

Lanes, Volumes, Timings
12: Crow Hill Road & Route 32

2025 Background Traffic
PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	48	20	648	10	7	714
Future Volume (vph)	48	20	648	10	7	714
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.161	
Satd. Flow (perm)	1770	1583	1863	1583	300	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		22		9		
Link Speed (mph)	30		30			30
Link Distance (ft)	928		1366			1150
Travel Time (s)	21.1		31.0			26.1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	54	22	728	11	8	802
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	22	728	11	8	802
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	D.P+P	NA
Protected Phases	3		2		1	1 2
Permitted Phases		3		2	2	

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	3	3	2	2	1	1 2
Switch Phase						
Minimum Initial (s)	5.0	5.0	15.0	15.0	5.0	
Minimum Split (s)	22.5	22.5	24.8	24.8	9.5	
Total Split (s)	22.0	22.0	24.0	24.0	14.0	
Total Split (%)	36.7%	36.7%	40.0%	40.0%	23.3%	
Maximum Green (s)	18.0	18.0	17.2	17.2	10.0	
Yellow Time (s)	3.0	3.0	4.7	4.7	3.0	
All-Red Time (s)	1.0	1.0	2.1	2.1	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	6.8	6.8	4.0	
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Max	C-Max	None	
Walk Time (s)	7.0	7.0	7.0	7.0		
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0	0		
Act Effct Green (s)	7.3	7.3	26.4	26.4	44.6	50.2
Actuated g/C Ratio	0.12	0.12	0.44	0.44	0.74	0.84
v/c Ratio	0.25	0.10	0.89	0.02	0.01	0.51
Control Delay	26.1	11.8	40.1	10.3	2.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	11.8	40.1	10.3	2.6	4.5
LOS	C	B	D	B	A	A
Approach Delay	21.9		39.7			4.5
Approach LOS	C		D			A
90th %ile Green (s)	9.6	9.6	17.2	17.2	18.4	
90th %ile Term Code	Gap	Gap	Coord	Coord	Max	
70th %ile Green (s)	8.2	8.2	17.2	17.2	19.8	
70th %ile Term Code	Gap	Gap	Coord	Coord	Max	
50th %ile Green (s)	7.2	7.2	17.7	17.7	20.3	
50th %ile Term Code	Gap	Gap	Coord	Coord	Gap	
30th %ile Green (s)	0.0	0.0	39.1	39.1	10.1	
30th %ile Term Code	Skip	Skip	Coord	Coord	Gap	
10th %ile Green (s)	0.0	0.0	40.9	40.9	8.3	
10th %ile Term Code	Skip	Skip	Coord	Coord	Gap	
Stops (vph)	44	10	355	6	3	237
Fuel Used(gal)	1	0	14	0	0	8
CO Emissions (g/hr)	59	17	990	11	6	585
NOx Emissions (g/hr)	11	3	193	2	1	114
VOC Emissions (g/hr)	14	4	229	3	1	136
Dilemma Vehicles (#)	0	0	0	0	0	0
Queue Length 50th (ft)	18	0	~353	1	1	90
Queue Length 95th (ft)	44	16	#535	10	3	189
Internal Link Dist (ft)	848		1286			1070
Turn Bay Length (ft)				150		
Base Capacity (vph)	531	490	820	702	609	1544
Starvation Cap Reductn	0	0	0	0	0	0

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.04	0.89	0.02	0.01	0.52

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 53 (88%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 21.3

Intersection Capacity Utilization 48.4%

Analysis Period (min) 15

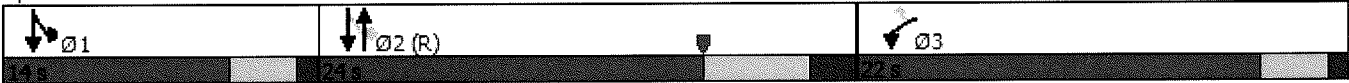
Intersection LOS: C

ICU Level of Service A

~ 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: 12: Crow Hill Road & Route 32



Lanes, Volumes, Timings
15: Podurgiel

2025 Background Traffic
PM Peak Hour

							Ø5	Ø7
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	W		W	↑↑↑	↑↑			
Traffic Volume (vph)	6	2	3	802	869	10		
Future Volume (vph)	6	2	3	802	869	10		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	60			0		
Storage Lanes	1	0	1			0		
Taper Length (ft)	25		25					
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	0.95		
Frt	0.966				0.998			
Flt Protected	0.964		0.950					
Satd. Flow (prot)	1735	0	1770	5085	3532	0		
Flt Permitted	0.964		0.296					
Satd. Flow (perm)	1735	0	551	5085	3532	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	2				1			
Link Speed (mph)	30			30	30			
Link Distance (ft)	532			671	101			
Travel Time (s)	12.1			15.3	2.3			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Adj. Flow (vph)	6	2	3	835	905	10		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	8	0	3	835	915	0		
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	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Number of Detectors	1		1	2	2			
Detector Template	Left		Left	Thru	Thru			
Leading Detector (ft)	20		20	100	100			
Trailing Detector (ft)	0		0	0	0			
Detector 1 Position(ft)	0		0	0	0			
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+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			
Detector 2 Position(ft)				94	94			
Detector 2 Size(ft)				6	6			
Detector 2 Type				CI+Ex	CI+Ex			
Detector 2 Channel								
Detector 2 Extend (s)				0.0	0.0			
Turn Type	Prot		pm+pt	NA	NA			
Protected Phases	4		1	6	2		5	7
Permitted Phases			6					

