200			110					
Base Capacity (vph)	229	1406	738	217	1321		224	1279			685	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.95	0.97	0.21	1.00	0.90		1.27	0.39			1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 62.9		Intersection LOS: E	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	

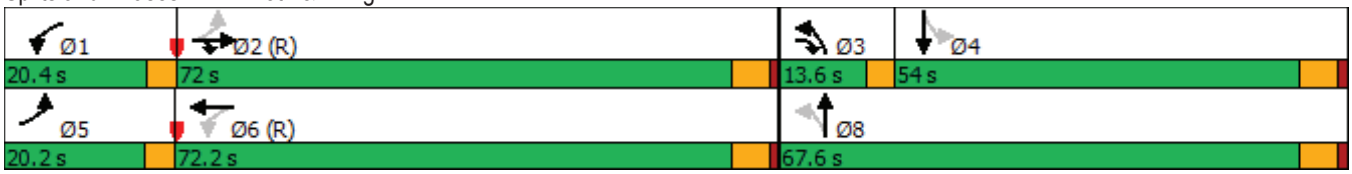
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: 25th & Irving



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	101	0	95	415	25	90	80	1599	0	0	2684	50
Future Volume (vph)	101	0	95	415	25	90	80	1599	0	0	2684	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	10	12	10	12	12	12	11	11	12	12	11	11
Storage Length (ft)	125		125	150		150	250		250	200		200
Storage Lanes	1		1	2		1	2		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	2724	0	1225	3433	1863	1583	2367	4979	0	0	4933	1259
Flt Permitted	0.740			0.950			0.044					
Satd. Flow (perm)	2121	0	1225	3433	1863	1583	110	4979	0	0	4933	1259
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125			125						125
Link Speed (mph)		25			30			50			50	
Link Distance (ft)		663			295			1987			1650	
Travel Time (s)		18.1			6.7			27.1			22.5	
Peak Hour Factor	0.64	0.92	0.80	0.92	0.92	0.92	0.92	0.96	0.92	0.92	0.98	0.69
Heavy Vehicles (%)	20%	2%	23%	2%	2%	2%	43%	6%	2%	2%	7%	24%
Adj. Flow (vph)	158	0	119	451	27	98	87	1666	0	0	2739	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	0	119	451	27	98	87	1666	0	0	2739	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.09	1.00	1.00	1.00	1.04	0.98	1.00	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	1			1	1
Detector Template	Left		Right	Left	Thru	Right	Left					Right
Leading Detector (ft)	36		36	20	100	20	36	256			256	36
Trailing Detector (ft)	0		0	0	0	0	0	250			250	0
Detector 1 Position(ft)	0		0	0	0	0	0	250			250	0
Detector 1 Size(ft)	36		36	20	6	20	36	6			6	36
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94							
Detector 2 Size(ft)					6							
Detector 2 Type					Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)					0.0							
Turn Type	pm+pt		Perm	pm+pt	NA	Perm	pm+pt	NA			NA	Perm

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	7			3	8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Detector Phase	7		4	3	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)	8.0		8.0	5.0	5.0	5.0	3.0	15.0			15.0	15.0
Minimum Split (s)	15.0		15.0	12.0	25.0	25.0	8.0	22.0			22.0	22.0
Total Split (s)	15.0		21.0	19.0	25.0	25.0	9.0	100.0			91.0	91.0
Total Split (%)	10.7%		15.0%	13.6%	17.9%	17.9%	6.4%	71.4%			65.0%	65.0%
Maximum Green (s)	8.0		14.0	12.0	18.0	18.0	4.0	93.0			84.0	84.0
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0	4.0	5.0			5.0	5.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	1.0	2.0			2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.0		7.0	7.0	7.0	7.0	5.0	7.0			7.0	7.0
Lead/Lag	Lead		Lag	Lead	Lag	Lag	Lead				Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes						
Vehicle Extension (s)	5.0		5.0	3.0	3.0	3.0	4.0	7.0			7.0	7.0
Recall Mode	None		None	None	None	None	None	C-Min			C-Min	C-Min
Walk Time (s)					7.0	7.0						
Flash Dont Walk (s)					11.0	11.0						
Pedestrian Calls (#/hr)					0	0						
Act Effct Green (s)	17.7		9.7	25.7	13.7	13.7	99.3	97.3			85.5	85.5
Actuated g/C Ratio	0.13		0.07	0.18	0.10	0.10	0.71	0.70			0.61	0.61
v/c Ratio	0.52		0.59	0.72	0.15	0.37	0.46	0.48			0.91	0.09
Control Delay	54.4		21.3	58.7	58.7	8.0	30.3	10.3			18.0	0.2
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	54.4		21.3	58.7	58.7	8.0	30.3	10.3			18.0	0.2
LOS	D		C	E	E	A	C	B			B	A
Approach Delay		40.2			50.1			11.3			17.6	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)	64		0	198	23	0	20	248			410	0
Queue Length 95th (ft)	64		37	244	53	31	m37	m269			667	m0
Internal Link Dist (ft)		583			215			1907			1570	
Turn Bay Length (ft)	125		125	150		150	250					200
Base Capacity (vph)	301		235	629	239	312	188	3461			3011	817
Starvation Cap Reductn	0		0	0	0	0	0	0			0	0
Spillback Cap Reductn	0		0	0	0	0	0	0			0	0
Storage Cap Reductn	0		0	0	0	0	0	0			0	0
Reduced v/c Ratio	0.52		0.51	0.72	0.11	0.31	0.46	0.48			0.91	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 92 (66%), Referenced to phase 2:NETL and 6:SWT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 20.1		Intersection LOS: C	
Intersection Capacity Utilization 85.3%		ICU Level of Service E	

