

APPENDICES

- **Turning Movement Counts**
- **U.S. Census Bureau Data**
- **Trip Assignment graphics**
- **Traffic Volume Figures**
- **Level of Service Table**
- **Synchro Analysis Reports**

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Bloomfield Avenue (CR 622) and Route 3 westbound ramps
Count Date Wednesday, September 18, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	0	0	0		0	129	83		61	0	37		47	127	0	
7:15 AM	-	7:30 AM	0	0	0		0	135	79		81	0	59		58	136	0	
7:30 AM	-	7:45 AM	0	0	0		0	121	62		55	0	44		60	162	0	
7:45 AM	-	8:00 AM	0	0	0		0	196	75		91	0	59		43	159	0	
8:00 AM	-	8:15 AM	0	0	0		0	143	81		89	0	78		39	132	0	
8:15 AM	-	8:30 AM	0	0	0		0	185	75		86	0	74		33	112	0	
8:30 AM	-	8:45 AM	0	0	0		0	194	89		88	0	82		33	148	0	
8:45 AM	-	9:00 AM	0	0	0		0	196	93		79	0	74		39	163	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	0	0	0		0	7	1		3	0	7		0	15	0	
7:15 AM	-	7:30 AM	0	0	0		0	5	4		6	0	4		6	15	0	
7:30 AM	-	7:45 AM	0	0	0		0	7	2		3	0	4		3	20	0	
7:45 AM	-	8:00 AM	0	0	0		0	2	1		5	0	10		2	13	0	
8:00 AM	-	8:15 AM	0	0	0		0	5	4		8	0	9		1	12	0	
8:15 AM	-	8:30 AM	0	0	0		0	4	2		4	0	10		0	12	0	
8:30 AM	-	8:45 AM	0	0	0		0	3	0		8	0	5		1	13	0	
8:45 AM	-	9:00 AM	0	0	0		0	7	1		6	0	6		1	14	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	0	0	0	0	0	136	84	0	64	0	44	0	47	142	0	0	517	2304
7:15 AM	-	7:30 AM	0	0	0	0	0	140	83	0	87	0	63	0	64	151	0	0	588	2388
7:30 AM	-	7:45 AM	0	0	0	0	0	128	64	0	58	0	48	0	63	182	0	0	543	2397
7:45 AM	-	8:00 AM	0	0	0	0	0	198	76	0	96	0	69	0	45	172	0	0	656	2518
8:00 AM	-	8:15 AM	0	0	0	0	0	148	85	0	97	0	87	0	40	144	0	0	601	2541
8:15 AM	-	8:30 AM	0	0	0	0	0	189	77	0	90	0	84	0	33	124	0	0	597	1940
8:30 AM	-	8:45 AM	0	0	0	0	0	197	89	0	96	0	87	0	34	161	0	0	664	1343
8:45 AM	-	9:00 AM	0	0	0	0	0	203	94	0	85	0	80	0	40	177	0	0	679	679

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	732	327	0	379	0	327	0	152	601	0	0
PHV by Approach	0				1059				706				753			
PHF by Movement						0.92	0.92		0.98		0.94		0.84	0.87		
Adjusted PHF						0.92	0.92		0.98		0.94		0.84	0.87		
PHF by Intersection	0.95															
Total Passenger Cars	0	0	0	0	0	718	320	0	354	0	293	0	148	551	0	0
Total Trucks/Buses	0	0	0	0	0	14	7	0	25	0	34	0	4	50	0	0
% Passenger Cars						98%	98%		93%		90%		97%	92%		
% Heavy Vehicles						2%	2%		7%		10%		3%	8%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Bloomfield Avenue (CR 622) and Route 3 westbound ramps
Count Date Wednesday, September 18, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	191	101		96	0	60		42	198	0	
4:15 PM	-	4:30 PM	0	0	0		0	188	132		105	0	72		42	236	0	
4:30 PM	-	4:45 PM	0	0	0		0	185	122		120	0	80		36	234	0	
4:45 PM	-	5:00 PM	0	0	0		0	171	90		86	0	68		37	219	0	
5:00 PM	-	5:15 PM	0	0	0		0	199	107		95	0	60		54	199	0	
5:15 PM	-	5:30 PM	0	0	0		0	184	112		98	0	69		60	203	0	
5:30 PM	-	5:45 PM	0	0	0		0	168	84		94	0	66		40	175	0	
5:45 PM	-	6:00 PM	0	0	0		0	180	106		108	0	50		48	178	0	
6:00 PM	-	6:15 PM	0	0	0		0	199	114		98	0	56		45	206	0	
6:15 PM	-	6:30 PM	0	0	0		0	196	139		99	0	48		44	212	0	
6:30 PM	-	6:45 PM	0	0	0		0	194	116		98	0	83		44	199	0	
6:45 PM	-	7:00 PM	0	0	0		0	169	98		92	0	50		37	184	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	5	0		2	0	4		2	7	0	
4:15 PM	-	4:30 PM	0	0	0		0	7	0		2	0	7		0	7	0	
4:30 PM	-	4:45 PM	0	0	0		0	4	0		1	0	3		1	7	0	
4:45 PM	-	5:00 PM	0	0	0		0	3	1		3	0	5		1	5	0	
5:00 PM	-	5:15 PM	0	0	0		0	0	1		2	0	8		0	3	0	
5:15 PM	-	5:30 PM	0	0	0		0	2	2		1	0	4		0	3	0	
5:30 PM	-	5:45 PM	0	0	0		0	6	2		2	0	7		1	6	0	
5:45 PM	-	6:00 PM	0	0	0		0	4	0		1	0	6		1	5	0	
6:00 PM	-	6:15 PM	0	0	0		0	5	0		2	0	5		0	9	0	
6:15 PM	-	6:30 PM	0	0	0		0	4	1		2	0	5		2	5	0	
6:30 PM	-	6:45 PM	0	0	0		0	1	1		2	0	3		1	1	0	
6:45 PM	-	7:00 PM	0	0	0		0	6	1		1	0	5		0	3	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	0	0	0	0	0	196	101	0	98	0	64	0	44	205	0	0	708	2988
4:15 PM	-	4:30 PM	0	0	0	0	0	195	132	0	107	0	79	0	42	243	0	0	798	3008
4:30 PM	-	4:45 PM	0	0	0	0	0	189	122	0	121	0	83	0	37	241	0	0	793	2948
4:45 PM	-	5:00 PM	0	0	0	0	0	174	91	0	89	0	73	0	38	224	0	0	689	2806
5:00 PM	-	5:15 PM	0	0	0	0	0	199	108	0	97	0	68	0	54	202	0	0	728	2804
5:15 PM	-	5:30 PM	0	0	0	0	0	186	114	0	99	0	73	0	60	206	0	0	738	2815
5:30 PM	-	5:45 PM	0	0	0	0	0	174	86	0	96	0	73	0	41	181	0	0	651	2834
5:45 PM	-	6:00 PM	0	0	0	0	0	184	106	0	109	0	56	0	49	183	0	0	687	2926
6:00 PM	-	6:15 PM	0	0	0	0	0	204	114	0	100	0	61	0	45	215	0	0	739	2885
6:15 PM	-	6:30 PM	0	0	0	0	0	200	140	0	101	0	53	0	46	217	0	0	757	2146
6:30 PM	-	6:45 PM	0	0	0	0	0	195	117	0	100	0	86	0	45	200	0	0	743	1389
6:45 PM	-	7:00 PM	0	0	0	0	0	175	99	0	93	0	55	0	37	187	0	0	646	646

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	762	446	0	406	0	243	0	181	796	0	0
PHV by Approach	0				1208				649				977			
PHF by Movement						0.93	0.80		0.93		0.83		0.92	0.92		
Adjusted PHF						0.93	0.83		0.93		0.83		0.92	0.92		
PHF by Intersection	0.94															
Total Passenger Cars	0	0	0	0	0	743	443	0	399	0	220	0	177	771	0	0
Total Trucks/Buses	0	0	0	0	0	19	3	0	7	0	23	0	4	25	0	0
% Passenger Cars						98%	99%		98%		91%		98%	97%		
% Heavy Vehicles						2%	1%		2%		9%		2%	3%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Bloomfield Avenue (CR 622) and Route 3 eastbound ramps
Count Date Wednesday, September 18, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	144	71		33	0	66		75	114	0	
7:15 AM	- 7:30 AM	0	0	0		0	136	103		30	0	74		93	130	0	
7:30 AM	- 7:45 AM	0	0	0		0	117	93		23	0	68		77	141	0	
7:45 AM	- 8:00 AM	0	0	0		0	156	86		41	0	115		71	178	0	
8:00 AM	- 8:15 AM	0	0	0		0	125	76		40	0	101		67	157	0	
8:15 AM	- 8:30 AM	0	0	0		0	162	78		29	0	96		57	139	0	
8:30 AM	- 8:45 AM	0	0	0		0	162	80		47	0	118		72	167	0	
8:45 AM	- 9:00 AM	0	0	0		0	147	59		51	0	142		93	145	0	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	6	2		1	0	3		13	6	0	
7:15 AM	- 7:30 AM	0	0	0		0	9	5		1	0	2		11	12	0	
7:30 AM	- 7:45 AM	0	0	0		0	9	5		0	0	1		13	8	0	
7:45 AM	- 8:00 AM	0	0	0		0	1	3		2	0	0		11	8	0	
8:00 AM	- 8:15 AM	0	0	0		0	6	8		2	0	2		10	11	0	
8:15 AM	- 8:30 AM	0	0	0		0	3	2		3	0	1		11	7	0	
8:30 AM	- 8:45 AM	0	0	0		0	3	4		8	0	0		9	11	0	
8:45 AM	- 9:00 AM	0	0	0		0	5	4		0	0	4		9	10	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	0	0	0	0	0	150	73	0	34	0	69	0	88	120	0	0	534	2367
7:15 AM	-	7:30 AM	0	0	0	0	0	145	108	0	31	0	76	0	104	142	0	0	606	2438
7:30 AM	-	7:45 AM	0	0	0	0	0	126	98	0	23	0	69	0	90	149	0	0	555	2420
7:45 AM	-	8:00 AM	0	0	0	0	0	157	89	0	43	0	115	0	82	186	0	0	672	2546
8:00 AM	-	8:15 AM	0	0	0	0	0	131	84	0	42	0	103	0	77	168	0	0	605	2543
8:15 AM	-	8:30 AM	0	0	0	0	0	165	80	0	32	0	97	0	68	146	0	0	588	1938
8:30 AM	-	8:45 AM	0	0	0	0	0	165	84	0	55	0	118	0	81	178	0	0	681	1350
8:45 AM	-	9:00 AM	0	0	0	0	0	152	63	0	51	0	146	0	102	155	0	0	669	669

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	618	337	0	172	0	433	0	308	678	0	0
PHV by Approach	0				955				605				986			
PHF by Movement						0.94	0.95		0.78		0.92		0.94	0.91		
Adjusted PHF						0.94	0.95		0.81		0.92		0.94	0.91		
PHF by Intersection	0.93															
Total Passenger Cars	0	0	0	0	0	605	320	0	157	0	430	0	267	641	0	0
Total Trucks/Buses	0	0	0	0	0	13	17	0	15	0	3	0	41	37	0	0
% Passenger Cars						98%	95%		91%		99%		87%	95%		
% Heavy Vehicles						2%	5%		9%		1%		13%	5%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Bloomfield Avenue (CR 622) and Route 3 eastbound ramps
Count Date Wednesday, September 18, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	157	52		46	0	138		98	200	0	
4:15 PM	-	4:30 PM	0	0	0		0	200	37		75	0	120		112	231	0	
4:30 PM	-	4:45 PM	0	0	0		0	206	96		68	0	103		117	238	0	
4:45 PM	-	5:00 PM	0	0	0		0	139	60		49	0	118		94	208	0	
5:00 PM	-	5:15 PM	0	0	0		0	164	48		64	0	148		88	203	0	
5:15 PM	-	5:30 PM	0	0	0		0	143	61		58	0	153		101	202	0	
5:30 PM	-	5:45 PM	0	0	0		0	130	56		74	0	121		74	202	0	
5:45 PM	-	6:00 PM	0	0	0		0	158	54		81	0	129		65	220	0	
6:00 PM	-	6:15 PM	0	0	0		0	157	73		75	0	154		83	219	0	
6:15 PM	-	6:30 PM	0	0	0		0	188	64		67	0	149		88	227	0	
6:30 PM	-	6:45 PM	0	0	0		0	154	74		62	0	161		69	226	0	
6:45 PM	-	7:00 PM	0	0	0		0	141	77		48	0	123		66	217	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	2	4		0	0	4		3	6	0	
4:15 PM	-	4:30 PM	0	0	0		0	3	4		0	0	4		5	3	0	
4:30 PM	-	4:45 PM	0	0	0		0	2	1		0	0	2		5	3	0	
4:45 PM	-	5:00 PM	0	0	0		0	4	3		0	0	0		4	3	0	
5:00 PM	-	5:15 PM	0	0	0		0	1	4		0	0	1		2	4	0	
5:15 PM	-	5:30 PM	0	0	0		0	3	4		1	0	1		0	2	0	
5:30 PM	-	5:45 PM	0	0	0		0	4	2		0	0	2		3	5	0	
5:45 PM	-	6:00 PM	0	0	0		0	2	2		1	0	3		3	3	0	
6:00 PM	-	6:15 PM	0	0	0		0	3	1		0	0	2		2	5	0	
6:15 PM	-	6:30 PM	0	0	0		0	4	3		1	0	1		5	3	0	
6:30 PM	-	6:45 PM	0	0	0		0	0	3		0	0	0		1	2	0	
6:45 PM	-	7:00 PM	0	0	0		0	4	1		2	0	2		2	2	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	0	0	0	0	0	159	56	0	46	0	142	0	101	206	0	0	710	3027
4:15 PM	-	4:30 PM	0	0	0	0	0	203	41	0	75	0	124	0	117	234	0	0	794	3044
4:30 PM	-	4:45 PM	0	0	0	0	0	208	97	0	68	0	105	0	122	241	0	0	841	2979
4:45 PM	-	5:00 PM	0	0	0	0	0	143	63	0	49	0	118	0	98	211	0	0	682	2811
5:00 PM	-	5:15 PM	0	0	0	0	0	165	52	0	64	0	149	0	90	207	0	0	727	2850
5:15 PM	-	5:30 PM	0	0	0	0	0	146	65	0	59	0	154	0	101	204	0	0	729	2897
5:30 PM	-	5:45 PM	0	0	0	0	0	134	58	0	74	0	123	0	77	207	0	0	673	2968
5:45 PM	-	6:00 PM	0	0	0	0	0	160	56	0	82	0	132	0	68	223	0	0	721	3047
6:00 PM	-	6:15 PM	0	0	0	0	0	160	74	0	75	0	156	0	85	224	0	0	774	3011
6:15 PM	-	6:30 PM	0	0	0	0	0	192	67	0	68	0	150	0	93	230	0	0	800	2237
6:30 PM	-	6:45 PM	0	0	0	0	0	154	77	0	62	0	161	0	70	228	0	0	752	1437
6:45 PM	-	7:00 PM	0	0	0	0	0	145	78	0	50	0	125	0	68	219	0	0	685	685