Lanes, Volumes, Timings
15: Podurriel

2025 Background Traffic
PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5	Ø7
Detector Phase	4		1	6	2			
Switch Phase								
Minimum Initial (s)	4.0		3.0	15.0	5.0		4.0	5.0
Minimum Split (s)	25.2		9.5	25.0	25.0		22.0	23.4
Total Split (s)	15.0		8.0	19.0	32.0		21.0	35.0
Total Split (%)	16.7%		8.9%	21.1%	35.6%		23%	39%
Maximum Green (s)	7.8		3.7	12.0	25.0		16.7	29.6
Yellow Time (s)	3.0		3.3	4.6	4.6		3.3	3.1
All-Red Time (s)	4.2		1.0	2.4	2.4		1.0	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			
Total Lost Time (s)	7.2		4.3	7.0	7.0			
Lead/Lag			Lead	Lag	Lag		Lead	
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0
Recall Mode	None		None	C-Max	C-Max		None	None
Walk Time (s)	7.0			7.0	7.0			7.0
Flash Dont Walk (s)	11.0			11.0	11.0			11.0
Pedestrian Calls (#/hr)	0			0	0			0
Act Effct Green (s)	6.0		52.7	44.4	55.1			
Actuated g/C Ratio	0.07		0.59	0.49	0.61			
v/c Ratio	0.07		0.01	0.33	0.42			
Control Delay	36.1		10.3	17.1	7.9			
Queue Delay	0.0		0.0	0.0	0.0			
Total Delay	36.1		10.3	17.1	7.9			
LOS	D		B	B	A			
Approach Delay	36.1			17.1	7.9			
Approach LOS	D			B	A			
90th %ile Green (s)	6.9		5.9	21.0	28.0		12.9	25.3
90th %ile Term Code	Gap		Gap	Coord	Coord		Gap	Gap
70th %ile Green (s)	0.0		0.0	44.3	57.4		8.8	20.2
70th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
50th %ile Green (s)	0.0		0.0	47.9	59.9		7.7	17.7
50th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
30th %ile Green (s)	0.0		0.0	52.1	63.3		6.9	14.3
30th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
10th %ile Green (s)	0.0		0.0	56.8	67.0		5.9	10.6
10th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
Stops (vph)	9		3	487	354			
Fuel Used(gal)	0		0	10	4			
CO Emissions (g/hr)	10		3	677	284			
NOx Emissions (g/hr)	2		1	132	55			
VOC Emissions (g/hr)	2		1	157	66			
Dilemma Vehicles (#)	0		0	0	0			
Queue Length 50th (ft)	3		1	91	42			
Queue Length 95th (ft)	17		6	205	#345			
Internal Link Dist (ft)	452			591	21			
Turn Bay Length (ft)			60					
Base Capacity (vph)	152		398	2509	2163			
Starvation Cap Reductn	0		0	0	0			

Lanes, Volumes, Timings
15: Podurgiel

2025 Background Traffic
PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5	Ø7
Spillback Cap Reductn	0		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.05		0.01	0.33	0.42			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 5 (6%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 12.4

Intersection LOS: B

Intersection Capacity Utilization 39.5%

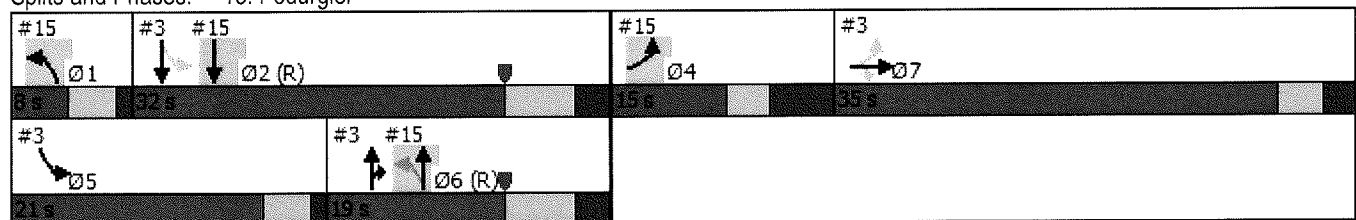
ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 15: Podurgiel



Lanes, Volumes, Timings
3: Rt 2A EB Ramps

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	0	330	0	0	0	0	620	191	153	550	0
Future Volume (vph)	252	0	330	0	0	0	0	620	191	153	550	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		175	225		0
Storage Lanes	0		1	0		0	0		0	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	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected		0.950								0.950		
Satd. Flow (prot)	0	1770	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted		0.950								0.364		
Satd. Flow (perm)	0	1770	1583	0	0	0	0	3539	1583	678	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			299						221			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1278			1235			101			694	
Travel Time (s)		29.0			28.1			2.3			15.8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%
Adj. Flow (vph)	228	0	299	0	0	0	0	562	173	139	498	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	299	0	0	0	0	562	173	139	498	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)		0			0			12			12	
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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2	1	1	2	
Detector Template	Left	Thru	Right					Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20					100	20	20	100	
Trailing Detector (ft)	0	0	0					0	0	0	0	
Detector 1 Position(ft)	0	0	0					0	0	0	0	
Detector 1 Size(ft)	20	6	20					6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex					CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	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	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA	custom	pm+pt	NA	
Protected Phases		7						6	6	5	2	

Lanes, Volumes, Timings
3: Rt 2A EB Ramps

2025 Combined Traffic
PM Peak Hour

Lane Group	Ø1	Ø4
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Growth Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	4

Lanes, Volumes, Timings
3: Rt 2A EB Ramps

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	7		7						6	2		
Detector Phase	7	7	7					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					15.0	15.0	4.0	5.0	
Minimum Split (s)	23.4	23.4	23.4					25.0	25.0	22.0	25.0	
Total Split (s)	35.0	35.0	35.0					19.0	19.0	21.0	32.0	
Total Split (%)	38.9%	38.9%	38.9%					21.1%	21.1%	23.3%	35.6%	
Maximum Green (s)	29.6	29.6	29.6					12.0	12.0	16.7	25.0	
Yellow Time (s)	3.1	3.1	3.1					4.6	4.6	3.3	4.6	
All-Red Time (s)	2.3	2.3	2.3					2.4	2.4	1.0	2.4	
Lost Time Adjust (s)		0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.4	5.4					7.0	7.0	4.3	7.0	
Lead/Lag								Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0					11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0					0	0		0	
Act Effct Green (s)		17.9	17.9					44.1	44.1	59.6	54.9	
Actuated g/C Ratio		0.20	0.20					0.49	0.49	0.66	0.61	
v/c Ratio		0.65	0.54					0.32	0.19	0.25	0.23	
Control Delay		41.1	7.3					1.8	0.5	3.5	4.9	
Queue Delay		0.0	7.7					0.0	0.0	0.0	0.0	
Total Delay		41.1	14.9					1.8	0.5	3.5	4.9	
LOS		D	B					A	A	A	A	
Approach Delay		26.3						1.5			4.6	
Approach LOS		C						A			A	
90th %ile Green (s)	25.3	25.3	25.3					20.9	20.9	13.0	28.0	
90th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
70th %ile Green (s)	21.1	21.1	21.1					43.3	43.3	8.9	56.5	
70th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
50th %ile Green (s)	17.8	17.8	17.8					47.7	47.7	7.8	59.8	
50th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
30th %ile Green (s)	14.4	14.4	14.4					52.0	52.0	6.9	63.2	
30th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
10th %ile Green (s)	10.7	10.7	10.7					56.6	56.6	6.0	66.9	
10th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
Stops (vph)		192	33					16	0	29	145	
Fuel Used(gal)		5	3					1	0	1	4	
CO Emissions (g/hr)		355	242					50	10	68	270	
NOx Emissions (g/hr)		69	47					10	2	13	53	
VOC Emissions (g/hr)		82	56					12	2	16	63	
Dilemma Vehicles (#)		0	0					0	0	0	0	
Queue Length 50th (ft)		120	0					5	0	11	26	
Queue Length 95th (ft)		176	59					7	1	44	143	
Internal Link Dist (ft)		1198			1155			21			614	
Turn Bay Length (ft)									175	225		
Base Capacity (vph)		582	721					1733	888	651	2158	

