146th Street & Clay Terrace Boulevard/Western Way

2035 AM
2035 PM

146th St. and Clay Terrace Blvd
2035 AM

Alternative 5
FEIS Preferred

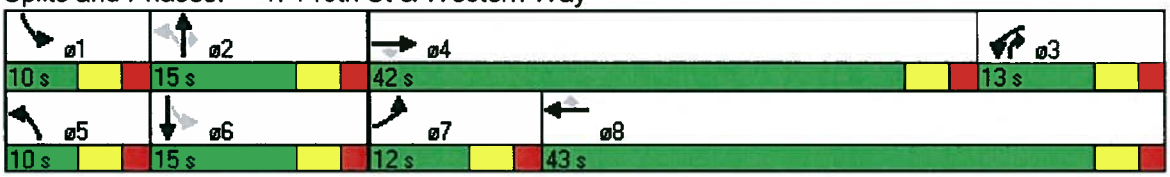
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	475		150	275		200	325		0	500		0
Storage Lanes	1		1	2		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.977	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3574	1568	3242	3574	1599	1805	1845	1599	1719	3527	0
Flt Permitted	0.950			0.950			0.739			0.740		
Satd. Flow (perm)	1805	3574	1568	3242	3574	1599	1404	1845	1599	1339	3527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			12			160			62		4	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		658			349			635			594	
Travel Time (s)		10.0			5.3			14.4			13.5	
Volume (vph)	61	1491	15	293	846	144	30	24	56	32	20	4
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
Heavy Vehicles (%)	0%	1%	3%	8%	1%	1%	0%	3%	1%	5%	0%	0%
Adj. Flow (vph)	68	1657	17	326	940	160	33	27	62	36	22	4
Lane Group Flow (vph)	68	1657	17	326	940	160	33	27	62	36	26	0
Turn Type	Prot		Perm	Prot		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8	2		2	6		
Detector Phases	7	4	4	3	8	8	5	2	3	1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	15.0	15.0	10.0	15.0	15.0	10.0	15.0	10.0	10.0	15.0	
Total Split (s)	12.0	42.0	42.0	13.0	43.0	43.0	10.0	15.0	13.0	10.0	15.0	0.0
Total Split (%)	15.0%	52.5%	52.5%	16.3%	53.8%	53.8%	12.5%	18.8%	16.3%	12.5%	18.8%	0.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
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	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	8.9	41.3	41.3	9.0	43.5	43.5	15.3	11.7	22.3	15.3	11.7	
Actuated g/C Ratio	0.11	0.52	0.52	0.11	0.54	0.54	0.19	0.15	0.28	0.19	0.15	
v/c Ratio	0.34	0.90	0.02	0.89	0.48	0.17	0.11	0.10	0.13	0.13	0.05	
Control Delay	37.3	26.1	6.5	67.5	17.9	8.2	25.2	33.0	5.4	25.5	28.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	37.3	26.1	6.5	67.5	17.9	8.2	25.2	33.0	5.4	25.5	28.7	
LOS	D	C	A	E	B	A	C	C	A	C	C	
Approach Delay		26.4			28.1			16.9			26.9	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	32	367	1	92	188	27	13	13	0	14	5	
Queue Length 95th (ft)	69	#561	11	#165	240	69	34	36	22	37	16	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		578			269			555			514	
Turn Bay Length (ft)	475		150	275		200	325			500		
Base Capacity (vph)	207	1845	815	365	1945	943	299	306	491	285	588	
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	0.33	0.90	0.02	0.89	0.48	0.17	0.11	0.09	0.13	0.13	0.04	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 57 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 68.0% 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: 1: 146th St & Western Way