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	646	255	0	299	0	561	0	323	884	0	0
PHV by Approach	0				901				860				1207			
PHF by Movement						0.84	0.86		0.91		0.90		0.87	0.96		
Adjusted PHF						0.85	0.86		0.91		0.90		0.87	0.96		
PHF by Intersection	0.93															
Total Passenger Cars	0	0	0	0	0	633	247	0	297	0	553	0	310	868	0	0
Total Trucks/Buses	0	0	0	0	0	13	8	0	2	0	8	0	13	16	0	0
% Passenger Cars						98%	97%		99%		99%		96%	98%		
% Heavy Vehicles						2%	3%		1%		1%		4%	2%		

Q

			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
Time Period			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	0	1229	17		0	0	6		0	0	0		0	0	0	
7:15 AM	-	7:30 AM	0	1247	17		0	0	2		0	0	0		0	0	0	
7:30 AM	-	7:45 AM	0	1196	18		0	0	7		0	0	0		0	0	0	
7:45 AM	-	8:00 AM	0	1117	29		0	0	3		0	0	0		0	0	0	
8:00 AM	-	8:15 AM	0	1108	21		0	0	3		0	0	0		0	0	0	
8:15 AM	-	8:30 AM	0	1076	33		0	0	2		0	0	0		0	0	0	
8:30 AM	-	8:45 AM	0	1007	31		0	0	4		0	0	0		0	0	0	
8:45 AM	-	9:00 AM	0	1054	26		0	0	4		0	0	0		0	0	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	0	52	1		0	0	0		0	0	0		0	0	0	
7:15 AM	-	7:30 AM	0	70	5		0	0	3		0	0	0		0	0	0	
7:30 AM	-	7:45 AM	0	72	2		0	0	3		0	0	0		0	0	0	
7:45 AM	-	8:00 AM	0	49	1		0	0	4		0	0	0		0	0	0	
8:00 AM	-	8:15 AM	0	64	1		0	0	1		0	0	0		0	0	0	
8:15 AM	-	8:30 AM	0	60	1		0	0	3		0	0	0		0	0	0	
8:30 AM	-	8:45 AM	0	62	0		0	0	4		0	0	0		0	0	0	
8:45 AM	-	9:00 AM	0	71	1		0	0	0		0	0	0		0	0	0	

[illegible][illegible][illegible]

Turning Movement Count Summary

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	56	0		0	0	1		0	0	0		0	0	0	
4:15 PM	-	4:30 PM	0	38	0		0	0	0		0	0	0		0	0	0	
4:30 PM	-	4:45 PM	0	39	0		0	0	3		0	0	0		0	0	0	
4:45 PM	-	5:00 PM	0	51	0		0	0	1		0	0	0		0	0	0	
5:00 PM	-	5:15 PM	0	45	0		0	0	0		0	0	0		0	0	0	
5:15 PM	-	5:30 PM	0	37	0		0	0	2		0	0	0		0	0	0	
5:30 PM	-	5:45 PM	0	32	0		0	0	2		0	0	0		0	0	0	
5:45 PM	-	6:00 PM	0	27	0		0	0	2		0	0	0		0	0	0	
6:00 PM	-	6:15 PM	0	27	0		0	0	0		0	0	0		0	0	0	
6:15 PM	-	6:30 PM	0	41	0		0	0	1		0	0	0		0	0	0	
6:30 PM	-	6:45 PM	0	25	0		0	0	1		0	0	0		0	0	0	
6:45 PM	-	7:00 PM	0	31	0		0	0	0		0	0	0		0	0	0	

Summary Calculations

[illegible]

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Darling Avenue (CR622) and Kingsland Street/Passaic Avenue (CR644)
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

0

Turning Movement Count Summary

		Passenger Cars															
Time Period		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	121	36	3		0	0	0		1	36	54		25	0	82	
7:15 AM	- 7:30 AM	118	44	0		0	0	0		1	44	40		24	1	108	
7:30 AM	- 7:45 AM	123	75	1		0	0	0		0	66	40		56	4	123	
7:45 AM	- 8:00 AM	126	96	1		0	0	0		2	90	47		44	6	121	
8:00 AM	- 8:15 AM	144	92	0		0	0	0		1	68	52		46	9	109	
8:15 AM	- 8:30 AM	129	78	4		0	0	0		2	75	50		41	12	95	
8:30 AM	- 8:45 AM	103	83	2		0	0	0		1	48	28		29	2	118	
8:45 AM	- 9:00 AM	92	70	3		0	0	0		1	63	47		31	1	125	

		Trucks/Buses															
Time Period		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	7	1	0		0	0	0		0	0	2		3	1	4	
7:15 AM	- 7:30 AM	4	2	0		0	0	0		0	3	3		2	0	2	
7:30 AM	- 7:45 AM	6	2	0		0	0	0		1	1	5		6	1	7	
7:45 AM	- 8:00 AM	1	1	0		0	0	0		0	1	1		0	0	3	
8:00 AM	- 8:15 AM	5	1	0		0	0	0		0	3	2		5	1	15	
8:15 AM	- 8:30 AM	3	0	0		0	0	0		0	5	2		0	0	8	
8:30 AM	- 8:45 AM	4	2	0		0	0	0		0	5	3		1	0	5	
8:45 AM	- 9:00 AM	5	1	1		0	0	0		0	1	3		4	0	8	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	128	37	3	0	0	0	0	0	1	36	56	0	28	1	86	0	376	1829
7:15 AM	-	7:30 AM	122	46	0	0	0	0	0	0	1	47	43	0	26	1	110	0	396	2006
7:30 AM	-	7:45 AM	129	77	1	0	0	0	0	0	1	67	45	0	62	5	130	0	517	2114
7:45 AM	-	8:00 AM	127	97	1	0	0	0	0	0	2	91	48	0	44	6	124	0	540	2031
8:00 AM	-	8:15 AM	149	93	0	0	0	0	0	0	1	71	54	0	51	10	124	0	553	1947
8:15 AM	-	8:30 AM	132	78	4	0	0	0	0	0	2	80	52	0	41	12	103	0	504	1394
8:30 AM	-	8:45 AM	107	85	2	0	0	0	0	0	1	53	31	0	30	2	123	0	434	890
8:45 AM	-	9:00 AM	97	71	4	0	0	0	0	0	1	64	50	0	35	1	133	0	456	456

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	515	353	7	0	0	0	0	0	6	295	185	0	166	30	474	0
PHV by Approach	875				0				486				670			
PHF by Movement	0.86	0.91	0.44						0.75	0.81	0.86		0.81	0.63	0.96	
Adjusted PHF	0.86	0.91	0.80						0.80	0.82	0.86		0.81	0.81	0.96	
PHF by Intersection	0.92															
Total Passenger Cars	502	349	7	0	0	0	0	0	6	281	177	0	160	29	443	0
Total Trucks/Buses	13	4	0	0	0	0	0	0	0	14	8	0	6	1	31	0
% Passenger Cars	97%	99%	100%						100%	95%	96%		96%	97%	93%	
% Heavy Vehicles	3%	1%	0%						0%	5%	4%		4%	3%	7%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Darling Avenue (CR622) and Kingsland Street/Passaic Avenue (CR644)
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	87	36	3		0	0	0		0	70	59		43	13	110	
4:15 PM	-	4:30 PM	123	47	0		0	0	0		1	71	61		44	19	128	
4:30 PM	-	4:45 PM	108	46	9		0	0	0		3	85	51		64	16	134	
4:45 PM	-	5:00 PM	117	52	5		0	0	0		1	67	41		57	14	136	
5:00 PM	-	5:15 PM	102	59	0		0	0	0		0	87	57		53	14	123	
5:15 PM	-	5:30 PM	91	46	3		0	0	0		0	79	48		62	20	136	
5:30 PM	-	5:45 PM	123	72	2		0	0	0		0	81	45		75	20	150	
5:45 PM	-	6:00 PM	117	67	3		0	0	0		1	71	39		67	16	154	
6:00 PM	-	6:15 PM	127	62	4		0	0	0		1	73	55		66	16	133	
6:15 PM	-	6:30 PM	120	54	4		0	0	0		2	75	44		49	17	124	
6:30 PM	-	6:45 PM	115	41	5		0	0	0		1	73	43		58	25	119	
6:45 PM	-	7:00 PM	123	47	0		0	0	0		1	71	61		44	19	128	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	2	0	0		0	0	0		0	1	1		2	0	4	
4:15 PM	-	4:30 PM	5	0	0		0	0	0		0	0	1		1	0	1	
4:30 PM	-	4:45 PM	4	0	0		0	0	0		0	0	0		2	0	1	
4:45 PM	-	5:00 PM	3	1	0		0	0	0		0	0	1		1	0	4	
5:00 PM	-	5:15 PM	6	0	0		0	0	0		0	0	2		1	0	0	
5:15 PM	-	5:30 PM	1	1	0		0	0	0		0	0	0		2	1	3	
5:30 PM	-	5:45 PM	3	0	0		0	0	0		0	1	2		1	0	0	
5:45 PM	-	6:00 PM	3	0	0		0	0	0		0	1	3		2	1	4	
6:00 PM	-	6:15 PM	3	0	0		0	0	0		0	0	2		0	0	2	
6:15 PM	-	6:30 PM	2	0	0		0	0	0		0	0	1		2	0	1	
6:30 PM	-	6:45 PM	1	0	0		0	0	0		0	3	3		1	0	1	
6:45 PM	-	7:00 PM	5	0	0		0	0	0		0	0	1		1	0	1	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	89	36	3	0	0	0	0	0	71	60	0	45	13	114	0	431	1956	
4:15 PM	-	4:30 PM	128	47	0	0	0	0	0	1	71	62	0	45	19	129	0	502	2029	
4:30 PM	-	4:45 PM	112	46	9	0	0	0	0	3	85	51	0	66	16	135	0	523	2020	
4:45 PM	-	5:00 PM	120	53	5	0	0	0	0	1	67	42	0	58	14	140	0	500	2072	
5:00 PM	-	5:15 PM	108	59	0	0	0	0	0	0	87	59	0	54	14	123	0	504	2121	
5:15 PM	-	5:30 PM	92	47	3	0	0	0	0	0	79	48	0	64	21	139	0	493	2161	
5:30 PM	-	5:45 PM	126	72	2	0	0	0	0	0	82	47	0	76	20	150	0	575	2163	
5:45 PM	-	6:00 PM	120	67	3	0	0	0	0	1	72	42	0	69	17	158	0	549	2077	
6:00 PM	-	6:15 PM	130	62	4	0	0	0	0	1	73	57	0	66	16	135	0	544	2030	
6:15 PM	-	6:30 PM	122	54	4	0	0	0	0	2	75	45	0	51	17	125	0	495	1486	
6:30 PM	-	6:45 PM	116	41	5	0	0	0	0	1	76	46	0	59	25	120	0	489	991	
6:45 PM	-	7:00 PM	128	47	0	0	0	0	0	1	71	62	0	45	19	129	0	502	502	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	498	255	13	0	0	0	0	0	4	302	191	0	262	70	568	0
PHV by Approach	766				0				497				900			
PHF by Movement	0.96	0.89	0.81						0.50	0.92	0.84		0.86	0.88	0.90	
Adjusted PHF	0.96	0.89	0.81						0.80	0.92	0.84		0.86	0.88	0.90	
PHF by Intersection	0.94															
Total Passenger Cars	487	255	13	0	0	0	0	0	4	300	183	0	257	69	561	0
Total Trucks/Buses	11	0	0	0	0	0	0	0	0	2	8	0	5	1	7	0
% Passenger Cars	98%	100%	100%						100%	99%	96%		98%	99%	99%	
% Heavy Vehicles	2%	0%	0%						0%	1%	4%		2%	1%	1%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Darling Avenue (CR622) and Kingsland Street/Passaic Avenue (CR644)
Count Date Wednesday, September 18, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

0

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	109	37	1		0	0	0		1	31	52		35	0	79	
7:15 AM	- 7:30 AM	123	40	5		0	0	0		2	50	51		28	3	106	
7:30 AM	- 7:45 AM	104	62	0		0	0	0		0	78	54		25	6	98	
7:45 AM	- 8:00 AM	121	79	3		0	0	0		1	79	52		29	15	116	
8:00 AM	- 8:15 AM	115	56	5		0	0	0		2	86	59		46	7	119	
8:15 AM	- 8:30 AM	111	67	2		0	0	0		0	66	55		44	5	109	
8:30 AM	- 8:45 AM	114	58	2		0	0	0		2	60	47		64	5	124	
8:45 AM	- 9:00 AM	127	73	6		0	0	0		0	51	48		49	8	105	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	2	1	0		0	0	0		0	2	1		3	1	1	
7:15 AM	- 7:30 AM	2	1	0		0	0	0		0	2	4		3	0	5	
7:30 AM	- 7:45 AM	4	1	0		0	0	0		1	2	3		3	0	3	
7:45 AM	- 8:00 AM	1	1	0		0	0	0		0	4	1		2	1	6	
8:00 AM	- 8:15 AM	4	2	0		0	0	0		0	2	2		2	0	9	
8:15 AM	- 8:30 AM	3	0	0		0	0	0		0	0	1		1	0	4	
8:30 AM	- 8:45 AM	4	4	0		0	0	0		0	1	2		2	0	7	
8:45 AM	- 9:00 AM	4	0	0		0	0	0		0	2	3		4	0	5	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	111	38	1	0	0	0	0	0	1	33	53	0	38	1	80	0	356	1736
7:15 AM	-	7:30 AM	125	41	5	0	0	0	0	0	2	52	55	0	31	3	111	0	425	1896
7:30 AM	-	7:45 AM	108	63	0	0	0	0	0	0	1	80	57	0	28	6	101	0	444	1939
7:45 AM	-	8:00 AM	122	80	3	0	0	0	0	0	1	83	53	0	31	16	122	0	511	1991
8:00 AM	-	8:15 AM	119	58	5	0	0	0	0	0	2	88	61	0	48	7	128	0	516	1965
8:15 AM	-	8:30 AM	114	67	2	0	0	0	0	0	0	66	56	0	45	5	113	0	468	1449
8:30 AM	-	8:45 AM	118	62	2	0	0	0	0	0	2	61	49	0	66	5	131	0	496	981
8:45 AM	-	9:00 AM	131	73	6	0	0	0	0	0	0	53	51	0	53	8	110	0	485	485