Lanes, Volumes, Timings
3: Rt 2A EB Ramps

2025 Combined Traffic
PM Peak Hour

Lane Group	Ø1	Ø4
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	3.0	4.0
Minimum Split (s)	9.5	25.2
Total Split (s)	8.0	15.0
Total Split (%)	9%	17%
Maximum Green (s)	3.7	7.8
Yellow Time (s)	3.3	3.0
All-Red Time (s)	1.0	4.2
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)		7.0
Flash Dont Walk (s)		11.0
Pedestrian Calls (#/hr)		0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
90th %ile Green (s)	5.9	6.9
90th %ile Term Code	Gap	Gap
70th %ile Green (s)	0.0	0.0
70th %ile Term Code	Skip	Skip
50th %ile Green (s)	0.0	0.0
50th %ile Term Code	Skip	Skip
30th %ile Green (s)	0.0	0.0
30th %ile Term Code	Skip	Skip
10th %ile Green (s)	0.0	0.0
10th %ile Term Code	Skip	Skip
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		

Lanes, Volumes, Timings
3: Rt 2A EB Ramps

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0					0	0	0	0	
Spillback Cap Reductn		0	372					0	0	0	0	
Storage Cap Reductn		0	0					0	0	0	0	
Reduced v/c Ratio		0.39	0.86					0.32	0.19	0.21	0.23	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 5 (6%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 9.4

Intersection LOS: A

Intersection Capacity Utilization 48.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Rt 2A EB Ramps

#15  Ø1 8 s	#3  Ø2 (R) 32 s	#15  Ø4 15 s	#3  Ø7 35 s
#3  Ø5 21 s	#3  Ø6 (R) 19 s		

Lane Group	Ø1	Ø4
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings
6: Rt 2A WB Ramps

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	211	0	157	217	654	0	0	490	363
Future Volume (vph)	0	0	0	211	0	157	217	654	0	0	490	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	200		200
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95		1.00	1.00	1.00	1.00	0.95	0.95
Frt						0.850					0.936	
Flt Protected				0.950	0.950		0.950					
Satd. Flow (prot)	0	0	0	1681	1681	1583	1770	1863	0	0	3313	0
Flt Permitted				0.950	0.950		0.239					
Satd. Flow (perm)	0	0	0	1681	1681	1583	445	1863	0	0	3313	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						164					216	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1387			1103			694			836	
Travel Time (s)		31.5			25.1			15.8			19.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	220	0	164	226	681	0	0	510	378
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	0	0	110	110	164	226	681	0	0	888	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2				2
Detector Template				Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)				20	100	20	20	100			100	
Trailing Detector (ft)				0	0	0	0	0			0	
Detector 1 Position(ft)				0	0	0	0	0			0	
Detector 1 Size(ft)				20	6	20	20	6			6	
Detector 1 Type				CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex			CI+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	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	D.P+P	NA			NA	
Protected Phases					3		1	1 2			2	
Permitted Phases				3		3	2					

Lanes, Volumes, Timings
6: Rt 2A WB Ramps

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				3	3	3	1	1 2			2	
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0				15.0	
Minimum Split (s)				22.5	22.5	22.5	9.5				22.9	
Total Split (s)				20.0	20.0	20.0	37.0				33.0	
Total Split (%)				22.2%	22.2%	22.2%	41.1%				36.7%	
Maximum Green (s)				15.6	15.6	15.6	33.0				28.1	
Yellow Time (s)				3.3	3.3	3.3	3.0				3.9	
All-Red Time (s)				1.1	1.1	1.1	1.0				1.0	
Lost Time Adjust (s)				0.0	0.0	0.0	0.0				0.0	
Total Lost Time (s)				4.4	4.4	4.4	4.0				4.9	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0	3.0	3.0				3.0	
Recall Mode				None	None	None	None				C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				11.0	11.0	11.0					11.0	
Pedestrian Calls (#/hr)				0	0	0					0	
Act Effct Green (s)				11.3	11.3	11.3	66.3	70.3			44.0	
Actuated g/C Ratio				0.13	0.13	0.13	0.74	0.78			0.49	
v/c Ratio				0.52	0.52	0.48	0.35	0.47			0.51	
Control Delay				44.8	44.8	10.7	5.0	7.0			9.5	
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay				44.8	44.8	10.7	5.0	7.0			9.5	
LOS				D	D	B	A	A			A	
Approach Delay					30.2			6.5			9.5	
Approach LOS					C			A			A	
90th %ile Green (s)				15.6	15.6	15.6	33.0				28.1	
90th %ile Term Code				Max	Max	Max	Max				Coord	
70th %ile Green (s)				13.9	13.9	13.9	26.1				36.7	
70th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
50th %ile Green (s)				11.2	11.2	11.2	20.7				44.8	
50th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
30th %ile Green (s)				9.3	9.3	9.3	15.7				51.7	
30th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
10th %ile Green (s)				6.7	6.7	6.7	11.5				58.5	
10th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
Stops (vph)				96	96	25	72	299			310	
Fuel Used(gal)				2	2	2	2	6			9	
CO Emissions (g/hr)				168	168	128	125	428			623	
NOx Emissions (g/hr)				33	33	25	24	83			121	
VOC Emissions (g/hr)				39	39	30	29	99			144	
Dilemma Vehicles (#)				0	0	0	0	0			0	
Queue Length 50th (ft)				63	63	0	56	212			56	
Queue Length 95th (ft)				111	111	52	18	99			88	
Internal Link Dist (ft)		1307			1023			614			756	
Turn Bay Length (ft)							150					
Base Capacity (vph)				291	291	409	829	1454			1728	
Starvation Cap Reductn				0	0	0	0	0			0	

Lanes, Volumes, Timings
6: Rt 2A WB Ramps

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn				0	0	0	0	0			0	
Storage Cap Reductn				0	0	0	0	0			0	
Reduced v/c Ratio				0.38	0.38	0.40	0.27	0.47			0.51	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 56 (62%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 11.9

Intersection LOS: B

Intersection Capacity Utilization 54.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: Rt 2A WB Ramps