146th St. and Clay Terrace Blvd
2035 PM

Alternative 5
FEIS Preferred

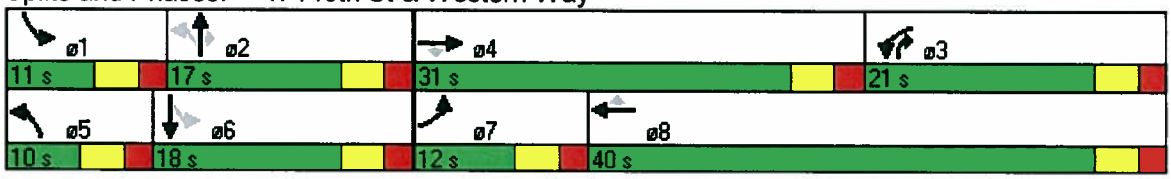
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	475		150	275		200	325		0	500		0
Storage Lanes	1		1	2		1	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.929	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3574	1568	3242	3574	1599	1805	1845	1599	1719	3354	0
Flt Permitted	0.950			0.950			0.734			0.447		
Satd. Flow (perm)	1805	3574	1568	3242	3574	1599	1395	1845	1599	809	3354	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			53			400			53		16	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		658			349			635			594	
Travel Time (s)		10.0			5.3			14.4			13.5	
Volume (vph)	118	956	56	216	1136	360	187	159	431	192	16	14
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
Heavy Vehicles (%)	0%	1%	3%	8%	1%	1%	0%	3%	1%	5%	0%	0%
Adj. Flow (vph)	131	1062	62	240	1262	400	208	177	479	213	18	16
Lane Group Flow (vph)	131	1062	62	240	1262	400	208	177	479	213	34	0
Turn Type	Prot		Perm	Prot		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4			8	2		2	6		
Detector Phases	7	4	4	3	8	8	5	2	3	1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	15.0	15.0	10.0	15.0	15.0	10.0	15.0	10.0	10.0	15.0	
Total Split (s)	12.0	31.0	31.0	21.0	40.0	40.0	10.0	17.0	21.0	11.0	18.0	0.0
Total Split (%)	15.0%	38.8%	38.8%	26.3%	50.0%	50.0%	12.5%	21.3%	26.3%	13.8%	22.5%	0.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
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	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	8.3	26.7	26.7	17.4	35.8	35.8	18.9	12.3	29.7	20.8	13.2	
Actuated g/C Ratio	0.10	0.33	0.33	0.22	0.45	0.45	0.24	0.15	0.37	0.26	0.16	
v/c Ratio	0.70	0.89	0.11	0.34	0.79	0.43	0.57	0.63	0.76	0.72	0.06	
Control Delay	56.1	36.2	7.5	25.8	20.5	6.3	30.9	42.1	21.3	39.5	18.8	
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	56.1	36.2	7.5	25.8	20.5	6.3	30.9	42.1	21.3	39.5	18.8	
LOS	E	D	A	C	C	A	C	D	C	D	B	
Approach Delay		36.9			18.2			27.9			36.6	
Approach LOS		D			B			C			D	
Queue Length 50th (ft)	65	260	3	46	238	56	82	83	120	85	4	
Queue Length 95th (ft)	#149	#376	28	m69	260	76	140	147	#214	#173	16	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		578			269			555			514	
Turn Bay Length (ft)	475		150	275		200	325			500		
Base Capacity (vph)	188	1217	569	707	1608	940	364	300	627	297	600	
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	0.70	0.87	0.11	0.34	0.78	0.43	0.57	0.59	0.76	0.72	0.06	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 57 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 26.7 Intersection LOS: C
Intersection Capacity Utilization 73.8% 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: 1: 146th St & Western Way



Greyhound Pass & US 31 NB CD

2035 AM
2035 PM

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	2		1	0	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected						
Satd. Flow (prot)	0	2842	1743	1615	0	0
Flt Permitted						
Satd. Flow (perm)	0	2842	1743	1615	0	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		40			40
Link Distance (ft)	335		815			351
Travel Time (s)	7.6		13.9			6.0
Volume (vph)	0	157	520	296	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	9%	0%	0%	0%
Adj. Flow (vph)	0	174	578	329	0	0
Lane Group Flow (vph)	0	174	578	329	0	0
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	2		1	0	
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected						
Satd. Flow (prot)	0	2842	1743	1615	0	0
Flt Permitted						
Satd. Flow (perm)	0	2842	1743	1615	0	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30		40			40
Link Distance (ft)	335		815			351
Travel Time (s)	7.6		13.9			6.0
Volume (vph)	0	81	1185	272	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	9%	0%	0%	0%
Adj. Flow (vph)	0	90	1317	302	0	0
Lane Group Flow (vph)	0	90	1317	302	0	0
Sign Control	Yield		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Greyhound Pass & US 31 SB CD