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	473	267	12	0	0	0	0	0	5	298	219	0	190	33	494	0
PHV by Approach	752				0				522				717			
PHF by Movement	0.97	0.83	0.60						0.63	0.85	0.90		0.72	0.52	0.94	
Adjusted PHF	0.97	0.83	0.80						0.80	0.85	0.90		0.82	0.81	0.94	
PHF by Intersection	0.96															
Total Passenger Cars	461	260	12	0	0	0	0	0	5	291	213	0	183	32	468	0
Total Trucks/Buses	12	7	0	0	0	0	0	0	0	7	6	0	7	1	26	0
% Passenger Cars	97%	97%	100%						100%	98%	97%		96%	97%	95%	
% Heavy Vehicles	3%	3%	0%						0%	2%	3%		4%	3%	5%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Darling Avenue (CR622) and Kingsland Street/Passaic Avenue (CR644)
Count Date Wednesday, September 18, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	90	50	4		0	0	0		1	89	73		48	17	144	
4:15 PM	-	4:30 PM	99	44	6		0	0	0		3	73	44		59	15	133	
4:30 PM	-	4:45 PM	106	66	1		0	0	0		3	77	61		60	22	139	
4:45 PM	-	5:00 PM	104	63	4		0	0	0		2	78	54		34	13	136	
5:00 PM	-	5:15 PM	106	52	3		0	0	0		1	82	63		60	29	118	
5:15 PM	-	5:30 PM	103	53	3		0	0	0		0	87	49		55	18	143	
5:30 PM	-	5:45 PM	103	66	4		0	0	0		0	85	51		60	15	170	
5:45 PM	-	6:00 PM	120	54	2		0	0	0		3	61	46		75	25	134	
6:00 PM	-	6:15 PM	124	47	3		0	0	0		3	82	48		77	21	155	
6:15 PM	-	6:30 PM	131	81	7		0	0	0		1	71	53		63	22	120	
6:30 PM	-	6:45 PM	117	35	7		0	0	0		0	55	42		76	25	145	
6:45 PM	-	7:00 PM	109	45	3		0	0	0		3	65	53		59	16	135	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	6	0	0		0	0	0		0	0	0		3	0	3	
4:15 PM	-	4:30 PM	5	0	0		0	0	0		0	1	0		1	0	1	
4:30 PM	-	4:45 PM	3	0	0		0	0	0		0	0	1		2	0	0	
4:45 PM	-	5:00 PM	3	1	0		0	0	0		0	2	1		1	0	2	
5:00 PM	-	5:15 PM	5	0	0		0	0	0		0	0	2		2	0	1	
5:15 PM	-	5:30 PM	2	1	1		0	0	0		0	1	2		1	1	1	
5:30 PM	-	5:45 PM	3	1	0		0	0	0		0	0	1		0	0	2	
5:45 PM	-	6:00 PM	1	0	0		0	0	0		0	1	3		2	0	3	
6:00 PM	-	6:15 PM	3	0	0		0	0	0		0	1	0		1	0	2	
6:15 PM	-	6:30 PM	3	1	0		0	0	0		0	0	2		2	0	2	
6:30 PM	-	6:45 PM	3	0	0		0	0	0		0	2	0		0	0	1	
6:45 PM	-	7:00 PM	5	0	0		0	0	0		0	1	0		1	0	1	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	96	50	4	0	0	0	0	0	1	89	73	0	51	17	147	0	528	2051
4:15 PM	-	4:30 PM	104	44	6	0	0	0	0	0	3	74	44	0	60	15	134	0	484	2047
4:30 PM	-	4:45 PM	109	66	1	0	0	0	0	0	3	77	62	0	62	22	139	0	541	2084
4:45 PM	-	5:00 PM	107	64	4	0	0	0	0	0	2	80	55	0	35	13	138	0	498	2104
5:00 PM	-	5:15 PM	111	52	3	0	0	0	0	0	1	82	65	0	62	29	119	0	524	2136
5:15 PM	-	5:30 PM	105	54	4	0	0	0	0	0	0	88	51	0	56	19	144	0	521	2179
5:30 PM	-	5:45 PM	106	67	4	0	0	0	0	0	0	85	52	0	60	15	172	0	561	2217
5:45 PM	-	6:00 PM	121	54	2	0	0	0	0	0	3	62	49	0	77	25	137	0	530	2164
6:00 PM	-	6:15 PM	127	47	3	0	0	0	0	0	3	83	48	0	78	21	157	0	567	2130
6:15 PM	-	6:30 PM	134	82	7	0	0	0	0	0	1	71	55	0	65	22	122	0	559	1563
6:30 PM	-	6:45 PM	120	35	7	0	0	0	0	0	0	57	42	0	76	25	146	0	508	1004
6:45 PM	-	7:00 PM	114	45	3	0	0	0	0	0	3	66	53	0	60	16	136	0	496	496

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	488	250	16	0	0	0	0	0	7	301	204	0	280	83	588	0
PHV by Approach	754				0				512				951			
PHF by Movement	0.91	0.76	0.57						0.58	0.89	0.93		0.90	0.83	0.85	
Adjusted PHF	0.91	0.82	0.80						0.80	0.89	0.93		0.90	0.83	0.85	
PHF by Intersection	0.98															
Total Passenger Cars	478	248	16	0	0	0	0	0	7	299	198	0	275	83	579	0
Total Trucks/Buses	10	2	0	0	0	0	0	0	0	2	6	0	5	0	9	0
% Passenger Cars	98%	99%	100%						100%	99%	97%		98%	100%	98%	
% Heavy Vehicles	2%	1%	0%						0%	1%	3%		2%	0%	2%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Darling Avenue (CR622) and Kingsland Street/Passaic Avenue (CR644)
Count Date Wednesday, October 23, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

0

Turning Movement Count Summary

		Passenger Cars															
Time Period		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	131	45	7		0	0	0		1	33	46		28	4	80	
7:15 AM	- 7:30 AM	134	42	2		0	0	0		0	57	58		38	1	101	
7:30 AM	- 7:45 AM	128	86	0		0	0	0		1	96	63		41	4	117	
7:45 AM	- 8:00 AM	137	84	1		0	0	0		0	119	58		53	9	119	
8:00 AM	- 8:15 AM	134	99	0		0	0	0		3	107	63		53	5	86	
8:15 AM	- 8:30 AM	119	94	0		0	0	0		1	83	62		38	8	108	
8:30 AM	- 8:45 AM	134	109	1		0	0	0		5	67	70		51	6	91	
8:45 AM	- 9:00 AM	155	130	1		0	0	0		2	77	47		34	11	86	

		Trucks/Buses															
Time Period		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	2	3	1		0	0	0		0	0	8		6	1	4	
7:15 AM	- 7:30 AM	3	2	0		0	0	0		0	1	4		2	0	0	
7:30 AM	- 7:45 AM	3	1	0		0	0	0		0	2	2		2	0	6	
7:45 AM	- 8:00 AM	3	0	0		0	0	0		0	4	1		4	1	4	
8:00 AM	- 8:15 AM	3	1	0		0	0	0		0	3	1		6	0	5	
8:15 AM	- 8:30 AM	1	0	0		0	0	0		0	1	3		0	0	2	
8:30 AM	- 8:45 AM	4	0	0		0	0	0		0	1	2		4	0	5	
8:45 AM	- 9:00 AM	5	1	0		0	0	0		0	0	4		0	0	8	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	133	48	8	0	0	0	0	0	1	33	54	0	34	5	84	0	400	1994
7:15 AM	-	7:30 AM	137	44	2	0	0	0	0	0	0	58	62	0	40	1	101	0	445	2163
7:30 AM	-	7:45 AM	131	87	0	0	0	0	0	0	1	98	65	0	43	4	123	0	552	2238
7:45 AM	-	8:00 AM	140	84	1	0	0	0	0	0	0	123	59	0	57	10	123	0	597	2236
8:00 AM	-	8:15 AM	137	100	0	0	0	0	0	0	3	110	64	0	59	5	91	0	569	2200
8:15 AM	-	8:30 AM	120	94	0	0	0	0	0	0	1	84	65	0	38	8	110	0	520	1631
8:30 AM	-	8:45 AM	138	109	1	0	0	0	0	0	5	68	72	0	55	6	96	0	550	1111
8:45 AM	-	9:00 AM	160	131	1	0	0	0	0	0	2	77	51	0	34	11	94	0	561	561

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	535	387	2	0	0	0	0	0	9	385	260	0	209	29	420	0
PHV by Approach	924				0				654				658			
PHF by Movement	0.96	0.89	0.50						0.45	0.78	0.90		0.89	0.73	0.85	
Adjusted PHF	0.96	0.89	0.80						0.80	0.83	0.90		0.89	0.81	0.85	
PHF by Intersection	0.94															
Total Passenger Cars	524	386	2	0	0	0	0	0	9	376	253	0	195	28	404	0
Total Trucks/Buses	11	1	0	0	0	0	0	0	0	9	7	0	14	1	16	0
% Passenger Cars	98%	100%	100%						100%	98%	97%		93%	97%	96%	
% Heavy Vehicles	2%	0%	0%						0%	2%	3%		7%	3%	4%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Darling Avenue (CR622) and Kingsland Street/Passaic Avenue (CR644)
Count Date Wednesday, October 23, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	98	60	0		0	0	0		2	75	62		38	17	106	
4:15 PM	-	4:30 PM	98	57	0		0	0	0		0	75	61		85	28	77	
4:30 PM	-	4:45 PM	84	38	0		0	0	0		1	79	64		76	15	82	
4:45 PM	-	5:00 PM	90	63	1		0	0	0		0	85	54		76	16	87	
5:00 PM	-	5:15 PM	88	71	1		0	0	0		5	74	57		58	20	99	
5:15 PM	-	5:30 PM	126	50	1		0	0	0		2	89	51		62	23	127	
5:30 PM	-	5:45 PM	128	49	2		0	0	0		2	62	59		75	25	110	
5:45 PM	-	6:00 PM	101	65	2		0	0	0		0	68	50		57	17	115	
6:00 PM	-	6:15 PM	94	53	0		0	0	0		0	81	65		43	19	126	
6:15 PM	-	6:30 PM	100	53	1		0	0	0		0	100	85		52	17	123	
6:30 PM	-	6:45 PM	96	65	0		0	0	0		1	90	48		62	26	137	
6:45 PM	-	7:00 PM	94	62	1		0	0	0		1	85	55		54	19	134	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	2	0	0		0	0	0		0	1	1		1	1	1	
4:15 PM	-	4:30 PM	2	1	0		0	0	0		0	0	0		1	0	0	
4:30 PM	-	4:45 PM	4	1	0		0	0	0		0	1	2		1	1	3	
4:45 PM	-	5:00 PM	9	0	0		0	0	0		0	1	1		1	0	0	
5:00 PM	-	5:15 PM	6	2	0		0	0	0		0	0	1		3	0	0	
5:15 PM	-	5:30 PM	3	1	0		0	0	0		0	0	1		0	0	0	
5:30 PM	-	5:45 PM	0	1	0		0	0	0		0	0	1		0	0	1	
5:45 PM	-	6:00 PM	0	2	0		0	0	0		0	0	0		1	0	0	
6:00 PM	-	6:15 PM	2	0	0		0	0	0		0	1	1		2	0	2	
6:15 PM	-	6:30 PM	3	0	0		0	0	0		0	1	0		2	0	2	
6:30 PM	-	6:45 PM	3	0	0		0	0	0		0	0	3		0	0	0	
6:45 PM	-	7:00 PM	0	1	0		0	0	0		0	0	3		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	100	60	0	0	0	0	0	0	2	76	63	0	39	18	107	0	465	1886
4:15 PM	-	4:30 PM	100	58	0	0	0	0	0	0	0	75	61	0	86	28	77	0	485	1906
4:30 PM	-	4:45 PM	88	39	0	0	0	0	0	0	1	80	66	0	77	16	85	0	452	1957
4:45 PM	-	5:00 PM	99	63	1	0	0	0	0	0	0	86	55	0	77	16	87	0	484	2020
5:00 PM	-	5:15 PM	94	73	1	0	0	0	0	0	5	74	58	0	61	20	99	0	485	2014
5:15 PM	-	5:30 PM	129	51	1	0	0	0	0	0	2	89	52	0	62	23	127	0	536	2018
5:30 PM	-	5:45 PM	128	50	2	0	0	0	0	0	2	62	60	0	75	25	111	0	515	2021
5:45 PM	-	6:00 PM	101	67	2	0	0	0	0	0	0	68	50	0	58	17	115	0	478	2037
6:00 PM	-	6:15 PM	96	53	0	0	0	0	0	0	0	82	66	0	45	19	128	0	489	2068
6:15 PM	-	6:30 PM	103	53	1	0	0	0	0	0	0	101	85	0	54	17	125	0	539	1579
6:30 PM	-	6:45 PM	99	65	0	0	0	0	0	0	1	90	51	0	62	26	137	0	531	1040
6:45 PM	-	7:00 PM	94	63	1	0	0	0	0	0	1	85	58	0	54	19	134	0	509	509

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	428	223	5	0	0	0	0	0	2	313	261	0	232	78	479	0
PHV by Approach	656				0				576				789			
PHF by Movement	0.84	0.83	0.63						0.25	0.77	0.77		0.77	0.78	0.94	
Adjusted PHF	0.84	0.83	0.80						0.80	0.82	0.82		0.82	0.81	0.94	
PHF by Intersection	0.94															
Total Passenger Cars	423	220	5	0	0	0	0	0	2	311	259	0	227	78	474	0
Total Trucks/Buses	5	3	0	0	0	0	0	0	0	2	2	0	5	0	5	0
% Passenger Cars	99%	99%	100%						100%	99%	99%		98%	100%	99%	
% Heavy Vehicles	1%	1%	0%						0%	1%	1%		2%	0%	1%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Bloomfield Avenue/Metro Boulevard
Count Date Wednesday, October 23, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	12	52	11		23	1	60		15	34	10		2	2	3	
7:15 AM	-	7:30 AM	14	64	15		27	13	62		18	60	15		2	0	1	
7:30 AM	-	7:45 AM	21	80	24		18	15	84		24	82	14		1	0	7	
7:45 AM	-	8:00 AM	24	104	22		36	16	93		21	106	8		1	1	3	
8:00 AM	-	8:15 AM	22	108	15		32	19	99		26	89	19		2	0	4	
8:15 AM	-	8:30 AM	24	108	17		35	17	75		28	67	24		3	1	3	
8:30 AM	-	8:45 AM	22	114	14		24	16	78		23	61	26		2	0	4	
8:45 AM	-	9:00 AM	26	98	18		18	14	63		17	54	28		2	5	3	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	1	1	5		4	0	1		0	2	1		0	0	1	
7:15 AM	-	7:30 AM	0	1	1		3	0	0		0	0	2		1	0	1	
7:30 AM	-	7:45 AM	0	3	1		1	0	1		0	3	0		1	0	0	
7:45 AM	-	8:00 AM	0	3	1		1	0	0		2	5	2		0	0	0	
8:00 AM	-	8:15 AM	0	3	5		0	0	0		0	4	0		0	0	0	
8:15 AM	-	8:30 AM	0	1	0		2	0	3		1	1	0		0	0	0	
8:30 AM	-	8:45 AM	0	5	0		0	0	1		0	4	4		0	0	0	
8:45 AM	-	9:00 AM	1	0	1		0	0	0		0	2	3		0	0	1	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	13	53	16	0	27	1	61	0	15	36	11	0	2	2	4	0	241	1370
7:15 AM	-	7:30 AM	14	65	16	0	30	13	62	0	18	60	17	0	3	0	2	0	300	1576
7:30 AM	-	7:45 AM	21	83	25	0	19	15	85	0	24	85	14	0	2	0	7	0	380	1686
7:45 AM	-	8:00 AM	24	107	23	0	37	16	93	0	23	111	10	0	1	1	3	0	449	1704
8:00 AM	-	8:15 AM	22	111	20	0	32	19	99	0	26	93	19	0	2	0	4	0	447	1609
8:15 AM	-	8:30 AM	24	109	17	0	37	17	78	0	29	68	24	0	3	1	3	0	410	1162
8:30 AM	-	8:45 AM	22	119	14	0	24	16	79	0	23	65	30	0	2	0	4	0	398	752
8:45 AM	-	9:00 AM	27	98	19	0	18	14	63	0	17	56	31	0	2	5	4	0	354	354