 Ø1	 Ø2 (R)	 Ø3
37 s	33 s	20 s

Lanes, Volumes, Timings
8: Gallivan Lane

2025 Combined Traffic
PM Peak Hour

							
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	23	107	135	676	745	38	
Future Volume (vph)	23	107	135	676	745	38	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0	100			175	
Storage Lanes	1	0	1			0	
Taper Length (ft)	25		25				
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	
Frt	0.889				0.993		
Flt Protected	0.991		0.950				
Satd. Flow (prot)	1641	0	1770	1863	3514	0	
Flt Permitted	0.991		0.276				
Satd. Flow (perm)	1641	0	514	1863	3514	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	113				9		
Link Speed (mph)	30			30	30		
Link Distance (ft)	1408			836	286		
Travel Time (s)	32.0			19.0	6.5		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	24	113	142	712	784	40	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	137	0	142	712	824	0	
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	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Number of Detectors	1		1	2	2		
Detector Template	Left		Left	Thru	Thru		
Leading Detector (ft)	20		20	100	100		
Trailing Detector (ft)	0		0	0	0		
Detector 1 Position(ft)	0		0	0	0		
Detector 1 Size(ft)	20		20	6	6		
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+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		
Detector 2 Position(ft)				94	94		
Detector 2 Size(ft)				6	6		
Detector 2 Type				CI+Ex	CI+Ex		
Detector 2 Channel							
Detector 2 Extend (s)				0.0	0.0		
Turn Type	Prot		custom	NA	NA		
Protected Phases	4		5	2 5	6		2
Permitted Phases			2				



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Detector Phase	4		5	2 5	6		
Switch Phase							
Minimum Initial (s)	7.0		5.0		15.0		15.0
Minimum Split (s)	22.5		9.5		23.6		23.6
Total Split (s)	23.0		13.0		54.0		67.0
Total Split (%)	25.6%		14.4%		60.0%		74%
Maximum Green (s)	19.0		9.0		48.4		61.4
Yellow Time (s)	3.0		3.0		4.6		4.6
All-Red Time (s)	1.0		1.0		1.0		1.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		4.0		5.6		
Lead/Lag			Lead		Lag		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	None		None		C-Max		C-Max
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)	8.5		73.5	71.9	51.6		
Actuated g/C Ratio	0.09		0.82	0.80	0.57		
v/c Ratio	0.54		0.22	0.48	0.41		
Control Delay	18.9		2.0	2.8	11.8		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	18.9		2.0	2.8	11.8		
LOS	B		A	A	B		
Approach Delay	18.9			2.6	11.8		
Approach LOS	B			A	B		
90th %ile Green (s)	12.3		15.7		48.4		68.1
90th %ile Term Code	Gap		Max		Coord		Coord
70th %ile Green (s)	9.1		18.9		48.4		71.3
70th %ile Term Code	Gap		Max		Coord		Coord
50th %ile Green (s)	7.0		18.7		50.7		73.4
50th %ile Term Code	Min		Gap		Coord		Coord
30th %ile Green (s)	7.0		15.8		53.6		73.4
30th %ile Term Code	Min		Gap		Coord		Coord
10th %ile Green (s)	7.0		12.5		56.9		73.4
10th %ile Term Code	Min		Gap		Coord		Coord
Stops (vph)	37		15	82	414		
Fuel Used(gal)	2		1	5	7		
CO Emissions (g/hr)	149		71	366	494		
NOx Emissions (g/hr)	29		14	71	96		
VOC Emissions (g/hr)	35		16	85	115		
Dilemma Vehicles (#)	0		0	0	0		
Queue Length 50th (ft)	13		3	21	129		
Queue Length 95th (ft)	65		27	158	182		
Internal Link Dist (ft)	1328			756	206		
Turn Bay Length (ft)			100				
Base Capacity (vph)	435		647	1488	2018		
Starvation Cap Reductn	0		0	0	0		

Lanes, Volumes, Timings
8: Gallivan Lane

2025 Combined Traffic
PM Peak Hour

							
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Spillback Cap Reductn	0		0	0	0		
Storage Cap Reductn	0		0	0	0		
Reduced v/c Ratio	0.31		0.22	0.48	0.41		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 62 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 8.0

Intersection LOS: A

Intersection Capacity Utilization 51.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: Gallivan Lane

 Ø2 (R)		 Ø4	
57 s		23 s	
 Ø5	 Ø6 (R)		
13 s	54 s		

Lanes, Volumes, Timings
10: Site Drive/Fort Shantock Rd

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	5	51	1	30	9	628	61	34	728	4
Future Volume (vph)	3	1	5	51	1	30	9	628	61	34	728	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	300		0	150		150	500		0
Storage Lanes	0		0	0		0	1		0	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	1.00	1.00	1.00	1.00	1.00
Frt		0.925			0.951			0.987			0.999	
Flt Protected		0.984			0.970		0.950			0.950		
Satd. Flow (prot)	0	1695	0	0	1718	0	1770	1839	0	1770	1861	0
Flt Permitted		0.929			0.805		0.317			0.299		
Satd. Flow (perm)	0	1601	0	0	1426	0	590	1839	0	557	1861	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			31			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			1009			189			1366	
Travel Time (s)		12.9			22.9			4.3			31.0	
Peak Hour Factor	0.92	0.92	0.92	0.96	0.92	0.96	0.92	0.96	0.96	0.96	0.96	0.92
Adj. Flow (vph)	3	1	5	53	1	31	10	654	64	35	758	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	85	0	10	718	0	35	762	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)		0			0			12			12	
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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	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	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4			6			2		