2035 AM
2035 PM

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			300
Storage Lanes	0	1	0			1
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1644	0	0	3610	1615
Flt Permitted						
Satd. Flow (perm)	0	1644	0	0	3610	1615
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			45	40	
Link Distance (ft)	463			646	825	
Travel Time (s)	10.5			9.8	14.1	
Volume (vph)	0	189	0	0	159	57
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	210	0	0	177	63
Lane Group Flow (vph)	0	210	0	0	177	63
Sign Control	Yield			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.8%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			300
Storage Lanes	0	2	0			1
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	0.88	1.00	1.00	0.95	1.00
Frt		0.850				0.850
Flt Protected						
Satd. Flow (prot)	0	2842	0	0	3610	1615
Flt Permitted						
Satd. Flow (perm)	0	2842	0	0	3610	1615
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			45	40	
Link Distance (ft)	463			646	825	
Travel Time (s)	10.5			9.8	14.1	
Volume (vph)	0	801	0	0	171	411
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	890	0	0	190	457
Lane Group Flow (vph)	0	890	0	0	190	457
Sign Control	Yield			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 39.4% ICU Level of Service A
Analysis Period (min) 15

151st Street & NB Ramps

2035 AM
2035 PM

151st St and US 31 NB Ramps
2035 AM

Alternative 5
FEIS Preferred

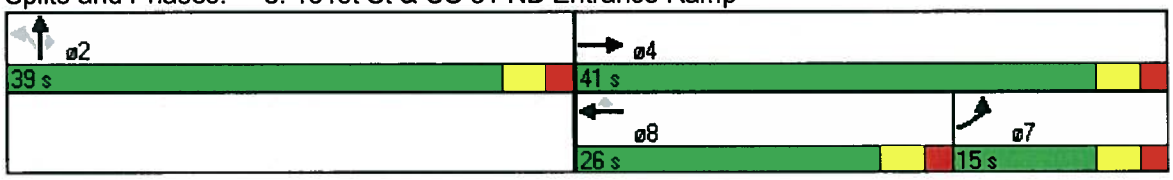
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		175	300		300	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50	50	50	50	50			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86	1.00	1.00	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1805	5085	0	0	6166	1615	1805	3610	2682	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1805	5085	0	0	6166	1615	1805	3610	2682	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						296			305			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			40			45	
Link Distance (ft)		268			366			485			367	
Travel Time (s)		6.1			8.3			8.3			5.6	
Volume (vph)	22	583	0	0	696	266	426	123	325	0	0	0
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
Heavy Vehicles (%)	0%	2%	0%	0%	6%	0%	0%	0%	6%	0%	0%	0%
Adj. Flow (vph)	24	648	0	0	773	296	473	137	361	0	0	0
Lane Group Flow (vph)	24	648	0	0	773	296	473	137	361	0	0	0
Turn Type	Prot					Perm	Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Detector Phases	7	4			8	8	2	2	2			
Minimum Initial (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Minimum Split (s)	10.0	15.0			15.0	15.0	15.0	15.0	15.0			
Total Split (s)	15.0	41.0	0.0	0.0	26.0	26.0	39.0	39.0	39.0	0.0	0.0	0.0
Total Split (%)	18.8%	51.3%	0.0%	0.0%	32.5%	32.5%	48.8%	48.8%	48.8%	0.0%	0.0%	0.0%
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0			
Lead/Lag	Lag				Lead	Lead						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	None			None	None	C-Min	C-Min	C-Min			
Act Effct Green (s)	7.7	28.0			22.8	22.8	44.0	44.0	44.0			
Actuated g/C Ratio	0.10	0.35			0.28	0.28	0.55	0.55	0.55			
v/c Ratio	0.14	0.36			0.44	0.44	0.48	0.07	0.22			
Control Delay	45.7	20.7			9.9	3.2	18.5	12.9	7.0			
Queue Delay	0.0	0.1			0.1	0.0	0.0	0.0	0.0			
Total Delay	45.7	20.9			10.0	3.2	18.5	12.9	7.0			
LOS	D	C			B	A	B	B	A			
Approach Delay		21.7			8.1			13.4				
Approach LOS		C			A			B				
Queue Length 50th (ft)	14	104			47	1	163	16	3			
Queue Length 95th (ft)	m30	168			64	m17	311	42	59			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		188			286			405			287	
Turn Bay Length (ft)						175	300		300			
Base Capacity (vph)	248	2391			1892	701	1008	2015	1632			
Starvation Cap Reductn	0	789			0	0	0	0	0			
Spillback Cap Reductn	0	0			318	0	0	0	0			
Storage Cap Reductn	0	0			0	0	0	0	0			
Reduced v/c Ratio	0.10	0.40			0.49	0.42	0.47	0.07	0.22			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 11 (14%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 13.4 Intersection LOS: B
Intersection Capacity Utilization 59.9% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: 151st St & US 31 NB Entrance Ramp