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	92	446	74	0	130	68	349	0	101	337	83	0	8	2	14	0
PHV by Approach	612				547				521				24			
PHF by Movement	0.96	0.94	0.80		0.88	0.89	0.88		0.87	0.76	0.69		0.67	0.50	0.88	
Adjusted PHF	0.96	0.94	0.81		0.88	0.89	0.88		0.87	0.83	0.81		0.80	0.80	0.88	
PHF by Intersection	0.95															
Total Passenger Cars	92	434	68	0	127	68	345	0	98	323	77	0	8	2	14	0
Total Trucks/Buses	0	12	6	0	3	0	4	0	3	14	6	0	0	0	0	0
% Passenger Cars	100%	97%	92%		98%	100%	99%		97%	96%	93%		100%	100%	100%	
% Heavy Vehicles	0%	3%	8%		2%	0%	1%		3%	4%	7%		0%	0%	0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Bloomfield Avenue/Metro Boulevard
Count Date Wednesday, October 23, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	4	62	32		20	2	33		57	92	9		9	8	24	
4:15 PM	-	4:30 PM	4	84	37		29	2	38		54	82	2		10	3	16	
4:30 PM	-	4:45 PM	4	90	38		25	2	33		59	91	8		7	8	27	
4:45 PM	-	5:00 PM	2	94	49		20	4	32		58	98	2		5	6	19	
5:00 PM	-	5:15 PM	2	89	31		20	4	44		48	88	4		17	12	24	
5:15 PM	-	5:30 PM	2	75	34		12	1	36		48	109	1		19	8	19	
5:30 PM	-	5:45 PM	2	79	40		21	0	35		44	88	4		8	5	20	
5:45 PM	-	6:00 PM	5	86	33		15	0	28		57	95	6		9	3	8	
6:00 PM	-	6:15 PM	3	71	22		20	2	47		54	98	3		5	5	21	
6:15 PM	-	6:30 PM	0	68	30		34	0	23		60	111	2		7	6	12	
6:30 PM	-	6:45 PM	1	85	33		27	3	38		55	92	2		1	2	9	
6:45 PM	-	7:00 PM	0	65	27		22	0	39		46	82	0		2	2	9	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	1	1		0	0	0		0	0	0		1	2	3	
4:15 PM	-	4:30 PM	0	3	0		0	0	0		0	0	1		0	0	0	
4:30 PM	-	4:45 PM	0	1	0		0	0	0		0	0	0		0	0	0	
4:45 PM	-	5:00 PM	0	0	1		1	0	0		0	1	0		0	0	0	
5:00 PM	-	5:15 PM	0	5	2		0	0	1		0	2	0		0	0	0	
5:15 PM	-	5:30 PM	0	1	0		0	0	0		0	1	0		1	0	0	
5:30 PM	-	5:45 PM	0	2	1		1	0	0		0	1	0		0	0	0	
5:45 PM	-	6:00 PM	0	3	0		0	0	0		0	0	1		0	0	0	
6:00 PM	-	6:15 PM	0	0	3		1	0	1		0	1	0		0	0	0	
6:15 PM	-	6:30 PM	0	1	1		1	0	0		0	0	0		1	0	0	
6:30 PM	-	6:45 PM	0	0	0		2	0	1		0	1	0		0	0	0	
6:45 PM	-	7:00 PM	0	1	0		1	0	0		1	2	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	4	63	33	0	20	2	33	0	57	92	9	0	10	10	27	0	360	1510
4:15 PM	-	4:30 PM	4	87	37	0	29	2	38	0	54	82	3	0	10	3	16	0	365	1543
4:30 PM	-	4:45 PM	4	91	38	0	25	2	33	0	59	91	8	0	7	8	27	0	393	1545
4:45 PM	-	5:00 PM	2	94	50	0	21	4	32	0	58	99	2	0	5	6	19	0	392	1503
5:00 PM	-	5:15 PM	2	94	33	0	20	4	45	0	48	90	4	0	17	12	24	0	393	1460
5:15 PM	-	5:30 PM	2	76	34	0	12	1	36	0	48	110	1	0	20	8	19	0	367	1424
5:30 PM	-	5:45 PM	2	81	41	0	22	0	35	0	44	89	4	0	8	5	20	0	351	1414
5:45 PM	-	6:00 PM	5	89	33	0	15	0	28	0	57	95	7	0	9	3	8	0	349	1415
6:00 PM	-	6:15 PM	3	71	25	0	21	2	48	0	54	99	3	0	5	5	21	0	357	1365
6:15 PM	-	6:30 PM	0	69	31	0	35	0	23	0	60	111	2	0	8	6	12	0	357	1008
6:30 PM	-	6:45 PM	1	85	33	0	29	3	39	0	55	93	2	0	1	2	9	0	352	651
6:45 PM	-	7:00 PM	0	66	27	0	23	0	39	0	47	84	0	0	2	2	9	0	299	299

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	10	310	130	0	93	2	134	0	215	394	16	0	30	19	61	0
PHV by Approach	450				229				625				110			
PHF by Movement	0.50	0.87	0.79		0.66	0.25	0.70		0.90	0.89	0.57		0.83	0.79	0.73	
Adjusted PHF	0.80	0.87	0.81		0.81	0.80	0.81		0.90	0.89	0.80		0.83	0.80	0.81	
PHF by Intersection	0.99															
Total Passenger Cars	10	304	125	0	90	2	133	0	215	392	15	0	29	19	61	0
Total Trucks/Buses	0	6	5	0	3	0	1	0	0	2	1	0	1	0	0	0
% Passenger Cars	100%	98%	96%		97%	100%	99%		100%	99%	94%		97%	100%	100%	
% Heavy Vehicles	0%	2%	4%		3%	0%	1%		0%	1%	6%		3%	0%	0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Ideation Way
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

			Passenger Cars															
Time Period			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	14	98	0		0	0	0		0	54	11		4	0	1	
7:15 AM	-	7:30 AM	15	118	0		0	0	0		0	75	21		0	0	3	
7:30 AM	-	7:45 AM	36	128	0		0	0	0		0	91	32		1	0	3	
7:45 AM	-	8:00 AM	27	192	0		0	0	0		0	117	64		3	0	0	
8:00 AM	-	8:15 AM	22	185	0		0	0	0		0	96	19		6	0	0	
8:15 AM	-	8:30 AM	19	145	0		0	0	0		0	99	14		3	0	1	
8:30 AM	-	8:45 AM	23	162	0		0	0	0		0	86	34		1	0	2	
8:45 AM	-	9:00 AM	28	163	0		0	0	0		0	83	33		5	0	5	

			Trucks/Buses															
Time Period			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	1	3	0		0	0	0		0	3	0		0	0	0	
7:15 AM	-	7:30 AM	0	0	0		0	0	0		0	3	0		0	0	0	
7:30 AM	-	7:45 AM	0	5	0		0	0	0		0	9	0		0	0	0	
7:45 AM	-	8:00 AM	1	3	0		0	0	0		0	2	0		0	0	2	
8:00 AM	-	8:15 AM	0	4	0		0	0	0		0	7	1		0	0	3	
8:15 AM	-	8:30 AM	2	2	0		0	0	0		0	7	0		0	0	1	
8:30 AM	-	8:45 AM	1	2	0		0	0	0		0	6	0		0	0	1	
8:45 AM	-	9:00 AM	1	3	0		0	0	0		0	2	0		0	0	2	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	15	101	0	0	0	0	0	0	57	11	0	4	0	1	0	189	1140	
7:15 AM	-	7:30 AM	15	118	0	0	0	0	0	0	78	21	0	0	0	3	0	235	1294	
7:30 AM	-	7:45 AM	36	133	0	0	0	0	0	0	100	32	0	1	0	3	0	305	1352	
7:45 AM	-	8:00 AM	28	195	0	0	0	0	0	0	119	64	0	3	0	2	0	411	1365	
8:00 AM	-	8:15 AM	22	189	0	0	0	0	0	0	103	20	0	6	0	3	0	343	1279	
8:15 AM	-	8:30 AM	21	147	0	0	0	0	0	0	106	14	0	3	0	2	0	293	936	
8:30 AM	-	8:45 AM	24	164	0	0	0	0	0	0	92	34	0	1	0	3	0	318	643	
8:45 AM	-	9:00 AM	29	166	0	0	0	0	0	0	85	33	0	5	0	7	0	325	325	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	95	695	0	0	0	0	0	0	0	420	132	0	13	0	10	0
PHV by Approach	790				0				552				23			
PHF by Movement	0.85	0.89								0.88	0.52		0.54		0.83	
Adjusted PHF	0.85	0.89								0.88	0.81		0.80		0.83	
PHF by Intersection	0.83															
Total Passenger Cars	91	684	0	0	0	0	0	0	0	398	131	0	13	0	3	0
Total Trucks/Buses	4	11	0	0	0	0	0	0	0	22	1	0	0	0	7	0
% Passenger Cars	96%	98%								95%	99%		100%		30%	
% Heavy Vehicles	4%	2%								5%	1%		0%		70%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Ideation Way
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	3	102	0		0	0	0		0	153	7		17	0	15	
4:15 PM	-	4:30 PM	4	73	0		0	0	0		0	133	9		12	0	12	
4:30 PM	-	4:45 PM	2	97	0		0	0	0		0	136	1		13	0	16	
4:45 PM	-	5:00 PM	1	108	0		0	0	0		0	146	4		9	0	20	
5:00 PM	-	5:15 PM	1	105	0		0	0	0		0	146	4		12	0	11	
5:15 PM	-	5:30 PM	1	108	0		0	0	0		0	135	2		8	0	11	
5:30 PM	-	5:45 PM	1	127	0		0	0	0		0	160	1		13	0	13	
5:45 PM	-	6:00 PM	1	116	0		0	0	0		0	133	3		12	0	12	
6:00 PM	-	6:15 PM	1	126	0		0	0	0		0	161	2		9	0	16	
6:15 PM	-	6:30 PM	1	94	0		0	0	0		0	148	3		18	0	13	
6:30 PM	-	6:45 PM	0	95	0		0	0	0		0	134	3		7	0	11	
6:45 PM	-	7:00 PM	0	92	0		0	0	0		0	150	1		10	0	6	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	2	0		0	0	0		0	1	0		0	0	0	
4:15 PM	-	4:30 PM	0	2	0		0	0	0		0	0	0		0	0	0	
4:30 PM	-	4:45 PM	0	1	0		0	0	0		0	1	0		0	0	0	
4:45 PM	-	5:00 PM	0	1	0		0	0	0		0	2	0		0	0	0	
5:00 PM	-	5:15 PM	0	2	0		0	0	0		0	2	0		0	0	0	
5:15 PM	-	5:30 PM	0	2	0		0	0	0		0	1	0		0	0	1	
5:30 PM	-	5:45 PM	0	2	0		0	0	0		0	1	0		0	0	1	
5:45 PM	-	6:00 PM	0	2	0		0	0	0		0	2	0		0	0	0	
6:00 PM	-	6:15 PM	0	0	0		0	0	0		0	2	0		0	0	0	
6:15 PM	-	6:30 PM	0	2	0		0	0	0		0	2	0		1	0	0	
6:30 PM	-	6:45 PM	0	1	0		0	0	0		0	3	0		0	0	0	
6:45 PM	-	7:00 PM	0	0	0		0	0	0		0	3	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	3	104	0	0	0	0	0	0	154	7	0	17	0	15	0	300	1103	
4:15 PM	-	4:30 PM	4	75	0	0	0	0	0	0	133	9	0	12	0	12	0	245	1086	
4:30 PM	-	4:45 PM	2	98	0	0	0	0	0	0	137	1	0	13	0	16	0	267	1110	
4:45 PM	-	5:00 PM	1	109	0	0	0	0	0	0	148	4	0	9	0	20	0	291	1162	
5:00 PM	-	5:15 PM	1	107	0	0	0	0	0	0	148	4	0	12	0	11	0	283	1152	
5:15 PM	-	5:30 PM	1	110	0	0	0	0	0	0	136	2	0	8	0	12	0	269	1186	
5:30 PM	-	5:45 PM	1	129	0	0	0	0	0	0	161	1	0	13	0	14	0	319	1199	
5:45 PM	-	6:00 PM	1	118	0	0	0	0	0	0	135	3	0	12	0	12	0	281	1134	
6:00 PM	-	6:15 PM	1	126	0	0	0	0	0	0	163	2	0	9	0	16	0	317	1115	
6:15 PM	-	6:30 PM	1	96	0	0	0	0	0	0	150	3	0	19	0	13	0	282	798	
6:30 PM	-	6:45 PM	0	96	0	0	0	0	0	0	137	3	0	7	0	11	0	254	516	
6:45 PM	-	7:00 PM	0	92	0	0	0	0	0	0	153	1	0	10	0	6	0	262	262	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	4	469	0	0	0	0	0	0	0	609	9	0	53	0	55	0
PHV by Approach	473				0				618				108			
PHF by Movement	1.00	0.91								0.93	0.75		0.70		0.86	
Adjusted PHF	0.98	0.91								0.93	0.80		0.81		0.86	
PHF by Intersection	0.94															
Total Passenger Cars	4	463	0	0	0	0	0	0	0	602	9	0	52	0	54	0
Total Trucks/Buses	0	6	0	0	0	0	0	0	0	7	0	0	1	0	1	0
% Passenger Cars	100%	99%								99%	100%		98%		98%	
% Heavy Vehicles	0%	1%								1%	0%		2%		2%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Ideation Way
Count Date Wednesday, October 23, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

0

Turning Movement Count Summary

			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
Time Period			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	5	109	0		0	0	0		0	57	8		1	0	1	
7:15 AM	-	7:30 AM	5	124	0		0	0	0		0	95	12		1	0	1	
7:30 AM	-	7:45 AM	11	153	0		0	0	0		0	125	25		2	0	0	
7:45 AM	-	8:00 AM	8	188	0		0	0	0		0	127	41		0	0	1	
8:00 AM	-	8:15 AM	13	198	0		0	0	0		0	133	15		1	0	2	
8:15 AM	-	8:30 AM	19	166	0		0	0	0		0	117	23		2	0	1	
8:30 AM	-	8:45 AM	17	177	0		0	0	0		0	103	34		1	0	9	
8:45 AM	-	9:00 AM	14	149	0		0	0	0		0	95	28		3	0	3	