Lanes, Volumes, Timings
10: Site Drive/Fort Shantock Rd

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		10.9	24.0		10.9	10.9	
Total Split (s)	24.0	24.0		24.0	24.0		16.0	40.0		16.0	40.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		20.0%	50.0%		20.0%	50.0%	
Maximum Green (s)	19.5	19.5		19.5	19.5		12.0	34.1		12.0	34.1	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.4		1.0	1.4	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.0	5.9		4.0	5.9	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0				
Pedestrian Calls (#/hr)	0	0		0	0			0				
Act Effct Green (s)		8.6			8.6		62.2	58.1		64.2	62.2	
Actuated g/C Ratio		0.11			0.11		0.78	0.73		0.80	0.78	
v/c Ratio		0.05			0.47		0.02	0.54		0.07	0.53	
Control Delay		23.4			30.9		2.7	9.8		2.7	7.5	
Queue Delay		0.0			0.0		0.0	0.6		0.0	0.0	
Total Delay		23.4			30.9		2.7	10.3		2.7	7.5	
LOS		C			C		A	B		A	A	
Approach Delay		23.4			30.9			10.2			7.3	
Approach LOS		C			C			B			A	
90th %ile Green (s)	12.6	12.6		12.6	12.6		5.9	46.5		6.5	47.1	
90th %ile Term Code	Gap	Gap		Gap	Gap		Gap	Coord		Gap	Coord	
70th %ile Green (s)	10.1	10.1		10.1	10.1		0.0	49.4		6.1	59.5	
70th %ile Term Code	Gap	Gap		Gap	Gap		Skip	Coord		Gap	Coord	
50th %ile Green (s)	8.3	8.3		8.3	8.3		0.0	51.5		5.8	61.3	
50th %ile Term Code	Gap	Gap		Gap	Gap		Skip	Coord		Gap	Coord	
30th %ile Green (s)	6.6	6.6		6.6	6.6		0.0	63.0		0.0	63.0	
30th %ile Term Code	Gap	Gap		Gap	Gap		Skip	Coord		Skip	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	74.1		0.0	74.1	
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Coord		Skip	Coord	
Stops (vph)		8			51		3	342		7	307	
Fuel Used(gal)		0			1		0	6		0	11	
CO Emissions (g/hr)		8			101		4	406		29	741	
NOx Emissions (g/hr)		2			20		1	79		6	144	
VOC Emissions (g/hr)		2			23		1	94		7	172	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		2			26		1	182		3	114	
Queue Length 95th (ft)		14			65		4	343		10	371	
Internal Link Dist (ft)		488			929			109			1286	
Turn Bay Length (ft)							150			500		
Base Capacity (vph)		394			371		655	1337		633	1446	
Starvation Cap Reductn		0			0		0	269		0	0	

Lanes, Volumes, Timings
10: Site Drive/Fort Shantock Rd

2025 Combined Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.02			0.23		0.02	0.67		0.06	0.53	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 10.0

Intersection LOS: A

Intersection Capacity Utilization 55.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Site Drive/Fort Shantock Rd

 Ø1 16 s	 Ø2 (R) 40 s	 Ø4 24 s
 Ø5 16 s	 Ø6 (R) 40 s	

Lanes, Volumes, Timings
12: Crow Hill Road & Route 32

2025 Combined Traffic
PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	20	651	10	7	717
Future Volume (vph)	49	20	651	10	7	717
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.161	
Satd. Flow (perm)	1770	1583	1863	1583	300	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		22		9		
Link Speed (mph)	30		30			30
Link Distance (ft)	928		1366			1150
Travel Time (s)	21.1		31.0			26.1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	55	22	731	11	8	806
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	22	731	11	8	806
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+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
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	D.P+P	NA
Protected Phases	3		2		1	12
Permitted Phases		3		2	2	

Lanes, Volumes, Timings
12: Crow Hill Road & Route 32

2025 Combined Traffic
PM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	3	3	2	2	1	1 2
Switch Phase						
Minimum Initial (s)	5.0	5.0	15.0	15.0	5.0	
Minimum Split (s)	22.5	22.5	24.8	24.8	9.5	
Total Split (s)	22.0	22.0	24.0	24.0	14.0	
Total Split (%)	36.7%	36.7%	40.0%	40.0%	23.3%	
Maximum Green (s)	18.0	18.0	17.2	17.2	10.0	
Yellow Time (s)	3.0	3.0	4.7	4.7	3.0	
All-Red Time (s)	1.0	1.0	2.1	2.1	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	6.8	6.8	4.0	
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	C-Max	C-Max	None	
Walk Time (s)	7.0	7.0	7.0	7.0		
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		
Pedestrian Calls (#/hr)	0	0	0	0		
Act Effct Green (s)	7.4	7.4	26.3	26.3	44.6	50.2
Actuated g/C Ratio	0.12	0.12	0.44	0.44	0.74	0.84
v/c Ratio	0.25	0.10	0.89	0.02	0.01	0.52
Control Delay	26.1	11.7	40.9	10.3	2.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	11.7	40.9	10.3	2.6	4.6
LOS	C	B	D	B	A	A
Approach Delay	22.0		40.5			4.6
Approach LOS	C		D			A
90th %ile Green (s)	9.7	9.7	17.2	17.2	18.3	
90th %ile Term Code	Gap	Gap	Coord	Coord	Max	
70th %ile Green (s)	8.2	8.2	17.2	17.2	19.8	
70th %ile Term Code	Gap	Gap	Coord	Coord	Max	
50th %ile Green (s)	7.2	7.2	17.5	17.5	20.5	
50th %ile Term Code	Gap	Gap	Coord	Coord	Gap	
30th %ile Green (s)	0.0	0.0	39.0	39.0	10.2	
30th %ile Term Code	Skip	Skip	Coord	Coord	Gap	
10th %ile Green (s)	0.0	0.0	40.8	40.8	8.4	
10th %ile Term Code	Skip	Skip	Coord	Coord	Gap	
Stops (vph)	45	10	356	6	3	239
Fuel Used(gal)	1	0	14	0	0	8
CO Emissions (g/hr)	60	17	1001	11	6	589
NOx Emissions (g/hr)	12	3	195	2	1	115
VOC Emissions (g/hr)	14	4	232	3	1	136
Dilemma Vehicles (#)	0	0	0	0	0	0
Queue Length 50th (ft)	18	0	~358	1	1	91
Queue Length 95th (ft)	44	16	#538	10	3	192
Internal Link Dist (ft)	848		1286			1070
Turn Bay Length (ft)				150		
Base Capacity (vph)	531	490	817	700	610	1543
Starvation Cap Reductn	0	0	0	0	0	0

Lanes, Volumes, Timings
12: Crow Hill Road & Route 32

2025 Combined Traffic
PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.04	0.89	0.02	0.01	0.52

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 53 (88%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 21.7

Intersection LOS: C

Intersection Capacity Utilization 48.6%

ICU Level of Service A

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: 12: Crow Hill Road & Route 32