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

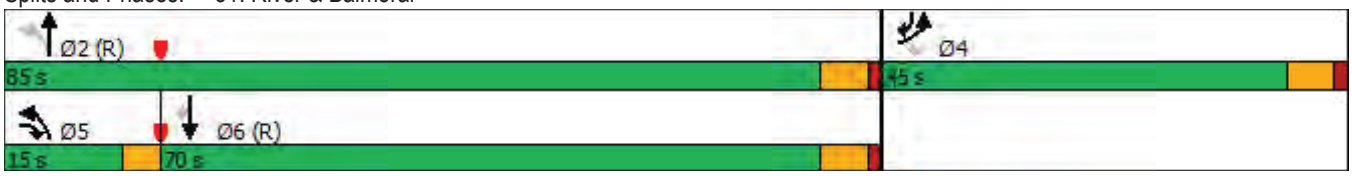
Splits and Phases: 25: Mannheim & Montrose

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	343	182	47	586	995	533
Future Volume (vph)	343	182	47	586	995	533
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	11	12	12	12	11	12
Storage Length (ft)	330	330	250			485
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3319	1553	1787	3654	3637	1599
Flt Permitted	0.950		0.189			
Satd. Flow (perm)	3319	1553	356	3654	3637	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				586
Link Speed (mph)	25			35	35	
Link Distance (ft)	872			1329	1055	
Travel Time (s)	23.8			25.9	20.6	
Peak Hour Factor	0.79	0.93	0.94	0.85	0.89	0.91
Heavy Vehicles (%)	2%	4%	1%	4%	1%	1%
Adj. Flow (vph)	434	196	50	689	1118	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	196	50	689	1118	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	0.94	0.98	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	1	1	1
Detector Template	Left	Right	Left			Right
Leading Detector (ft)	36	36	36	256	256	36
Trailing Detector (ft)	0	0	0	250	250	0
Detector 1 Position(ft)	0	0	0	250	250	0
Detector 1 Size(ft)	36	36	36	6	6	36
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	10.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Split (s)	40.0	13.5	13.5	36.0	44.0	40.0
Total Split (s)	45.0	15.0	15.0	85.0	70.0	45.0
Total Split (%)	34.6%	11.5%	11.5%	65.4%	53.8%	34.6%
Maximum Green (s)	39.0	11.5	11.5	79.0	64.0	39.0
Yellow Time (s)	4.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	1.5	0.0	0.0	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.5	3.5	6.0	6.0	6.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	5.0	5.0	7.0	7.0	3.0
Minimum Gap (s)	0.2	0.2	0.2	4.5	4.5	0.2
Time Before Reduce (s)	0.0	0.0	0.0	35.0	35.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	25.0	25.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Walk Time (s)	10.0				10.0	10.0
Flash Dont Walk (s)	24.0				28.0	24.0
Pedestrian Calls (#/hr)	0				0	0
Act Effct Green (s)	24.4	40.4	96.1	93.6	80.1	110.5
Actuated g/C Ratio	0.19	0.31	0.74	0.72	0.62	0.85
v/c Ratio	0.70	0.38	0.13	0.26	0.50	0.40
Control Delay	55.1	26.6	6.3	7.0	15.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	26.6	6.3	7.0	15.4	1.0
LOS	E	C	A	A	B	A
Approach Delay	46.2			7.0	10.5	
Approach LOS	D			A	B	
Queue Length 50th (ft)	178	94	10	93	257	0
Queue Length 95th (ft)	189	150	25	134	353	13
Internal Link Dist (ft)	792			1249	975	
Turn Bay Length (ft)	330	330	250			485
Base Capacity (vph)	995	536	389	2630	2240	1558
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.26	0.50	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 31: River & Balmoral