			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
Time Period			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	0	2	0		0	0	0		0	3	0		0	0	0	
7:15 AM	-	7:30 AM	0	2	0		0	0	0		0	2	0		0	0	0	
7:30 AM	-	7:45 AM	0	4	0		0	0	0		0	3	0		0	0	0	
7:45 AM	-	8:00 AM	0	4	0		0	0	0		0	9	0		0	0	0	
8:00 AM	-	8:15 AM	0	3	0		0	0	0		0	4	0		0	0	0	
8:15 AM	-	8:30 AM	0	4	0		0	0	0		0	2	0		0	0	0	
8:30 AM	-	8:45 AM	1	5	0		0	0	0		0	7	0		0	0	1	
8:45 AM	-	9:00 AM	0	0	0		0	0	0		0	5	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	5	111	0	0	0	0	0	0	60	8	0	1	0	1	0	186	1129	
7:15 AM	-	7:30 AM	5	126	0	0	0	0	0	0	97	12	0	1	0	1	0	242	1312	
7:30 AM	-	7:45 AM	11	157	0	0	0	0	0	0	128	25	0	2	0	0	0	323	1404	
7:45 AM	-	8:00 AM	8	192	0	0	0	0	0	0	136	41	0	0	0	1	0	378	1436	
8:00 AM	-	8:15 AM	13	201	0	0	0	0	0	0	137	15	0	1	0	2	0	369	1355	
8:15 AM	-	8:30 AM	19	170	0	0	0	0	0	0	119	23	0	2	0	1	0	334	986	
8:30 AM	-	8:45 AM	18	182	0	0	0	0	0	0	110	34	0	1	0	10	0	355	652	
8:45 AM	-	9:00 AM	14	149	0	0	0	0	0	0	100	28	0	3	0	3	0	297	297	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	58	745	0	0	0	0	0	0	0	502	113	0	4	0	14	0
PHV by Approach	803				0				615				18			
PHF by Movement	0.76	0.93								0.92	0.69		0.50		0.35	
Adjusted PHF	0.81	0.93								0.92	0.81		0.80		0.80	
PHF by Intersection	0.95															
Total Passenger Cars	57	729	0	0	0	0	0	0	0	480	113	0	4	0	13	0
Total Trucks/Buses	1	16	0	0	0	0	0	0	0	22	0	0	0	0	1	0
% Passenger Cars	98%	98%								96%	100%		100%		93%	
% Heavy Vehicles	2%	2%								4%	0%		0%		7%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Ideation Way
Count Date Wednesday, October 23, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	1	105	0		0	0	0		0	148	5		6	0	11	
4:15 PM	-	4:30 PM	5	127	0		0	0	0		0	131	4		12	0	7	
4:30 PM	-	4:45 PM	5	125	0		0	0	0		0	155	6		7	0	10	
4:45 PM	-	5:00 PM	4	125	0		0	0	0		0	146	11		12	0	8	
5:00 PM	-	5:15 PM	3	146	0		0	0	0		0	135	4		27	0	17	
5:15 PM	-	5:30 PM	0	128	0		0	0	0		0	127	4		17	0	18	
5:30 PM	-	5:45 PM	1	121	0		0	0	0		0	124	3		8	0	11	
5:45 PM	-	6:00 PM	0	124	0		0	0	0		0	147	3		2	0	7	
6:00 PM	-	6:15 PM	1	119	0		0	0	0		0	155	2		1	0	2	
6:15 PM	-	6:30 PM	1	100	0		0	0	0		0	168	2		6	0	3	
6:30 PM	-	6:45 PM	0	123	0		0	0	0		0	145	2		7	0	4	
6:45 PM	-	7:00 PM	1	104	0		0	0	0		0	125	0		6	0	4	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	2	0		0	0	0		0	0	0		0	0	0	
4:15 PM	-	4:30 PM	0	3	0		0	0	0		0	1	0		0	0	0	
4:30 PM	-	4:45 PM	0	1	0		0	0	0		0	0	0		0	0	0	
4:45 PM	-	5:00 PM	0	0	0		0	0	0		0	1	0		0	0	0	
5:00 PM	-	5:15 PM	0	6	0		0	0	0		0	2	0		0	0	0	
5:15 PM	-	5:30 PM	0	2	0		0	0	0		0	1	0		0	0	0	
5:30 PM	-	5:45 PM	0	2	0		0	0	0		0	1	0		0	0	0	
5:45 PM	-	6:00 PM	0	3	0		0	0	0		0	1	0		0	0	0	
6:00 PM	-	6:15 PM	0	1	0		0	0	0		0	1	1		0	0	0	
6:15 PM	-	6:30 PM	0	2	0		0	0	0		0	0	0		0	0	0	
6:30 PM	-	6:45 PM	0	1	0		0	0	0		0	1	0		0	0	0	
6:45 PM	-	7:00 PM	0	1	0		0	0	0		0	3	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	1	107	0	0	0	0	0	0	148	5	0	6	0	11	0	278	1184	
4:15 PM	-	4:30 PM	5	130	0	0	0	0	0	0	132	4	0	12	0	7	0	290	1246	
4:30 PM	-	4:45 PM	5	126	0	0	0	0	0	0	155	6	0	7	0	10	0	309	1253	
4:45 PM	-	5:00 PM	4	125	0	0	0	0	0	0	147	11	0	12	0	8	0	307	1215	
5:00 PM	-	5:15 PM	3	152	0	0	0	0	0	0	137	4	0	27	0	17	0	340	1195	
5:15 PM	-	5:30 PM	0	130	0	0	0	0	0	0	128	4	0	17	0	18	0	297	1138	
5:30 PM	-	5:45 PM	1	123	0	0	0	0	0	0	125	3	0	8	0	11	0	271	1123	
5:45 PM	-	6:00 PM	0	127	0	0	0	0	0	0	148	3	0	2	0	7	0	287	1135	
6:00 PM	-	6:15 PM	1	120	0	0	0	0	0	0	156	3	0	1	0	2	0	283	1092	
6:15 PM	-	6:30 PM	1	102	0	0	0	0	0	0	168	2	0	6	0	3	0	282	809	
6:30 PM	-	6:45 PM	0	124	0	0	0	0	0	0	146	2	0	7	0	4	0	283	527	
6:45 PM	-	7:00 PM	1	105	0	0	0	0	0	0	128	0	0	6	0	4	0	244	244	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	3	472	0	0	0	0	0	0	0	597	11	0	17	0	23	0
PHV by Approach	475				0				608				40			
PHF by Movement	0.75	0.93								0.89	0.92		0.53		0.52	
Adjusted PHF	0.80	0.93								0.89	0.92		0.80		0.80	
PHF by Intersection	0.98															
Total Passenger Cars	3	464	0	0	0	0	0	0	0	594	10	0	17	0	23	0
Total Trucks/Buses	0	8	0	0	0	0	0	0	0	3	1	0	0	0	0	0
% Passenger Cars	100%	98%								99%	91%		100%		100%	
% Heavy Vehicles	0%	2%								1%	9%		0%		0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Cathedral Avenue
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	57	44	0		0	0	0		0	36	0		0	0	30	
7:15 AM	- 7:30 AM	71	47	0		0	0	0		0	50	0		1	0	51	
7:30 AM	- 7:45 AM	65	56	0		0	0	0		0	65	0		1	0	51	
7:45 AM	- 8:00 AM	111	88	0		0	0	0		0	106	0		1	0	63	
8:00 AM	- 8:15 AM	99	92	0		0	0	0		0	58	0		0	0	57	
8:15 AM	- 8:30 AM	75	71	0		0	0	0		0	66	0		2	0	47	
8:30 AM	- 8:45 AM	95	62	0		0	0	0		0	60	1		1	0	55	
8:45 AM	- 9:00 AM	84	87	0		0	0	0		0	62	0		1	0	60	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	3	0		0	0	0		0	2	0		0	0	2	
7:15 AM	- 7:30 AM	0	0	0		0	0	0		0	1	0		0	0	2	
7:30 AM	- 7:45 AM	2	5	0		0	0	0		0	5	0		0	0	2	
7:45 AM	- 8:00 AM	1	2	0		0	0	0		0	1	0		0	0	0	
8:00 AM	- 8:15 AM	1	3	0		0	0	0		0	3	0		0	0	4	
8:15 AM	- 8:30 AM	0	0	0		0	0	0		0	4	0		0	0	2	
8:30 AM	- 8:45 AM	1	1	0		0	0	0		0	4	0		0	0	1	
8:45 AM	- 9:00 AM	2	1	0		0	0	0		0	1	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	57	47	0	0	0	0	0	0	38	0	0	0	0	32	0	174	1022	
7:15 AM	-	7:30 AM	71	47	0	0	0	0	0	0	51	0	0	1	0	53	0	223	1165	
7:30 AM	-	7:45 AM	67	61	0	0	0	0	0	0	70	0	0	1	0	53	0	252	1209	
7:45 AM	-	8:00 AM	112	90	0	0	0	0	0	0	107	0	0	1	0	63	0	373	1238	
8:00 AM	-	8:15 AM	100	95	0	0	0	0	0	0	61	0	0	0	0	61	0	317	1163	
8:15 AM	-	8:30 AM	75	71	0	0	0	0	0	0	70	0	0	2	0	49	0	267	846	
8:30 AM	-	8:45 AM	96	63	0	0	0	0	0	0	64	1	0	1	0	56	0	281	579	
8:45 AM	-	9:00 AM	86	88	0	0	0	0	0	0	63	0	0	1	0	60	0	298	298	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	383	319	0	0	0	0	0	0	0	302	1	0	4	0	229	0
PHV by Approach	702				0				303				233			
PHF by Movement	0.85	0.84								0.71	0.25		0.50		0.91	
Adjusted PHF	0.85	0.84								0.82	0.80		0.80		0.91	
PHF by Intersection	0.83															
Total Passenger Cars	380	313	0	0	0	0	0	0	0	290	1	0	4	0	222	0
Total Trucks/Buses	3	6	0	0	0	0	0	0	0	12	0	0	0	0	7	0
% Passenger Cars	99%	98%								96%	100%		100%		97%	
% Heavy Vehicles	1%	2%								4%	0%		0%		3%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Cathedral Avenue
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	53	64	0		0	0	0		0	88	1		3	0	72	
4:15 PM	-	4:30 PM	47	38	0		0	0	0		0	79	0		2	0	66	
4:30 PM	-	4:45 PM	44	70	0		0	0	0		0	74	0		2	0	59	
4:45 PM	-	5:00 PM	43	73	0		0	0	0		0	76	2		1	0	75	
5:00 PM	-	5:15 PM	52	68	0		0	0	0		0	90	0		0	0	65	
5:15 PM	-	5:30 PM	46	70	0		0	0	0		0	76	0		1	0	57	
5:30 PM	-	5:45 PM	50	87	0		0	0	0		0	99	0		1	0	63	
5:45 PM	-	6:00 PM	48	78	0		0	0	0		0	63	0		3	0	78	
6:00 PM	-	6:15 PM	51	88	0		0	0	0		0	79	0		2	0	83	
6:15 PM	-	6:30 PM	47	65	0		0	0	0		0	76	0		1	0	78	
6:30 PM	-	6:45 PM	39	68	0		0	0	0		0	65	0		2	0	67	
6:45 PM	-	7:00 PM	37	64	0		0	0	0		0	70	1		2	0	79	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	1	1	0		0	0	0		0	0	0		0	0	1	
4:15 PM	-	4:30 PM	0	1	0		0	0	0		0	0	0		0	0	0	
4:30 PM	-	4:45 PM	0	1	0		0	0	0		0	1	1		0	0	1	
4:45 PM	-	5:00 PM	0	1	0		0	0	0		0	1	0		0	0	0	
5:00 PM	-	5:15 PM	0	1	0		0	0	0		0	2	0		0	0	0	
5:15 PM	-	5:30 PM	1	2	0		0	0	0		0	0	0		0	0	1	
5:30 PM	-	5:45 PM	1	1	0		0	0	0		0	1	0		0	0	0	
5:45 PM	-	6:00 PM	1	1	0		0	0	0		0	2	0		0	0	0	
6:00 PM	-	6:15 PM	0	0	0		0	0	0		0	1	0		0	0	0	
6:15 PM	-	6:30 PM	0	1	0		0	0	0		0	3	0		0	0	0	
6:30 PM	-	6:45 PM	1	0	0		0	0	0		0	3	0		0	0	1	
6:45 PM	-	7:00 PM	0	0	0		0	0	0		0	3	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	54	65	0	0	0	0	0	0	88	1	0	3	0	73	0	284	1042	
4:15 PM	-	4:30 PM	47	39	0	0	0	0	0	0	79	0	0	2	0	66	0	233	1036	
4:30 PM	-	4:45 PM	44	71	0	0	0	0	0	0	75	1	0	2	0	60	0	253	1057	
4:45 PM	-	5:00 PM	43	74	0	0	0	0	0	0	77	2	0	1	0	75	0	272	1107	
5:00 PM	-	5:15 PM	52	69	0	0	0	0	0	0	92	0	0	0	0	65	0	278	1109	
5:15 PM	-	5:30 PM	47	72	0	0	0	0	0	0	76	0	0	1	0	58	0	254	1135	
5:30 PM	-	5:45 PM	51	88	0	0	0	0	0	0	100	0	0	1	0	63	0	303	1152	
5:45 PM	-	6:00 PM	49	79	0	0	0	0	0	0	65	0	0	3	0	78	0	274	1095	
6:00 PM	-	6:15 PM	51	88	0	0	0	0	0	0	80	0	0	2	0	83	0	304	1077	
6:15 PM	-	6:30 PM	47	66	0	0	0	0	0	0	79	0	0	1	0	78	0	271	773	
6:30 PM	-	6:45 PM	40	68	0	0	0	0	0	0	68	0	0	2	0	68	0	246	502	
6:45 PM	-	7:00 PM	37	64	0	0	0	0	0	0	73	1	0	2	0	79	0	256	256	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	198	321	0	0	0	0	0	0	0	324	0	0	7	0	302	0
PHV by Approach	519				0				324				309			
PHF by Movement	0.97	0.91								0.81			0.58		0.91	
Adjusted PHF	0.97	0.91								0.83			0.80		0.91	
PHF by Intersection	0.95															
Total Passenger Cars	196	318	0	0	0	0	0	0	0	317	0	0	7	0	302	0
Total Trucks/Buses	2	3	0	0	0	0	0	0	0	7	0	0	0	0	0	0
% Passenger Cars	99%	99%								98%			100%		100%	
% Heavy Vehicles	1%	1%								2%			0%		0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Franklin Avenue
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	48	19		43	15	24		5	43	3		4	15	0	
7:15 AM	- 7:30 AM	1	47	21		45	12	25		14	46	0		1	19	4	
7:30 AM	- 7:45 AM	2	64	22		54	14	31		10	78	0		1	22	0	
7:45 AM	- 8:00 AM	2	83	29		55	21	32		12	101	1		3	26	2	
8:00 AM	- 8:15 AM	0	91	28		52	22	46		18	74	1		5	18	3	
8:15 AM	- 8:30 AM	0	90	30		52	17	36		22	76	3		1	24	2	
8:30 AM	- 8:45 AM	0	59	29		57	21	31		15	88	1		4	18	1	
8:45 AM	- 9:00 AM	0	81	34		42	21	24		13	70	0		2	26	3	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	3	1		1	0	1		2	1	0		0	0	0	
7:15 AM	- 7:30 AM	0	2	0		1	1	2		1	0	0		0	1	0	
7:30 AM	- 7:45 AM	0	5	0		2	0	1		1	5	0		0	0	0	
7:45 AM	- 8:00 AM	0	2	2		0	0	1		1	1	0		0	0	0	
8:00 AM	- 8:15 AM	0	2	0		2	0	0		1	3	0		0	0	1	
8:15 AM	- 8:30 AM	0	1	2		0	0	2		1	5	0		0	3	1	
8:30 AM	- 8:45 AM	0	3	1		0	0	0		1	6	0		0	1	0	
8:45 AM	- 9:00 AM	0	2	1		0	0	1		3	1	0		0	0	1	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	0	51	20	0	44	15	25	0	7	44	3	0	4	15	0	0	228	1157
7:15 AM	-	7:30 AM	1	49	21	0	46	13	27	0	15	46	0	0	1	20	4	0	243	1296
7:30 AM	-	7:45 AM	2	69	22	0	56	14	32	0	11	83	0	0	1	22	0	0	312	1421
7:45 AM	-	8:00 AM	2	85	31	0	55	21	33	0	13	102	1	0	3	26	2	0	374	1445
8:00 AM	-	8:15 AM	0	93	28	0	54	22	46	0	19	77	1	0	5	18	4	0	367	1396
8:15 AM	-	8:30 AM	0	91	32	0	52	17	38	0	23	81	3	0	1	27	3	0	368	1029
8:30 AM	-	8:45 AM	0	62	30	0	57	21	31	0	16	94	1	0	4	19	1	0	336	661
8:45 AM	-	9:00 AM	0	83	35	0	42	21	25	0	16	71	0	0	2	26	4	0	325	325