 Ø1	  Ø2 (R)	 Ø3
14 s	24 s	22 s

Lanes, Volumes, Timings
15: Podurgiel

2025 Combined Traffic
PM Peak Hour

								
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5	Ø7
Lane Configurations								
Traffic Volume (vph)	6	2	3	805	870	10		
Future Volume (vph)	6	2	3	805	870	10		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	0	60			0		
Storage Lanes	1	0	1			0		
Taper Length (ft)	25		25					
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	0.95		
Frt	0.966				0.998			
Flt Protected	0.964		0.950					
Satd. Flow (prot)	1735	0	1770	5085	3532	0		
Flt Permitted	0.964		0.296					
Satd. Flow (perm)	1735	0	551	5085	3532	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	2				1			
Link Speed (mph)	30			30	30			
Link Distance (ft)	532			671	101			
Travel Time (s)	12.1			15.3	2.3			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Adj. Flow (vph)	6	2	3	839	906	10		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	8	0	3	839	916	0		
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	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15	9	15			9		
Number of Detectors	1		1	2	2			
Detector Template	Left		Left	Thru	Thru			
Leading Detector (ft)	20		20	100	100			
Trailing Detector (ft)	0		0	0	0			
Detector 1 Position(ft)	0		0	0	0			
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+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			
Detector 2 Position(ft)				94	94			
Detector 2 Size(ft)				6	6			
Detector 2 Type				CI+Ex	CI+Ex			
Detector 2 Channel								
Detector 2 Extend (s)				0.0	0.0			
Turn Type	Prot		pm+pt	NA	NA			
Protected Phases	4		1	6	2		5	7
Permitted Phases			6					

Lanes, Volumes, Timings
15: Podurgiel

2025 Combined Traffic
PM Peak Hour

								
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5	Ø7
Detector Phase	4		1	6	2			
Switch Phase								
Minimum Initial (s)	4.0		3.0	15.0	5.0		4.0	5.0
Minimum Split (s)	25.2		9.5	25.0	25.0		22.0	23.4
Total Split (s)	15.0		8.0	19.0	32.0		21.0	35.0
Total Split (%)	16.7%		8.9%	21.1%	35.6%		23%	39%
Maximum Green (s)	7.8		3.7	12.0	25.0		16.7	29.6
Yellow Time (s)	3.0		3.3	4.6	4.6		3.3	3.1
All-Red Time (s)	4.2		1.0	2.4	2.4		1.0	2.3
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			
Total Lost Time (s)	7.2		4.3	7.0	7.0			
Lead/Lag			Lead	Lag	Lag		Lead	
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0
Recall Mode	None		None	C-Max	C-Max		None	None
Walk Time (s)	7.0			7.0	7.0			7.0
Flash Dont Walk (s)	11.0			11.0	11.0			11.0
Pedestrian Calls (#/hr)	0			0	0			0
Act Effct Green (s)	6.0		52.4	44.1	54.9			
Actuated g/C Ratio	0.07		0.58	0.49	0.61			
v/c Ratio	0.07		0.01	0.34	0.43			
Control Delay	36.1		10.7	17.3	7.8			
Queue Delay	0.0		0.0	0.0	0.0			
Total Delay	36.1		10.7	17.3	7.8			
LOS	D		B	B	A			
Approach Delay	36.1			17.3	7.8			
Approach LOS	D			B	A			
90th %ile Green (s)	6.9		5.9	20.9	28.0		13.0	25.3
90th %ile Term Code	Gap		Gap	Coord	Coord		Gap	Gap
70th %ile Green (s)	0.0		0.0	43.3	56.5		8.9	21.1
70th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
50th %ile Green (s)	0.0		0.0	47.7	59.8		7.8	17.8
50th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
30th %ile Green (s)	0.0		0.0	52.0	63.2		6.9	14.4
30th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
10th %ile Green (s)	0.0		0.0	56.6	66.9		6.0	10.7
10th %ile Term Code	Skip		Skip	Coord	Coord		Gap	Gap
Stops (vph)	9		3	492	332			
Fuel Used(gal)	0		0	10	4			
CO Emissions (g/hr)	10		3	683	275			
NOx Emissions (g/hr)	2		1	133	53			
VOC Emissions (g/hr)	2		1	158	64			
Dilemma Vehicles (#)	0		0	0	0			
Queue Length 50th (ft)	3		1	92	42			
Queue Length 95th (ft)	17		6	206	#348			
Internal Link Dist (ft)	452			591	21			
Turn Bay Length (ft)			60					
Base Capacity (vph)	152		396	2491	2154			
Starvation Cap Reductn	0		0	0	0			

Lanes, Volumes, Timings
15: Podurgiel

2025 Combined Traffic
PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø5	Ø7
Spillback Cap Reductn	0		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.05		0.01	0.34	0.43			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 5 (6%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 12.5

Intersection LOS: B

Intersection Capacity Utilization 39.5%

ICU Level of Service A

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 15: Podurgiel

#15 Ø1 8 s	#3 #15 Ø2 (R) 32 s	#15 Ø4 15 s	#3 Ø7 35 s
#3 Ø5 21 s	#3 #15 Ø6 (R) 19 s		

Saturday Peak Hour

Lanes, Volumes, Timings

3: Rt 2A EB Ramps

Background Traffic

Saturday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	0	238	0	0	0	0	560	163	94	499	0
Future Volume (vph)	173	0	238	0	0	0	0	560	163	94	499	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		175	225		0
Storage Lanes	0		1	0		0	0		0	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	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			
Flt Protected		0.950								0.950		
Satd. Flow (prot)	0	1770	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted		0.950								0.403		
Satd. Flow (perm)	0	1770	1583	0	0	0	0	3539	1583	751	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			230						199			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1278			1235			101			694	
Travel Time (s)		29.0			28.1			2.3			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%
Adj. Flow (vph)	167	0	230	0	0	0	0	541	158	91	482	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	230	0	0	0	0	541	158	91	482	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)		0			0			12			12	
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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2	1	1	2	
Detector Template	Left	Thru	Right					Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20					100	20	20	100	
Trailing Detector (ft)	0	0	0					0	0	0	0	
Detector 1 Position(ft)	0	0	0					0	0	0	0	
Detector 1 Size(ft)	20	6	20					6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex					CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	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	
Detector 1 Delay (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA	Perm					NA	custom	pm+pt	NA	
Protected Phases		7						6	6	5	2	

Lanes, Volumes, Timings

3: Rt 2A EB Ramps

Background Traffic
Saturday Peak Hour

Lane Group	Ø1	Ø4
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Growth Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	4