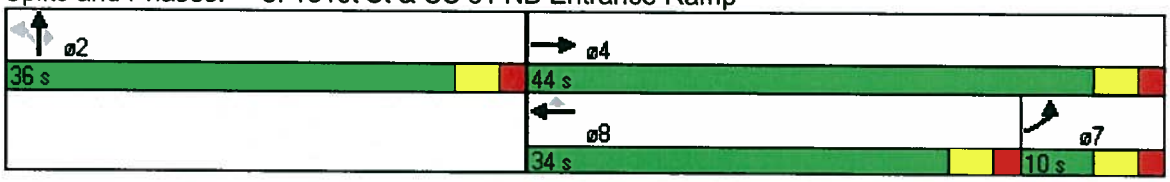
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		175	300		300	0		0
Storage Lanes	1		0	0		1	1		2	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50	50	50	50	50			
Trailing Detector (ft)	0	0			0	0	0	0	0			
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86	1.00	1.00	0.95	0.88	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1805	5085	0	0	6166	1615	1805	3610	2682	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1805	5085	0	0	6166	1615	1805	3610	2682	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						258			95			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			40			45	
Link Distance (ft)		268			366			485			367	
Travel Time (s)		6.1			8.3			8.3			5.6	
Volume (vph)	20	1011	0	0	687	599	187	496	917	0	0	0
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
Heavy Vehicles (%)	0%	2%	0%	0%	6%	0%	0%	0%	6%	0%	0%	0%
Adj. Flow (vph)	22	1123	0	0	763	666	208	551	1019	0	0	0
Lane Group Flow (vph)	22	1123	0	0	763	666	208	551	1019	0	0	0
Turn Type	Prot					Perm	Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Detector Phases	7	4			8	8	2	2	2			
Minimum Initial (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Minimum Split (s)	10.0	15.0			15.0	15.0	15.0	15.0	15.0			
Total Split (s)	10.0	44.0	0.0	0.0	34.0	34.0	36.0	36.0	36.0	0.0	0.0	0.0
Total Split (%)	12.5%	55.0%	0.0%	0.0%	42.5%	42.5%	45.0%	45.0%	45.0%	0.0%	0.0%	0.0%
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0			
Lead/Lag	Lag				Lead	Lead						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	None			None	None	C-Min	C-Min	C-Min			
Act Effct Green (s)	6.1	33.0			29.0	29.0	39.0	39.0	39.0			
Actuated g/C Ratio	0.08	0.41			0.36	0.36	0.49	0.49	0.49			
v/c Ratio	0.16	0.53			0.34	0.89	0.24	0.31	0.75			
Control Delay	40.1	16.1			6.9	18.2	13.7	13.9	20.4			
Queue Delay	0.0	0.7			0.0	5.0	0.0	0.0	0.0			
Total Delay	40.1	16.8			7.0	23.2	13.7	13.9	20.5			
LOS	D	B			A	C	B	B	C			
Approach Delay		17.3			14.5			17.6				
Approach LOS		B			B			B				
Queue Length 50th (ft)	12	216			47	92	63	91	188			
Queue Length 95th (ft)	m24	258			37	#397	m83	m112	m#388			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		188			286			405			287	
Turn Bay Length (ft)						175	300		300			
Base Capacity (vph)	137	2543			2312	767	879	1758	1355			
Starvation Cap Reductn	0	981			0	61	0	0	0			
Spillback Cap Reductn	0	220			264	0	0	0	4			
Storage Cap Reductn	0	0			0	0	0	0	0			
Reduced v/c Ratio	0.16	0.72			0.37	0.94	0.24	0.31	0.75			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 11 (14%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 64.1% 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: 8: 151st St & US 31 NB Entrance Ramp