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	2	331	121	0	218	81	148	0	71	354	6	0	13	90	10	0
PHV by Approach	454				447				431				113			
PHF by Movement	0.25	0.89	0.95		0.96	0.92	0.80		0.77	0.87	0.50		0.65	0.83	0.63	
Adjusted PHF	0.80	0.89	0.95		0.96	0.92	0.81		0.81	0.87	0.80		0.80	0.83	0.80	
PHF by Intersection	0.97															
Total Passenger Cars	2	323	116	0	216	81	145	0	67	339	6	0	13	86	8	0
Total Trucks/Buses	0	8	5	0	2	0	3	0	4	15	0	0	0	4	2	0
% Passenger Cars	100%	98%	96%		99%	100%	98%		94%	96%	100%		100%	96%	80%	
% Heavy Vehicles	0%	2%	4%		1%	0%	2%		6%	4%	0%		0%	4%	20%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Franklin Avenue
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	3	69	49		54	23	25		22	94	1		6	55	2	
4:15 PM	-	4:30 PM	3	59	37		44	16	37		27	79	3		9	47	2	
4:30 PM	-	4:45 PM	0	72	44		47	14	27		16	96	1		7	45	3	
4:45 PM	-	5:00 PM	0	70	41		43	19	33		29	85	3		7	47	4	
5:00 PM	-	5:15 PM	2	80	32		48	17	34		20	103	1		8	43	2	
5:15 PM	-	5:30 PM	4	84	38		52	17	24		16	78	2		12	32	4	
5:30 PM	-	5:45 PM	1	96	30		44	20	22		21	112	1		5	39	9	
5:45 PM	-	6:00 PM	3	86	36		44	20	36		29	70	1		9	47	3	
6:00 PM	-	6:15 PM	1	91	32		32	13	39		12	86	2		4	36	8	
6:15 PM	-	6:30 PM	0	81	47		50	17	33		23	84	0		13	43	2	
6:30 PM	-	6:45 PM	1	86	34		50	20	21		20	69	3		2	52	7	
6:45 PM	-	7:00 PM	0	70	44		32	14	31		23	89	2		4	41	1	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	2	0		1	1	1		1	2	0		0	0	0	
4:15 PM	-	4:30 PM	0	0	3		0	0	2		2	0	0		1	0	0	
4:30 PM	-	4:45 PM	0	1	0		2	0	0		0	0	1		0	0	0	
4:45 PM	-	5:00 PM	0	1	1		0	1	1		0	1	0		1	2	0	
5:00 PM	-	5:15 PM	0	2	2		0	0	1		1	2	0		0	0	0	
5:15 PM	-	5:30 PM	0	1	0		2	0	1		1	0	0		0	0	0	
5:30 PM	-	5:45 PM	0	1	0		1	0	0		1	2	0		0	0	0	
5:45 PM	-	6:00 PM	0	1	1		0	0	1		1	2	0		0	0	0	
6:00 PM	-	6:15 PM	0	2	0		0	0	1		1	1	0		0	1	0	
6:15 PM	-	6:30 PM	0	2	0		1	0	1		0	3	0		0	0	0	
6:30 PM	-	6:45 PM	0	0	0		1	0	0		2	3	0		0	0	0	
6:45 PM	-	7:00 PM	0	1	0		0	0	1		1	3	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	3	71	49	0	55	24	26	0	23	96	1	0	6	55	2	0	411	1547
4:15 PM	-	4:30 PM	3	59	40	0	44	16	39	0	29	79	3	0	10	47	2	0	371	1534
4:30 PM	-	4:45 PM	0	73	44	0	49	14	27	0	16	96	2	0	7	45	3	0	376	1531
4:45 PM	-	5:00 PM	0	71	42	0	43	20	34	0	29	86	3	0	8	49	4	0	389	1560
5:00 PM	-	5:15 PM	2	82	34	0	48	17	35	0	21	105	1	0	8	43	2	0	398	1561
5:15 PM	-	5:30 PM	4	85	38	0	54	17	25	0	17	78	2	0	12	32	4	0	368	1525
5:30 PM	-	5:45 PM	1	97	30	0	45	20	22	0	22	114	1	0	5	39	9	0	405	1557
5:45 PM	-	6:00 PM	3	87	37	0	44	20	37	0	30	72	1	0	9	47	3	0	390	1523
6:00 PM	-	6:15 PM	1	93	32	0	32	13	40	0	13	87	2	0	4	37	8	0	362	1490
6:15 PM	-	6:30 PM	0	83	47	0	51	17	34	0	23	87	0	0	13	43	2	0	400	1128
6:30 PM	-	6:45 PM	1	86	34	0	51	20	21	0	22	72	3	0	2	52	7	0	371	728
6:45 PM	-	7:00 PM	0	71	44	0	32	14	32	0	24	92	2	0	4	41	1	0	357	357

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	5	360	146	0	172	70	133	0	88	360	4	0	31	166	22	0
PHV by Approach	511				375				452				219			
PHF by Movement	0.42	0.93	0.78		0.84	0.88	0.83		0.73	0.79	0.50		0.60	0.88	0.61	
Adjusted PHF	0.80	0.93	0.81		0.84	0.88	0.83		0.81	0.83	0.80		0.81	0.88	0.80	
PHF by Intersection	0.96															
Total Passenger Cars	5	354	145	0	170	70	130	0	85	352	4	0	31	165	22	0
Total Trucks/Buses	0	6	1	0	2	0	3	0	3	8	0	0	0	1	0	0
% Passenger Cars	100%	98%	99%		99%	100%	98%		97%	98%	100%		100%	99%	100%	
% Heavy Vehicles	0%	2%	1%		1%	0%	2%		3%	2%	0%		0%	1%	0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Passaic Avenue/Main Avenue
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	29	42	5		9	104	8		3	30	11		6	22	6	
7:15 AM	- 7:30 AM	32	43	3		8	99	10		1	34	6		9	28	17	
7:30 AM	- 7:45 AM	39	45	16		19	116	8		2	51	12		18	41	27	
7:45 AM	- 8:00 AM	46	66	15		11	127	9		3	64	19		12	54	30	
8:00 AM	- 8:15 AM	44	76	7		18	98	10		4	53	26		12	40	20	
8:15 AM	- 8:30 AM	45	77	18		15	108	14		3	53	17		14	29	22	
8:30 AM	- 8:45 AM	57	66	13		17	102	8		6	57	17		7	34	18	
8:45 AM	- 9:00 AM	43	60	14		12	97	10		4	56	21		10	50	20	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	1	2	1		1	1	1		0	2	0		4	0	2	
7:15 AM	- 7:30 AM	1	3	1		0	2	0		0	0	0		0	0	0	
7:30 AM	- 7:45 AM	1	4	0		1	0	1		1	5	0		2	4	2	
7:45 AM	- 8:00 AM	1	2	1		0	1	0		0	0	2		0	1	2	
8:00 AM	- 8:15 AM	0	3	0		0	1	0		0	3	1		1	0	2	
8:15 AM	- 8:30 AM	2	1	0		0	2	0		0	3	0		1	0	2	
8:30 AM	- 8:45 AM	0	3	0		1	1	1		0	6	1		0	2	1	
8:45 AM	- 9:00 AM	1	3	1		0	1	1		0	1	0		1	0	2	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	30	44	6	0	10	105	9	0	3	32	11	0	10	22	8	0	290	1468
7:15 AM	-	7:30 AM	33	46	4	0	8	101	10	0	1	34	6	0	9	28	17	0	297	1597
7:30 AM	-	7:45 AM	40	49	16	0	20	116	9	0	3	56	12	0	20	45	29	0	415	1726
7:45 AM	-	8:00 AM	47	68	16	0	11	128	9	0	3	64	21	0	12	55	32	0	466	1729
8:00 AM	-	8:15 AM	44	79	7	0	18	99	10	0	4	56	27	0	13	40	22	0	419	1671
8:15 AM	-	8:30 AM	47	78	18	0	15	110	14	0	3	56	17	0	15	29	24	0	426	1252
8:30 AM	-	8:45 AM	57	69	13	0	18	103	9	0	6	63	18	0	7	36	19	0	418	826
8:45 AM	-	9:00 AM	44	63	15	0	12	98	11	0	4	57	21	0	11	50	22	0	408	408

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	195	294	54	0	62	440	42	0	16	239	83	0	47	160	97	0
PHV by Approach	543				544				338				304			
PHF by Movement	0.86	0.93	0.75		0.86	0.86	0.75		0.67	0.93	0.77		0.78	0.73	0.76	
Adjusted PHF	0.86	0.93	0.81		0.86	0.86	0.81		0.80	0.93	0.81		0.81	0.81	0.81	
PHF by Intersection	0.93															
Total Passenger Cars	192	285	53	0	61	435	41	0	16	227	79	0	45	157	90	0
Total Trucks/Buses	3	9	1	0	1	5	1	0	0	12	4	0	2	3	7	0
% Passenger Cars	98%	97%	98%		98%	99%	98%		100%	95%	95%		96%	98%	93%	
% Heavy Vehicles	2%	3%	2%		2%	1%	2%		0%	5%	5%		4%	2%	7%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Kingsland Street and Passaic Avenue/Main Avenue
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	31	53	15		14	85	10		10	70	41		31	108	37	
4:15 PM	-	4:30 PM	34	58	20		9	79	6		8	57	25		33	95	32	
4:30 PM	-	4:45 PM	30	51	23		18	70	10		11	80	29		24	113	26	
4:45 PM	-	5:00 PM	36	76	27		14	103	4		15	85	31		28	113	20	
5:00 PM	-	5:15 PM	32	72	29		10	90	11		12	85	35		30	135	32	
5:15 PM	-	5:30 PM	41	72	34		9	101	18		17	80	43		41	119	25	
5:30 PM	-	5:45 PM	34	70	20		11	91	14		9	103	39		34	115	39	
5:45 PM	-	6:00 PM	45	85	17		8	97	12		10	75	39		44	118	21	
6:00 PM	-	6:15 PM	44	82	30		9	125	13		16	76	46		32	128	31	
6:15 PM	-	6:30 PM	47	76	23		19	108	12		21	81	36		35	152	32	
6:30 PM	-	6:45 PM	38	53	27		16	85	9		19	59	38		34	109	28	
6:45 PM	-	7:00 PM	38	55	29		12	92	9		17	96	32		33	129	29	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	1	2	0		0	1	0		0	1	0		1	2	1	
4:15 PM	-	4:30 PM	1	1	2		1	0	0		0	0	0		0	4	1	
4:30 PM	-	4:45 PM	0	1	0		0	1	1		0	1	1		1	0	0	
4:45 PM	-	5:00 PM	1	1	0		1	1	0		0	1	0		2	0	0	
5:00 PM	-	5:15 PM	1	1	0		0	0	0		0	2	0		0	0	1	
5:15 PM	-	5:30 PM	0	2	0		0	1	0		0	0	1		0	1	1	
5:30 PM	-	5:45 PM	0	0	1		0	0	0		0	2	0		0	1	1	
5:45 PM	-	6:00 PM	1	1	0		0	0	0		0	3	0		1	0	0	
6:00 PM	-	6:15 PM	1	1	0		0	0	0		0	1	0		0	2	2	
6:15 PM	-	6:30 PM	1	1	0		0	0	1		0	3	0		2	0	0	
6:30 PM	-	6:45 PM	0	0	0		0	0	0		0	3	1		1	2	3	
6:45 PM	-	7:00 PM	1	1	0		1	0	0		0	3	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	32	55	15	0	14	86	10	0	10	71	41	0	32	110	38	0	514	2030
4:15 PM	-	4:30 PM	35	59	22	0	10	79	6	0	8	57	25	0	33	99	33	0	466	2094
4:30 PM	-	4:45 PM	30	52	23	0	18	71	11	0	11	81	30	0	25	113	26	0	491	2234
4:45 PM	-	5:00 PM	37	77	27	0	15	104	4	0	15	86	31	0	30	113	20	0	559	2327
5:00 PM	-	5:15 PM	33	73	29	0	10	90	11	0	12	87	35	0	30	135	33	0	578	2345
5:15 PM	-	5:30 PM	41	74	34	0	9	102	18	0	17	80	44	0	41	120	26	0	606	2406
5:30 PM	-	5:45 PM	34	70	21	0	11	91	14	0	9	105	39	0	34	116	40	0	584	2450
5:45 PM	-	6:00 PM	46	86	17	0	8	97	12	0	10	78	39	0	45	118	21	0	577	2391
6:00 PM	-	6:15 PM	45	83	30	0	9	125	13	0	16	77	46	0	32	130	33	0	639	2391
6:15 PM	-	6:30 PM	48	77	23	0	19	108	13	0	21	84	36	0	37	152	32	0	650	1752
6:30 PM	-	6:45 PM	38	53	27	0	16	85	9	0	19	62	39	0	35	111	31	0	525	1102
6:45 PM	-	7:00 PM	39	56	29	0	13	92	9	0	17	99	32	0	33	129	29	0	577	577