Lanes, Volumes, Timings

3: Rt 2A EB Ramps

Background Traffic
Saturday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	7		7						6	2		
Detector Phase	7	7	7					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					15.0	15.0	4.0	5.0	
Minimum Split (s)	23.4	23.4	23.4					25.0	25.0	22.0	25.0	
Total Split (s)	34.0	34.0	34.0					37.0	37.0	14.0	43.0	
Total Split (%)	34.0%	34.0%	34.0%					37.0%	37.0%	14.0%	43.0%	
Maximum Green (s)	28.6	28.6	28.6					30.0	30.0	9.7	36.0	
Yellow Time (s)	3.1	3.1	3.1					4.6	4.6	3.3	4.6	
All-Red Time (s)	2.3	2.3	2.3					2.4	2.4	1.0	2.4	
Lost Time Adjust (s)		0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.4	5.4					7.0	7.0	4.3	7.0	
Lead/Lag								Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Recall Mode	None	None	None					C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0					11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0					0	0		0	
Act Effct Green (s)		15.1	15.1					60.0	60.0	72.2	67.5	
Actuated g/C Ratio		0.15	0.15					0.60	0.60	0.72	0.68	
v/c Ratio		0.63	0.53					0.25	0.15	0.15	0.20	
Control Delay		49.5	9.5					1.6	0.3	3.3	4.9	
Queue Delay		0.0	1.9					0.0	0.0	0.0	0.0	
Total Delay		49.5	11.4					1.6	0.3	3.3	4.9	
LOS		D	B					A	A	A	A	
Approach Delay		27.4						1.3			4.7	
Approach LOS		C						A			A	
90th %ile Green (s)	21.1	21.1	21.1					37.3	37.3	10.1	41.5	
90th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
70th %ile Green (s)	17.9	17.9	17.9					57.9	57.9	7.5	69.7	
70th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
50th %ile Green (s)	14.8	14.8	14.8					61.7	61.7	6.8	72.8	
50th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
30th %ile Green (s)	12.5	12.5	12.5					64.6	64.6	6.2	75.1	
30th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Gap	Coord	
10th %ile Green (s)	9.2	9.2	9.2					78.4	78.4	0.0	78.4	
10th %ile Term Code	Gap	Gap	Gap					Coord	Coord	Skip	Coord	
Stops (vph)		136	26					17	0	23	148	
Fuel Used(gal)		4	3					1	0	1	4	
CO Emissions (g/hr)		263	182					44	8	44	252	
NOx Emissions (g/hr)		51	35					9	2	9	49	
VOC Emissions (g/hr)		61	42					10	2	10	58	
Dilemma Vehicles (#)		0	0					0	0	0	0	
Queue Length 50th (ft)		101	0					6	0	8	33	
Queue Length 95th (ft)		159	61					8	1	43	125	
Internal Link Dist (ft)		1198			1155			21			614	
Turn Bay Length (ft)									175	225		
Base Capacity (vph)		506	616					2122	1029	641	2388	

Lanes, Volumes, Timings
3: Rt 2A EB Ramps

Background Traffic
Saturday Peak Hour

Lane Group	Ø1	Ø4
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	3.0	4.0
Minimum Split (s)	9.5	25.2
Total Split (s)	8.0	15.0
Total Split (%)	8%	15%
Maximum Green (s)	3.7	7.8
Yellow Time (s)	3.3	3.0
All-Red Time (s)	1.0	4.2
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)		7.0
Flash Dont Walk (s)		11.0
Pedestrian Calls (#/hr)		0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
90th %ile Green (s)	5.9	7.6
90th %ile Term Code	Gap	Gap
70th %ile Green (s)	0.0	0.0
70th %ile Term Code	Skip	Skip
50th %ile Green (s)	0.0	0.0
50th %ile Term Code	Skip	Skip
30th %ile Green (s)	0.0	0.0
30th %ile Term Code	Skip	Skip
10th %ile Green (s)	0.0	0.0
10th %ile Term Code	Skip	Skip
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		

Lanes, Volumes, Timings

3: Rt 2A EB Ramps

Background Traffic

Saturday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0					0	0	0	0	
Spillback Cap Reductn		0	247					0	0	0	0	
Storage Cap Reductn		0	0					0	0	0	0	
Reduced v/c Ratio		0.33	0.62					0.25	0.15	0.14	0.20	

Intersection Summary	
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	97 (97%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	8.7
Intersection Capacity Utilization	40.3%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

Splits and Phases: 3: Rt 2A EB Ramps

 #15 Ø1 8 s	 #3 Ø2 (R) 43 s	 #15 Ø2 (R)	 #15 Ø4 15 s	 #3 Ø7 34 s
 #3 Ø5 14 s	 #3 Ø6 (R) 37 s	 #15 Ø6 (R)		

Lane Group	Ø1	Ø4
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings
6: Rt 2A WB Ramps

Background Traffic
Saturday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	189	0	101	226	507	0	0	404	255
Future Volume (vph)	0	0	0	189	0	101	226	507	0	0	404	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	200		200
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt						0.850					0.942	
Flt Protected				0.950	0.950		0.950					
Satd. Flow (prot)	0	0	0	1681	1681	1583	1770	1863	0	0	3334	0
Flt Permitted				0.950	0.950		0.364					
Satd. Flow (perm)	0	0	0	1681	1681	1583	678	1863	0	0	3334	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						103					161	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1387			1103			694			836	
Travel Time (s)		31.5			25.1			15.8			19.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	193	0	103	231	517	0	0	412	260
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	0	0	96	97	103	231	517	0	0	672	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2	1	1	2			2	
Detector Template				Left	Thru	Right	Left	Thru			Thru	
Leading Detector (ft)				20	100	20	20	100			100	
Trailing Detector (ft)				0	0	0	0	0			0	
Detector 1 Position(ft)				0	0	0	0	0			0	
Detector 1 Size(ft)				20	6	20	20	6			6	
Detector 1 Type				CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex			CI+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	
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA	Perm	D.P+P	NA			NA	
Protected Phases					3		1	1 2			2	
Permitted Phases				3		3	2					