151st Street & SB Ramps

2035 AM
2035 PM

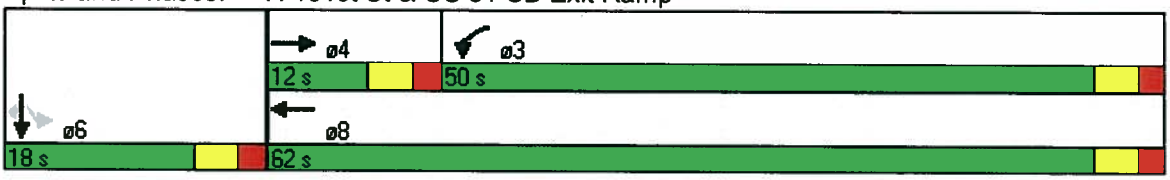
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	300		300
Storage Lanes	0		0	2		0	0		0	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50					50	50	50
Trailing Detector (ft)		0		0	0					0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.86	0.86	0.97	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt		0.982										0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	6307	0	3213	3539	0	0	0	0	3467	3610	1553
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	6307	0	3213	3539	0	0	0	0	3467	3610	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21										10
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		35			30			40			45	
Link Distance (ft)		303			268			701			963	
Travel Time (s)		5.9			6.1			11.9			14.6	
Volume (vph)	0	138	19	1060	61	0	0	0	0	467	165	9
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
Heavy Vehicles (%)	0%	2%	0%	9%	2%	0%	0%	0%	0%	1%	0%	4%
Adj. Flow (vph)	0	153	21	1178	68	0	0	0	0	519	183	10
Lane Group Flow (vph)	0	174	0	1178	68	0	0	0	0	519	183	10
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Detector Phases		4		3	8					6	6	6
Minimum Initial (s)		4.0		4.0	4.0					4.0	4.0	4.0
Minimum Split (s)		10.0		10.0	15.0					15.0	15.0	15.0
Total Split (s)	0.0	12.0	0.0	50.0	62.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0
Total Split (%)	0.0%	15.0%	0.0%	62.5%	77.5%	0.0%	0.0%	0.0%	0.0%	22.5%	22.5%	22.5%
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	3.0
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	2.0
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		None		None	None					C-Min	C-Min	C-Min
Act Effct Green (s)		7.7		35.7	47.4					24.6	24.6	24.6
Actuated g/C Ratio		0.10		0.45	0.59					0.31	0.31	0.31
v/c Ratio		0.28		0.82	0.03					0.49	0.17	0.02
Control Delay		30.5		19.9	3.4					26.2	22.9	13.6
Queue Delay		0.0		2.3	0.0					0.0	0.0	0.0
Total Delay		30.5		22.1	3.4					26.2	22.9	13.6
LOS		C		C	A					C	C	B
Approach Delay		30.5			21.1						25.2	
Approach LOS		C			C						C	
Queue Length 50th (ft)		20		237	1					115	37	0
Queue Length 95th (ft)		37		401	m8					176	67	13

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		223			188			621			883	
Turn Bay Length (ft)										300		300
Base Capacity (vph)		650		1847	2566					1065	1109	484
Starvation Cap Reductn		0		506	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		0.27		0.88	0.03					0.49	0.17	0.02

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 19 (24%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 23.2 Intersection LOS: C
Intersection Capacity Utilization 59.9% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: 151st St & US 31 SB Exit Ramp