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	173	316	91	0	47	421	52	0	56	344	160	0	148	516	126	0
PHV by Approach	580				520				560				790			
PHF by Movement	0.90	0.92	0.76		0.62	0.84	0.93		0.67	0.82	0.87		0.82	0.85	0.79	
Adjusted PHF	0.90	0.92	0.81		0.81	0.84	0.93		0.81	0.83	0.87		0.82	0.85	0.81	
PHF by Intersection	0.94															
Total Passenger Cars	170	313	90	0	47	421	51	0	56	335	160	0	145	513	123	0
Total Trucks/Buses	3	3	1	0	0	0	1	0	0	9	0	0	3	3	3	0
% Passenger Cars	98%	99%	99%		100%	100%	98%		100%	97%	100%		98%	99%	98%	
% Heavy Vehicles	2%	1%	1%		0%	0%	2%		0%	3%	0%		2%	1%	2%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Passaic Avenue and NJ3 West Ramp
Count Date Wednesday, September 25, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	78	66		22	0	20		22	78	0	
7:15 AM	- 7:30 AM	0	0	0		0	72	56		22	0	18		27	113	0	
7:30 AM	- 7:45 AM	0	0	0		0	110	52		37	0	24		30	142	0	
7:45 AM	- 8:00 AM	0	0	0		0	154	56		54	0	16		23	138	0	
8:00 AM	- 8:15 AM	0	0	0		0	137	45		31	0	25		30	121	0	
8:15 AM	- 8:30 AM	0	0	0		0	116	51		29	0	37		25	148	0	
8:30 AM	- 8:45 AM	0	0	0		0	114	57		52	0	29		23	137	0	
8:45 AM	- 9:00 AM	0	0	0		0	117	48		48	0	39		25	136	0	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	0	1		0	0	2		0	2	0	
7:15 AM	- 7:30 AM	0	0	0		0	4	1		3	0	1		1	5	0	
7:30 AM	- 7:45 AM	0	0	0		0	2	0		0	0	3		2	3	0	
7:45 AM	- 8:00 AM	0	0	0		0	4	1		1	0	0		0	3	0	
8:00 AM	- 8:15 AM	0	0	0		0	2	2		1	0	3		0	3	0	
8:15 AM	- 8:30 AM	0	0	0		0	5	0		1	0	5		0	3	0	
8:30 AM	- 8:45 AM	0	0	0		0	1	0		1	0	2		0	5	0	
8:45 AM	- 9:00 AM	0	0	0		0	2	1		1	0	3		0	2	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	0	0	0	0	0	78	67	0	22	0	22	0	22	80	0	0	291	1469
7:15 AM	-	7:30 AM	0	0	0	0	0	76	57	0	25	0	19	0	28	118	0	0	323	1578
7:30 AM	-	7:45 AM	0	0	0	0	0	112	52	0	37	0	27	0	32	145	0	0	405	1675
7:45 AM	-	8:00 AM	0	0	0	0	0	158	57	0	55	0	16	0	23	141	0	0	450	1691
8:00 AM	-	8:15 AM	0	0	0	0	0	139	47	0	32	0	28	0	30	124	0	0	400	1663
8:15 AM	-	8:30 AM	0	0	0	0	0	121	51	0	30	0	42	0	25	151	0	0	420	1263
8:30 AM	-	8:45 AM	0	0	0	0	0	115	57	0	53	0	31	0	23	142	0	0	421	843
8:45 AM	-	9:00 AM	0	0	0	0	0	119	49	0	49	0	42	0	25	138	0	0	422	422

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	533	212	0	170	0	117	0	101	558	0	0
PHV by Approach	0				745				287				659			
PHF by Movement						0.84	0.93		0.77		0.70		0.84	0.92		
Adjusted PHF						0.84	0.93		0.81		0.81		0.84	0.92		
PHF by Intersection	0.94															
Total Passenger Cars	0	0	0	0	0	521	209	0	166	0	107	0	101	544	0	0
Total Trucks/Buses	0	0	0	0	0	12	3	0	4	0	10	0	0	14	0	0
% Passenger Cars						98%	99%		98%		91%		100%	97%		
% Heavy Vehicles						2%	1%		2%		9%		0%	3%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Passaic Avenue and NJ3 West Ramp
Count Date Wednesday, September 25, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	120	45		35	0	44		22	179	0	
4:15 PM	-	4:30 PM	0	0	0		0	126	36		43	0	50		18	149	0	
4:30 PM	-	4:45 PM	0	0	0		0	130	51		47	0	30		17	193	0	
4:45 PM	-	5:00 PM	0	0	0		0	134	48		41	0	46		13	188	0	
5:00 PM	-	5:15 PM	0	0	0		0	159	50		53	0	44		23	272	0	
5:15 PM	-	5:30 PM	0	0	0		0	121	43		57	0	37		16	217	0	
5:30 PM	-	5:45 PM	0	0	0		0	144	44		40	0	43		19	180	0	
5:45 PM	-	6:00 PM	0	0	0		0	117	42		60	0	58		15	183	0	
6:00 PM	-	6:15 PM	0	0	0		0	136	55		54	0	35		27	195	0	
6:15 PM	-	6:30 PM	0	0	0		0	157	47		60	0	45		20	194	0	
6:30 PM	-	6:45 PM	0	0	0		0	131	38		54	0	39		28	169	0	
6:45 PM	-	7:00 PM	0	0	0		0	117	51		53	0	44		16	150	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	1	1		0	0	1		1	2	0	
4:15 PM	-	4:30 PM	0	0	0		0	3	0		1	0	3		2	6	0	
4:30 PM	-	4:45 PM	0	0	0		0	2	1		1	0	2		1	4	0	
4:45 PM	-	5:00 PM	0	0	0		0	1	0		0	0	2		0	2	0	
5:00 PM	-	5:15 PM	0	0	0		0	2	0		0	0	0		0	8	0	
5:15 PM	-	5:30 PM	0	0	0		0	0	0		1	0	3		0	3	0	
5:30 PM	-	5:45 PM	0	0	0		0	1	0		0	0	4		1	3	0	
5:45 PM	-	6:00 PM	0	0	0		0	1	0		0	0	2		0	1	0	
6:00 PM	-	6:15 PM	0	0	0		0	3	0		0	0	1		0	7	0	
6:15 PM	-	6:30 PM	0	0	0		0	0	0		0	0	0		0	1	0	
6:30 PM	-	6:45 PM	0	0	0		0	2	0		0	0	0		0	0	0	
6:45 PM	-	7:00 PM	0	0	0		0	0	1		0	0	1		0	2	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	0	0	0	0	0	121	46	0	35	0	45	0	23	181	0	0	451	1842
4:15 PM	-	4:30 PM	0	0	0	0	0	129	36	0	44	0	53	0	20	155	0	0	437	2002
4:30 PM	-	4:45 PM	0	0	0	0	0	132	52	0	48	0	32	0	18	197	0	0	479	2063
4:45 PM	-	5:00 PM	0	0	0	0	0	135	48	0	41	0	48	0	13	190	0	0	475	2063
5:00 PM	-	5:15 PM	0	0	0	0	0	161	50	0	53	0	44	0	23	280	0	0	611	2067
5:15 PM	-	5:30 PM	0	0	0	0	0	121	43	0	58	0	40	0	16	220	0	0	498	1969
5:30 PM	-	5:45 PM	0	0	0	0	0	145	44	0	40	0	47	0	20	183	0	0	479	1995
5:45 PM	-	6:00 PM	0	0	0	0	0	118	42	0	60	0	60	0	15	184	0	0	479	1977
6:00 PM	-	6:15 PM	0	0	0	0	0	139	55	0	54	0	36	0	27	202	0	0	513	1933
6:15 PM	-	6:30 PM	0	0	0	0	0	157	47	0	60	0	45	0	20	195	0	0	524	1420
6:30 PM	-	6:45 PM	0	0	0	0	0	133	38	0	54	0	39	0	28	169	0	0	461	896
6:45 PM	-	7:00 PM	0	0	0	0	0	117	52	0	53	0	45	0	16	152	0	0	435	435

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	559	188	0	214	0	188	0	82	764	0	0
PHV by Approach	0				747				402				846			
PHF by Movement						0.89	0.85		0.89		0.78		0.76	0.95		
Adjusted PHF						0.89	0.85		0.89		0.82		0.81	0.95		
PHF by Intersection	0.95															
Total Passenger Cars	0	0	0	0	0	554	188	0	214	0	181	0	81	752	0	0
Total Trucks/Buses	0	0	0	0	0	5	0	0	0	0	7	0	1	12	0	0
% Passenger Cars						99%	100%		100%		96%		99%	98%		
% Heavy Vehicles						1%	0%		0%		4%		1%	2%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Passaic Streeet and NJ 3 East Ramp/Ward Street
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	3	1	0		1	81	63		7	1	60		72	48	0	
7:15 AM	- 7:30 AM	1	1	3		0	88	59		5	0	32		66	64	0	
7:30 AM	- 7:45 AM	2	0	1		1	91	57		7	0	31		76	73	0	
7:45 AM	- 8:00 AM	3	0	3		2	124	76		10	0	44		84	78	0	
8:00 AM	- 8:15 AM	1	2	1		0	125	63		11	0	36		73	79	0	
8:15 AM	- 8:30 AM	1	1	1		1	101	61		10	0	48		83	77	0	
8:30 AM	- 8:45 AM	1	1	1		0	120	65		6	0	47		77	75	2	
8:45 AM	- 9:00 AM	3	1	0		1	103	56		10	0	48		69	93	2	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	1	0		1	0	1		2	4	0	
7:15 AM	- 7:30 AM	0	0	0		0	1	1		1	0	2		6	4	0	
7:30 AM	- 7:45 AM	0	0	0		0	2	2		1	0	2		2	4	0	
7:45 AM	- 8:00 AM	0	0	0		0	2	2		0	0	0		3	3	0	
8:00 AM	- 8:15 AM	0	0	0		0	2	1		4	0	2		3	2	0	
8:15 AM	- 8:30 AM	0	0	0		0	2	1		0	0	1		4	4	0	
8:30 AM	- 8:45 AM	0	1	0		1	0	2		1	0	2		3	3	0	
8:45 AM	- 9:00 AM	0	0	0		0	0	1		2	0	2		3	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	3	1	0	0	1	82	63	0	8	1	61	0	74	52	0	0	346	1466
7:15 AM	-	7:30 AM	1	1	3	0	0	89	60	0	6	0	34	0	72	68	0	0	334	1525
7:30 AM	-	7:45 AM	2	0	1	0	1	93	59	0	8	0	33	0	78	77	0	0	352	1587
7:45 AM	-	8:00 AM	3	0	3	0	2	126	78	0	10	0	44	0	87	81	0	0	434	1643
8:00 AM	-	8:15 AM	1	2	1	0	0	127	64	0	15	0	38	0	76	81	0	0	405	1603
8:15 AM	-	8:30 AM	1	1	1	0	1	103	62	0	10	0	49	0	87	81	0	0	396	1198
8:30 AM	-	8:45 AM	1	2	1	0	1	120	67	0	7	0	49	0	80	78	2	0	408	802
8:45 AM	-	9:00 AM	3	1	0	0	1	103	57	0	12	0	50	0	72	93	2	0	394	394

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	6	5	6	0	4	476	271	0	42	0	180	0	330	321	2	0
PHV by Approach	17				751				222				653			
PHF by Movement	0.50	0.63	0.50		0.50	0.94	0.87		0.70		0.92		0.95	0.99	0.25	
Adjusted PHF	0.80	0.80	0.80		0.80	0.94	0.87		0.81		0.92		0.95	0.98	0.80	
PHF by Intersection	0.95															
Total Passenger Cars	6	4	6	0	3	470	265	0	37	0	175	0	317	309	2	0
Total Trucks/Buses	0	1	0	0	1	6	6	0	5	0	5	0	13	12	0	0
% Passenger Cars	100%	80%	100%		75%	99%	98%		88%		97%		96%	96%	100%	
% Heavy Vehicles	0%	20%	0%		25%	1%	2%		12%		3%		4%	4%	0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Passaic Streeret and NJ 3 East Ramp/Ward Street
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	1	0	2		0	96	29		14	2	113		84	121	2	
4:15 PM	-	4:30 PM	0	0	1		2	93	21		11	0	83		86	132	2	
4:30 PM	-	4:45 PM	2	0	0		0	101	25		10	1	97		87	113	5	
4:45 PM	-	5:00 PM	2	0	1		0	85	29		11	0	71		73	133	1	
5:00 PM	-	5:15 PM	3	1	0		0	110	27		12	1	65		99	118	5	
5:15 PM	-	5:30 PM	1	1	0		2	97	21		11	2	69		86	122	1	
5:30 PM	-	5:45 PM	3	0	1		1	102	23		15	1	60		81	123	0	
5:45 PM	-	6:00 PM	2	2	0		3	94	31		12	3	78		67	121	4	
6:00 PM	-	6:15 PM	2	0	2		2	78	32		11	0	66		78	150	3	
6:15 PM	-	6:30 PM	4	0	1		0	108	34		14	1	88		75	140	2	
6:30 PM	-	6:45 PM	1	2	2		0	97	17		18	1	77		85	120	1	
6:45 PM	-	7:00 PM	1	1	1		1	80	31		9	0	73		74	136	3	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	3	2		0	0	0		5	4	0	
4:15 PM	-	4:30 PM	1	0	0		0	0	0		2	0	0		4	1	1	
4:30 PM	-	4:45 PM	0	0	0		0	2	2		0	0	0		2	2	0	
4:45 PM	-	5:00 PM	0	0	0		0	0	2		0	0	0		2	2	0	
5:00 PM	-	5:15 PM	0	0	0		0	0	0		0	0	0		0	2	0	
5:15 PM	-	5:30 PM	0	0	0		0	1	1		0	0	0		3	1	0	
5:30 PM	-	5:45 PM	0	0	0		0	3	1		0	0	3		3	0	0	
5:45 PM	-	6:00 PM	0	0	0		0	0	1		0	0	1		2	1	0	
6:00 PM	-	6:15 PM	0	0	0		0	0	0		0	0	1		3	3	0	
6:15 PM	-	6:30 PM	0	0	0		0	2	1		0	0	0		3	0	0	
6:30 PM	-	6:45 PM	0	0	0		0	3	0		0	0	0		2	1	0	
6:45 PM	-	7:00 PM	0	0	0		0	0	0		0	0	0		1	1	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	1	0	2	0	0	99	31	0	14	2	113	0	89	125	2	0	478	1779
4:15 PM	-	4:30 PM	1	0	1	0	2	93	21	0	13	0	83	0	90	133	3	0	440	1744
4:30 PM	-	4:45 PM	2	0	0	0	0	103	27	0	10	1	97	0	89	115	5	0	449	1723
4:45 PM	-	5:00 PM	2	0	1	0	0	85	31	0	11	0	71	0	75	135	1	0	412	1694
5:00 PM	-	5:15 PM	3	1	0	0	0	110	27	0	12	1	65	0	99	120	5	0	443	1704
5:15 PM	-	5:30 PM	1	1	0	0	2	98	22	0	11	2	69	0	89	123	1	0	419	1692
5:30 PM	-	5:45 PM	3	0	1	0	1	105	24	0	15	1	63	0	84	123	0	0	420	1746
5:45 PM	-	6:00 PM	2	2	0	0	3	94	32	0	12	3	79	0	69	122	4	0	422	1753
6:00 PM	-	6:15 PM	2	0	2	0	2	78	32	0	11	0	67	0	81	153	3	0	431	1743
6:15 PM	-	6:30 PM	4	0	1	0	0	110	35	0	14	1	88	0	78	140	2	0	473	1312
6:30 PM	-	6:45 PM	1	2	2	0	0	100	17	0	18	1	77	0	87	121	1	0	427	839
6:45 PM	-	7:00 PM	1	1	1	0	1	80	31	0	9	0	73	0	75	137	3	0	412	412