Lanes, Volumes, Timings
6: Rt 2A WB Ramps

Background Traffic
Saturday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				3	3	3	1	1 2			2	
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0				15.0	
Minimum Split (s)				22.5	22.5	22.5	9.5				22.9	
Total Split (s)				20.0	20.0	20.0	37.0				43.0	
Total Split (%)				20.0%	20.0%	20.0%	37.0%				43.0%	
Maximum Green (s)				15.6	15.6	15.6	33.0				38.1	
Yellow Time (s)				3.3	3.3	3.3	3.0				3.9	
All-Red Time (s)				1.1	1.1	1.1	1.0				1.0	
Lost Time Adjust (s)				0.0	0.0	0.0	0.0				0.0	
Total Lost Time (s)				4.4	4.4	4.4	4.0				4.9	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0	3.0	3.0				3.0	
Recall Mode				None	None	None	None				C-Max	
Walk Time (s)				7.0	7.0	7.0					7.0	
Flash Dont Walk (s)				11.0	11.0	11.0					11.0	
Pedestrian Calls (#/hr)				0	0	0					0	
Act Effct Green (s)				11.1	11.1	11.1	76.5	80.5			59.9	
Actuated g/C Ratio				0.11	0.11	0.11	0.76	0.80			0.60	
v/c Ratio				0.52	0.52	0.39	0.33	0.34			0.33	
Control Delay				50.9	51.1	12.3	5.7	5.8			4.1	
Queue Delay				0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay				50.9	51.1	12.3	5.7	5.8			4.1	
LOS				D	D	B	A	A			A	
Approach Delay					37.5			5.8			4.1	
Approach LOS					D			A			A	
90th %ile Green (s)				15.6	15.6	15.6	24.6				46.5	
90th %ile Term Code				Max	Max	Max	Gap				Coord	
70th %ile Green (s)				12.9	12.9	12.9	18.3				55.5	
70th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
50th %ile Green (s)				11.1	11.1	11.1	14.9				60.7	
50th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
30th %ile Green (s)				9.3	9.3	9.3	12.0				65.4	
30th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
10th %ile Green (s)				6.7	6.7	6.7	8.8				71.2	
10th %ile Term Code				Gap	Gap	Gap	Gap				Coord	
Stops (vph)				85	86	20	87	201			145	
Fuel Used(gal)				2	2	1	2	4			6	
CO Emissions (g/hr)				157	159	86	137	311			395	
NOx Emissions (g/hr)				31	31	17	27	61			77	
VOC Emissions (g/hr)				36	37	20	32	72			91	
Dilemma Vehicles (#)				0	0	0	0	0			0	
Queue Length 50th (ft)				62	62	0	30	58			0	
Queue Length 95th (ft)				111	111	46	88	318			165	
Internal Link Dist (ft)		1307			1023			614			756	
Turn Bay Length (ft)							150					
Base Capacity (vph)				262	262	333	905	1499			2060	
Starvation Cap Reductn				0	0	0	0	0			0	

Lanes, Volumes, Timings

6: Rt 2A WB Ramps

Background Traffic

Saturday Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn				0	0	0	0	0			0	
Storage Cap Reductn				0	0	0	0	0			0	
Reduced v/c Ratio				0.37	0.37	0.31	0.26	0.34			0.33	

Intersection Summary	
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	61 (61%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	10.6
Intersection Capacity Utilization	48.2%
Analysis Period (min)	15
	Intersection LOS: B
	ICU Level of Service A

Splits and Phases: 6: Rt 2A WB Ramps

 Ø1	 Ø2 (R)	 Ø3
67 s	43 s	20 s

Lanes, Volumes, Timings
8: Gallivan Lane

Background Traffic
Saturday Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	127	113	494	531	14
Future Volume (vph)	22	127	113	494	531	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			175
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt	0.885				0.996	
Flt Protected	0.993		0.950			
Satd. Flow (prot)	1637	0	1770	1863	3525	0
Flt Permitted	0.993		0.413			
Satd. Flow (perm)	1637	0	769	1863	3525	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	140				4	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1408			836	286	
Travel Time (s)	32.0			19.0	6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	24	140	124	543	584	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	164	0	124	543	599	0
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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	20		20	6	6	
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+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	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				CI+Ex	CI+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot		D.P+P	NA	NA	
Protected Phases	4		1	1 2	2	
Permitted Phases			2			

Lanes, Volumes, Timings

8: Gallivan Lane

Background Traffic
Saturday Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4		1	1 2	2	
Switch Phase						
Minimum Initial (s)	7.0		5.0		15.0	
Minimum Split (s)	22.5		9.5		23.6	
Total Split (s)	23.0		13.0		64.0	
Total Split (%)	23.0%		13.0%		64.0%	
Maximum Green (s)	19.0		9.0		58.4	
Yellow Time (s)	3.0		3.0		4.6	
All-Red Time (s)	1.0		1.0		1.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	4.0		4.0		5.6	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0		3.0	
Recall Mode	None		None		C-Max	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	11.0				11.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	8.8		79.2	83.2	64.4	
Actuated g/C Ratio	0.09		0.79	0.83	0.64	
v/c Ratio	0.61		0.17	0.35	0.26	
Control Delay	20.3		1.8	2.0	8.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	20.3		1.8	2.0	8.6	
LOS	C		A	A	A	
Approach Delay	20.3			2.0	8.6	
Approach LOS	C			A	A	
90th %ile Green (s)	13.5		14.5		58.4	
90th %ile Term Code	Gap		Max		Coord	
70th %ile Green (s)	9.6		17.1		59.7	
70th %ile Term Code	Gap		Gap		Coord	
50th %ile Green (s)	7.0		13.6		65.8	
50th %ile Term Code	Min		Gap		Coord	
30th %ile Green (s)	7.0		11.5		67.9	
30th %ile Term Code	Min		Gap		Coord	
10th %ile Green (s)	7.0		9.1		70.3	
10th %ile Term Code	Min		Gap		Coord	
Stops (vph)	37		15	59	223	
Fuel Used(gal)	2		1	4	4	
CO Emissions (g/hr)	172		60	262	294	
NOx Emissions (g/hr)	33		12	51	57	
VOC Emissions (g/hr)	40		14	61	68	
Dilemma Vehicles (#)	0		0	0	0	
Queue Length 50th (ft)	15		3	13	73	
Queue Length 95th (ft)	74		29	106	124	
Internal Link Dist (ft)	1328			756	206	
Turn Bay Length (ft)			100			
Base Capacity (vph)	424		740	1549	2272	
Starvation Cap Reductn	0		0	0	0	

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.39		0.17	0.35	0.26	

Intersection Summary	
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	48 (48%), Referenced to phase 2:NBSB and 6:, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	6.8
Intersection Capacity Utilization	41.8%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

Splits and Phases: 8: Gallivan Lane

 Ø1	 Ø2 (R)	 Ø4
13 s	54 s	23 s

Lanes, Volumes, Timings
10: Fort Shantock Rd

Background Traffic
Saturday Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	54	25	460	56	23	491
Future Volume (vph)	54	25	460	56	23	491
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300	0		150	500	
Storage Lanes	0	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.958		0.985			
Flt Protected	0.967				0.950	
Satd. Flow (prot)	1726	0	1835	0	1770	1863
Flt Permitted	0.967				0.395	
Satd. Flow (perm)	1726	0	1835	0	736	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	22		9			
Link Speed (mph)	30		30			30
Link Distance (ft)	1009		189			1366
Travel Time (s)	22.9		4.3			31.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	26	484	59	24	517
Shared Lane Traffic (%)						
Lane Group Flow (vph)	83	0	543	0	24	517
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+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
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+Ex			CI+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm		NA		D.P+P	NA
Protected Phases			2		1	1 2
Permitted Phases	3				2	