151st St. and US 31 SB Ramps
2035 PM

Alternative 5
FEIS Preferred

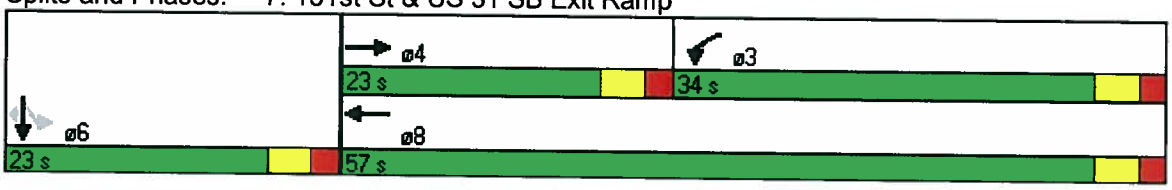
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	300		300
Storage Lanes	0		0	2		0	0		0	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50					50	50	50
Trailing Detector (ft)		0		0	0					0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.86	0.86	0.97	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt		0.978										0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	6285	0	3213	3539	0	0	0	0	3467	3610	1553
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	6285	0	3213	3539	0	0	0	0	3467	3610	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52										57
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		35			30			40			45	
Link Distance (ft)		303			268			701			963	
Travel Time (s)		5.9			6.1			11.9			14.6	
Volume (vph)	0	629	110	649	225	0	0	0	0	402	370	51
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
Heavy Vehicles (%)	0%	2%	0%	9%	2%	0%	0%	0%	0%	1%	0%	4%
Adj. Flow (vph)	0	699	122	721	250	0	0	0	0	447	411	57
Lane Group Flow (vph)	0	821	0	721	250	0	0	0	0	447	411	57
Turn Type				Prot						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases										6		6
Detector Phases		4		3	8					6	6	6
Minimum Initial (s)		4.0		4.0	4.0					4.0	4.0	4.0
Minimum Split (s)		15.0		10.0	15.0					15.0	15.0	15.0
Total Split (s)	0.0	23.0	0.0	34.0	57.0	0.0	0.0	0.0	0.0	23.0	23.0	23.0
Total Split (%)	0.0%	28.8%	0.0%	42.5%	71.3%	0.0%	0.0%	0.0%	0.0%	28.8%	28.8%	28.8%
Yellow Time (s)		3.0		3.0	3.0					3.0	3.0	3.0
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	2.0
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		None		None	None					C-Min	C-Min	C-Min
Act Effct Green (s)		16.5		24.5	45.0					27.0	27.0	27.0
Actuated g/C Ratio		0.21		0.31	0.56					0.34	0.34	0.34
v/c Ratio		0.62		0.73	0.13					0.38	0.34	0.10
Control Delay		28.8		21.9	4.6					23.1	22.5	7.7
Queue Delay		1.1		1.0	0.0					0.0	0.0	0.0
Total Delay		29.9		22.9	4.6					23.1	22.5	7.7
LOS		C		C	A					C	C	A
Approach Delay		29.9			18.2						21.9	
Approach LOS		C			B						C	
Queue Length 50th (ft)		102		150	14					86	79	0
Queue Length 95th (ft)		128		259	21					146	136	28

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		223			188			621			883	
Turn Bay Length (ft)										300		300
Base Capacity (vph)		1532		1205	2345					1170	1218	562
Starvation Cap Reductn		0		247	0					0	0	0
Spillback Cap Reductn		444		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.75		0.75	0.11					0.38	0.34	0.10

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 19 (24%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 23.0 Intersection LOS: C
Intersection Capacity Utilization 64.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: 151st St & US 31 SB Exit Ramp



151st Street & Thatcher Lane

2035 AM
2035 PM

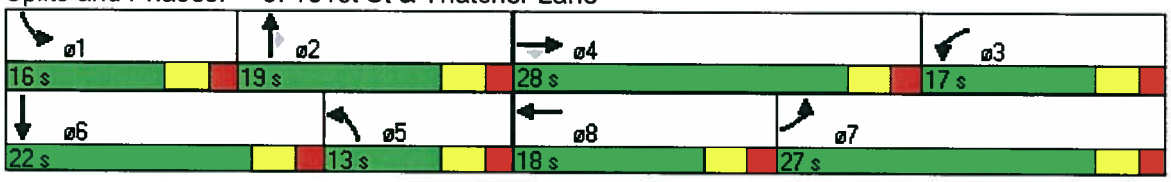
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	200		0	150		0	230		0
Storage Lanes	1		1	1		0	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.986				0.850		0.868	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4988	1553	1805	4935	0	3433	1900	1615	1805	1607	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	4988	1553	1805	4935	0	3433	1900	1615	1805	1607	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			198		19				66		233	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		366			408			408			305	
Travel Time (s)		8.3			9.3			9.3			6.9	
Volume (vph)	291	439	178	135	540	56	212	62	59	118	29	210
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
Heavy Vehicles (%)	3%	4%	4%	0%	4%	0%	2%	0%	0%	0%	0%	3%
Adj. Flow (vph)	323	488	198	150	600	62	236	69	66	131	32	233
Lane Group Flow (vph)	323	488	198	150	662	0	236	69	66	131	265	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Detector Phases	7	4	4	3	8		5	2	2	1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	15.0	15.0	10.0	15.0		10.0	15.0	15.0	10.0	15.0	
Total Split (s)	27.0	28.0	28.0	17.0	18.0	0.0	13.0	19.0	19.0	16.0	22.0	0.0
Total Split (%)	33.8%	35.0%	35.0%	21.3%	22.5%	0.0%	16.3%	23.8%	23.8%	20.0%	27.5%	0.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	19.4	13.7	13.7	21.1	15.3		12.6	20.8	20.8	10.7	16.6	
Actuated g/C Ratio	0.24	0.17	0.17	0.26	0.19		0.16	0.26	0.26	0.13	0.21	
v/c Ratio	0.76	0.57	0.46	0.32	0.69		0.44	0.14	0.14	0.54	0.51	
Control Delay	30.0	44.6	20.3	24.9	33.4		33.5	28.7	8.9	40.8	10.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	44.6	20.3	24.9	33.4		33.5	28.7	8.9	40.8	10.2	
LOS	C	D	C	C	C		C	C	A	D	B	
Approach Delay		35.2			31.9			28.2			20.3	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	153	78	18	57	105		55	30	0	61	14	
Queue Length 95th (ft)	255	130	100	107	153		91	64	32	114	78	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		286			328			328			225	
Turn Bay Length (ft)	100		100	200			150			230		
Base Capacity (vph)	504	1496	605	476	974		541	510	482	271	567	
Starvation Cap Reductn	1	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	0.64	0.33	0.33	0.32	0.68		0.44	0.14	0.14	0.48	0.47	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 30.9 Intersection LOS: C
Intersection Capacity Utilization 61.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: 151st St & Thatcher Lane