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	70	45	5	90	20	1932	10	55	1948	20
Future Volume (vph)	110	5	70	45	5	90	20	1932	10	55	1948	20
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	11	11	12	10	11	11	12	11	11
Storage Length (ft)	120		120	0		0	130		130	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt		0.870				0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1467	1479	0	1558	1933	1455	1203	4933	1459	1530	4845	0
Flt Permitted	0.541			0.698			0.950			0.950		
Satd. Flow (perm)	836	1479	0	1145	1933	1455	1203	4933	1459	1530	4845	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79				113			113		4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		971			377			1184			470	
Travel Time (s)		22.1			8.6			20.2			8.0	
Peak Hour Factor	0.92	0.42	0.89	0.64	0.75	0.82	0.59	0.86	0.92	0.84	0.94	0.50
Heavy Vehicles (%)	23%	17%	11%	12%	0%	11%	40%	7%	7%	18%	8%	40%
Adj. Flow (vph)	120	12	79	70	7	110	34	2247	11	65	2072	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	91	0	70	7	110	34	2247	11	65	2112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	0.98	1.00	1.09	0.98	1.04	1.00	0.98	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left		Right	Left		
Leading Detector (ft)	36	36		36	36	36	36	256	36	36	256	
Trailing Detector (ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Position(ft)	0	0		0	0	0	0	250	0	0	250	
Detector 1 Size(ft)	36	36		36	36	36	36	6	36	36	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	6.5	11.0		6.5	15.0	15.0	7.5	47.0	47.0	7.5	28.0	
Total Split (s)	16.0	23.0		11.0	18.0	18.0	14.2	88.0	88.0	18.0	91.8	
Total Split (%)	11.4%	16.4%		7.9%	12.9%	12.9%	10.1%	62.9%	62.9%	12.9%	65.6%	
Maximum Green (s)	12.5	17.0		7.5	12.0	12.0	9.7	82.0	82.0	13.5	85.8	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5	1.5	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		3.0	4.0	4.0	3.0	7.0	7.0	3.0	7.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)					7.0	7.0		9.0	9.0		7.0	
Flash Dont Walk (s)					28.0	28.0		32.0	32.0		15.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	26.2	14.9		18.0	8.2	8.2	8.6	91.2	91.2	10.8	95.6	
Actuated g/C Ratio	0.19	0.11		0.13	0.06	0.06	0.06	0.65	0.65	0.08	0.68	
v/c Ratio	0.57	0.40		0.41	0.06	0.58	0.46	0.70	0.01	0.55	0.64	
Control Delay	61.1	20.7		56.1	61.8	22.1	84.0	7.6	0.0	87.0	2.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.1	20.7		56.1	61.8	22.1	84.0	7.6	0.0	87.0	2.1	
LOS	E	C		E	E	C	F	A	A	F	A	
Approach Delay		43.7			36.3			8.7			4.7	
Approach LOS		D			D			A			A	
Queue Length 50th (ft)	99	10		55	6	0	30	160	0	63	35	
Queue Length 95th (ft)	157	0		69	19	43	m43	220	m0	m68	m38	
Internal Link Dist (ft)		891			297			1104			390	
Turn Bay Length (ft)	120						130		130	300		
Base Capacity (vph)	212	255		171	165	228	85	3214	990	147	3309	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.57	0.36		0.41	0.04	0.48	0.40	0.70	0.01	0.44	0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 111 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 34: Mannheim & United

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2122	26	54	1383	52	162
Future Volume (vph)	2122	26	54	1383	52	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.998				0.900	
Flt Protected				0.998	0.987	
Satd. Flow (prot)	3466	0	0	3470	1800	0
Flt Permitted				0.572	0.987	
Satd. Flow (perm)	3466	0	0	1989	1800	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				22	
Link Speed (mph)	35			35	20	
Link Distance (ft)	303			1685	596	
Travel Time (s)	5.9			32.8	20.3	
Peak Hour Factor	0.95	0.72	0.90	0.97	0.77	0.83
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	2234	36	60	1426	68	195
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2270	0	0	1486	263	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.92	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	1		1	1	1	
Detector Template			Left		Left	
Leading Detector (ft)	256		20	256	36	
Trailing Detector (ft)	250		0	250	0	
Detector 1 Position(ft)	250		0	250	0	
Detector 1 Size(ft)	6		20	6	36	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Detector Phase	2		6	6	8	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	8.0	
Minimum Split (s)	25.0		21.0	21.0	25.0	
Total Split (s)	131.0		131.0	131.0	29.0	
Total Split (%)	81.9%		81.9%	81.9%	18.1%	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Maximum Green (s)	125.0		125.0	125.0	23.0	
Yellow Time (s)	4.5		4.5	4.5	4.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	6.0			6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	7.0		7.0	7.0	5.0	
Minimum Gap (s)	4.5		4.5	4.5	0.2	
Time Before Reduce (s)	30.0		30.0	30.0	0.0	
Time To Reduce (s)	25.0		25.0	25.0	0.0	
Recall Mode	C-Min		C-Min	C-Min	None	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	12.0				23.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	124.8			124.8	23.2	
Actuated g/C Ratio	0.78			0.78	0.14	
v/c Ratio	0.84			1.07dl	0.94	
Control Delay	15.0			36.7	101.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	15.0			36.7	101.4	
LOS	B			D	F	
Approach Delay	15.0			36.7	101.4	
Approach LOS	B			D	F	
Queue Length 50th (ft)	697			402	256	
Queue Length 95th (ft)	803			m#415	#329	
Internal Link Dist (ft)	223			1605	516	
Turn Bay Length (ft)						
Base Capacity (vph)	2708			1553	280	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.84			0.96	0.94	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 140 (88%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 100.5%		ICU Level of Service G	
Analysis Period (min) 15			

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

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 42: Judd & Irving