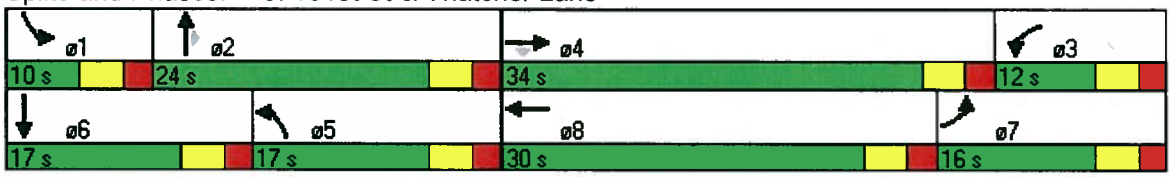
151st St. and Thatcher Lane
2035 PM

Alternative 5
FEIS Preferred

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	200		0	150		0	230		0
Storage Lanes	1		1	1		0	1		1	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.974				0.850		0.892	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4988	1553	1805	4890	0	3433	1900	1615	1805	1659	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	4988	1553	1805	4890	0	3433	1900	1615	1805	1659	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			201		58				223		132	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		366			408			408			305	
Travel Time (s)		8.3			9.3			9.3			6.9	
Volume (vph)	111	1508	308	106	782	161	385	65	201	44	46	119
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
Heavy Vehicles (%)	3%	4%	4%	0%	4%	0%	2%	0%	0%	0%	0%	3%
Adj. Flow (vph)	123	1676	342	118	869	179	428	72	223	49	51	132
Lane Group Flow (vph)	123	1676	342	118	1048	0	428	72	223	49	183	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Detector Phases	7	4	4	3	8		5	2	2	1	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	15.0	15.0	10.0	15.0		10.0	15.0	15.0	10.0	15.0	
Total Split (s)	16.0	34.0	34.0	12.0	30.0	0.0	17.0	24.0	24.0	10.0	17.0	0.0
Total Split (%)	20.0%	42.5%	42.5%	15.0%	37.5%	0.0%	21.3%	30.0%	30.0%	12.5%	21.3%	0.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	13.3	32.4	32.4	7.9	27.0		14.3	24.0	24.0	6.1	11.7	
Actuated g/C Ratio	0.17	0.40	0.40	0.10	0.34		0.18	0.30	0.30	0.08	0.15	
v/c Ratio	0.42	0.83	0.46	0.66	0.62		0.70	0.13	0.35	0.36	0.52	
Control Delay	33.3	17.2	5.9	54.2	23.4		38.0	23.8	5.4	42.9	16.4	
Queue Delay	0.0	0.5	0.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	33.3	17.7	6.0	54.2	23.4		38.0	23.8	5.4	42.9	16.4	
LOS	C	B	A	D	C		D	C	A	D	B	
Approach Delay		16.8			26.5			26.5			22.0	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	67	158	39	58	158		100	28	0	24	24	
Queue Length 95th (ft)	m107	#258	m67	#131	197		#169	61	51	57	80	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		286			328			328			225	
Turn Bay Length (ft)	100		100	200			150			230		
Base Capacity (vph)	310	2019	748	181	1763		621	572	642	137	401	
Starvation Cap Reductn	0	89	51	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	0.40	0.87	0.49	0.65	0.59		0.69	0.13	0.35	0.36	0.46	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 21.4 Intersection LOS: C
Intersection Capacity Utilization 69.1% 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: 9: 151st St & Thatcher Lane