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	11	2	4	0	6	387	123	0	52	5	297	0	312	538	9	0
PHV by Approach	17				516				354				859			
PHF by Movement	0.69	0.25	0.50		0.50	0.88	0.88		0.87	0.42	0.84		0.93	0.88	0.56	
Adjusted PHF	0.80	0.80	0.80		0.80	0.88	0.88		0.87	0.80	0.84		0.93	0.88	0.80	
PHF by Intersection	0.92															
Total Passenger Cars	11	2	4	0	6	382	120	0	52	5	292	0	301	534	9	0
Total Trucks/Buses	0	0	0	0	0	5	3	0	0	0	5	0	11	4	0	0
% Passenger Cars	100%	100%	100%		100%	99%	98%		100%	100%	98%		96%	99%	100%	
% Heavy Vehicles	0%	0%	0%		0%	1%	2%		0%	0%	2%		4%	1%	0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location W Passaic Avenue and High Street
Count Date Wednesday, September 18, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	0	143	3		4	0	12		1	114	0		0	1	2	
7:15 AM	-	7:30 AM	0	153	2		9	0	13		6	157	0		0	0	1	
7:30 AM	-	7:45 AM	0	170	3		13	1	12		7	179	0		0	0	0	
7:45 AM	-	8:00 AM	2	178	8		14	0	6		2	200	1		2	2	0	
8:00 AM	-	8:15 AM	0	178	14		11	2	12		4	190	1		0	1	0	
8:15 AM	-	8:30 AM	0	156	10		20	8	26		3	180	1		0	0	0	
8:30 AM	-	8:45 AM	2	169	6		14	1	10		4	170	1		0	4	0	
8:45 AM	-	9:00 AM	2	190	12		10	2	10		9	146	0		1	1	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	-	7:15 AM	0	5	0		1	0	0		0	2	0		0	0	0	
7:15 AM	-	7:30 AM	0	2	0		0	0	1		0	6	0		0	0	0	
7:30 AM	-	7:45 AM	0	2	0		0	0	1		0	6	0		0	0	0	
7:45 AM	-	8:00 AM	0	1	0		0	0	0		0	10	0		0	0	0	
8:00 AM	-	8:15 AM	0	5	0		0	0	1		0	7	0		0	0	0	
8:15 AM	-	8:30 AM	0	1	0		0	0	1		0	5	0		0	0	0	
8:30 AM	-	8:45 AM	0	6	0		0	0	0		0	6	0		0	0	0	
8:45 AM	-	9:00 AM	0	2	0		0	0	0		0	6	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	0	148	3	0	5	0	12	0	1	116	0	0	0	1	2	0	288	1458
7:15 AM	-	7:30 AM	0	155	2	0	9	0	14	0	6	163	0	0	0	0	1	0	350	1596
7:30 AM	-	7:45 AM	0	172	3	0	13	1	13	0	7	185	0	0	0	0	0	0	394	1657
7:45 AM	-	8:00 AM	2	179	8	0	14	0	6	0	2	210	1	0	2	2	0	0	426	1656
8:00 AM	-	8:15 AM	0	183	14	0	11	2	13	0	4	197	1	0	0	1	0	0	426	1621
8:15 AM	-	8:30 AM	0	157	10	0	20	8	27	0	3	185	1	0	0	0	0	0	411	1195
8:30 AM	-	8:45 AM	2	175	6	0	14	1	10	0	4	176	1	0	0	4	0	0	393	784
8:45 AM	-	9:00 AM	2	192	12	0	10	2	10	0	9	152	0	0	1	1	0	0	391	391

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	4	694	38	0	59	11	56	0	13	768	4	0	2	7	0	0
PHV by Approach	736				126				785				9			
PHF by Movement	0.50	0.95	0.68		0.74	0.34	0.52		0.81	0.91	1.00		0.25	0.44		
Adjusted PHF	0.80	0.95	0.81		0.81	0.80	0.81		0.81	0.91	0.98		0.80	0.80		
PHF by Intersection	0.97															
Total Passenger Cars	4	681	38	0	59	11	54	0	13	740	4	0	2	7	0	0
Total Trucks/Buses	0	13	0	0	0	0	2	0	0	28	0	0	0	0	0	0
% Passenger Cars	100%	98%	100%		100%	100%	96%		100%	96%	100%		100%	100%		
% Heavy Vehicles	0%	2%	0%		0%	0%	4%		0%	4%	0%		0%	0%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location W Passaic Avenue and High Street
Count Date Wednesday, September 18, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	3	154	9		7	1	11		11	224	4		0	0	2	
4:15 PM	-	4:30 PM	0	140	15		8	1	12		11	197	0		1	0	1	
4:30 PM	-	4:45 PM	0	147	12		9	0	10		7	207	1		0	1	1	
4:45 PM	-	5:00 PM	0	145	20		8	1	12		8	203	1		0	1	0	
5:00 PM	-	5:15 PM	4	154	21		6	3	6		8	215	0		0	0	1	
5:15 PM	-	5:30 PM	5	138	13		17	2	9		6	212	1		0	0	0	
5:30 PM	-	5:45 PM	0	141	15		9	0	14		15	212	3		1	0	3	
5:45 PM	-	6:00 PM	2	169	13		9	3	6		6	198	1		0	0	0	
6:00 PM	-	6:15 PM	2	160	10		8	1	6		8	223	1		0	1	3	
6:15 PM	-	6:30 PM	1	189	11		8	1	9		5	170	1		0	0	1	
6:30 PM	-	6:45 PM	3	142	19		14	1	9		13	196	1		0	0	1	
6:45 PM	-	7:00 PM	1	156	22		11	3	10		10	184	0		0	0	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	8	0		0	0	0		0	4	0		0	0	0	
4:15 PM	-	4:30 PM	0	4	0		0	0	0		0	3	0		0	0	0	
4:30 PM	-	4:45 PM	0	3	0		0	0	0		0	1	0		0	0	0	
4:45 PM	-	5:00 PM	0	5	0		0	0	0		0	4	0		0	0	0	
5:00 PM	-	5:15 PM	0	9	0		0	0	0		0	1	0		0	0	0	
5:15 PM	-	5:30 PM	0	4	0		0	0	0		0	2	0		0	0	0	
5:30 PM	-	5:45 PM	0	1	0		0	0	0		0	1	0		0	0	0	
5:45 PM	-	6:00 PM	0	1	0		0	0	0		0	4	0		0	0	0	
6:00 PM	-	6:15 PM	0	3	1		0	0	0		0	4	0		0	0	0	
6:15 PM	-	6:30 PM	0	5	1		0	0	0		0	3	0		0	0	0	
6:30 PM	-	6:45 PM	0	3	0		0	0	0		0	1	0		0	0	0	
6:45 PM	-	7:00 PM	0	0	1		0	0	0		0	3	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	3	162	9	0	7	1	11	0	11	228	4	0	0	2	0	438	1638	
4:15 PM	-	4:30 PM	0	144	15	0	8	1	12	0	11	200	0	0	1	0	1	393	1628	
4:30 PM	-	4:45 PM	0	150	12	0	9	0	10	0	7	208	1	0	0	1	1	399	1644	
4:45 PM	-	5:00 PM	0	150	20	0	8	1	12	0	8	207	1	0	0	1	0	408	1660	
5:00 PM	-	5:15 PM	4	163	21	0	6	3	6	0	8	216	0	0	0	0	1	428	1664	
5:15 PM	-	5:30 PM	5	142	13	0	17	2	9	0	6	214	1	0	0	0	0	409	1667	
5:30 PM	-	5:45 PM	0	142	15	0	9	0	14	0	15	213	3	0	1	0	3	415	1663	
5:45 PM	-	6:00 PM	2	170	13	0	9	3	6	0	6	202	1	0	0	0	0	412	1651	
6:00 PM	-	6:15 PM	2	163	11	0	8	1	6	0	8	227	1	0	0	1	3	431	1640	
6:15 PM	-	6:30 PM	1	194	12	0	8	1	9	0	5	173	1	0	0	0	1	405	1209	
6:30 PM	-	6:45 PM	3	145	19	0	14	1	9	0	13	197	1	0	0	0	1	403	804	
6:45 PM	-	7:00 PM	1	156	23	0	11	3	10	0	10	187	0	0	0	0	0	401	401	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	5	669	51	0	34	5	35	0	34	815	6	0	1	1	7	0
PHV by Approach	725				74				855				9			
PHF by Movement	0.63	0.86	0.85		0.94	0.42	0.63		0.57	0.90	0.50		0.25	0.25	0.58	
Adjusted PHF	0.80	0.86	0.85		0.94	0.80	0.81		0.81	0.90	0.80		0.80	0.80	0.80	
PHF by Intersection	0.96															
Total Passenger Cars	5	659	49	0	34	5	35	0	34	803	6	0	1	1	7	0
Total Trucks/Buses	0	10	2	0	0	0	0	0	0	12	0	0	0	0	0	0
% Passenger Cars	100%	99%	96%		100%	100%	100%		100%	99%	100%		100%	100%	100%	
% Heavy Vehicles	0%	1%	4%		0%	0%	0%		0%	1%	0%		0%	0%	0%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Main Avenue and NJ 3 West Ramp
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

0

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	56	35		25	0	22		22	40	0	
7:15 AM	- 7:30 AM	0	0	0		0	49	37		43	0	34		19	56	0	
7:30 AM	- 7:45 AM	0	0	0		0	85	42		57	0	64		16	76	0	
7:45 AM	- 8:00 AM	0	0	0		0	76	35		63	0	71		20	71	0	
8:00 AM	- 8:15 AM	0	0	0		0	75	37		55	0	71		26	64	0	
8:15 AM	- 8:30 AM	0	0	0		0	102	46		48	0	60		18	80	0	
8:30 AM	- 8:45 AM	0	0	0		0	75	52		48	0	37		16	66	0	
8:45 AM	- 9:00 AM	0	0	0		0	93	42		62	0	31		15	84	0	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	2	1		1	0	2		2	4	0	
7:15 AM	- 7:30 AM	0	0	0		0	3	1		1	0	3		1	4	0	
7:30 AM	- 7:45 AM	0	0	0		0	2	0		5	0	3		1	4	0	
7:45 AM	- 8:00 AM	0	0	0		0	4	0		2	0	2		0	2	0	
8:00 AM	- 8:15 AM	0	0	0		0	3	1		1	0	1		0	4	0	
8:15 AM	- 8:30 AM	0	0	0		0	3	0		5	0	2		0	5	0	
8:30 AM	- 8:45 AM	0	0	0		0	0	2		3	0	3		0	5	0	
8:45 AM	- 9:00 AM	0	0	0		0	3	1		2	0	3		0	1	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	0	0	0	0	0	58	36	0	26	0	24	0	24	44	0	0	212	1164
7:15 AM	-	7:30 AM	0	0	0	0	0	52	38	0	44	0	37	0	20	60	0	0	251	1290
7:30 AM	-	7:45 AM	0	0	0	0	0	87	42	0	62	0	67	0	17	80	0	0	355	1408
7:45 AM	-	8:00 AM	0	0	0	0	0	80	35	0	65	0	73	0	20	73	0	0	346	1360
8:00 AM	-	8:15 AM	0	0	0	0	0	78	38	0	56	0	72	0	26	68	0	0	338	1351
8:15 AM	-	8:30 AM	0	0	0	0	0	105	46	0	53	0	62	0	18	85	0	0	369	1013
8:30 AM	-	8:45 AM	0	0	0	0	0	75	54	0	51	0	40	0	16	71	0	0	307	644
8:45 AM	-	9:00 AM	0	0	0	0	0	96	43	0	64	0	34	0	15	85	0	0	337	337

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	338	173	0	225	0	247	0	80	297	0	0
PHV by Approach	0				511				472				377			
PHF by Movement						0.80	0.80		0.87		0.85		0.77	0.87		
Adjusted PHF						0.83	0.81		0.87		0.85		0.81	0.87		
PHF by Intersection	0.92															
Total Passenger Cars	0	0	0	0	0	328	170	0	214	0	239	0	80	281	0	0
Total Trucks/Buses	0	0	0	0	0	10	3	0	11	0	8	0	0	16	0	0
% Passenger Cars						97%	98%		95%		97%		100%	95%		
% Heavy Vehicles						3%	2%		5%		3%		0%	5%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Main Avenue and NJ 3 West Ramp
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	158	41		113	0	30		27	131	0	
4:15 PM	-	4:30 PM	0	0	0		0	140	28		121	0	43		15	132	0	
4:30 PM	-	4:45 PM	0	0	0		0	119	49		117	0	40		17	146	0	
4:45 PM	-	5:00 PM	0	0	0		0	137	43		140	0	43		18	144	0	
5:00 PM	-	5:15 PM	0	0	0		0	158	44		123	0	46		17	140	0	
5:15 PM	-	5:30 PM	0	0	0		0	142	47		131	0	45		16	138	0	
5:30 PM	-	5:45 PM	0	0	0		0	119	49		137	0	37		22	131	0	
5:45 PM	-	6:00 PM	0	0	0		0	155	35		131	0	48		16	146	0	
6:00 PM	-	6:15 PM	0	0	0		0	168	44		122	0	45		11	149	0	
6:15 PM	-	6:30 PM	0	0	0		0	181	41		115	0	40		19	153	0	
6:30 PM	-	6:45 PM	0	0	0		0	142	34		107	0	40		22	146	0	
6:45 PM	-	7:00 PM	0	0	0		0	119	29		102	0	33		20	129	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	2	1		3	0	2		2	5	0	
4:15 PM	-	4:30 PM	0	0	0		0	3	0		4	0	1		0	2	0	
4:30 PM	-	4:45 PM	0	0	0		0	0	0		2	0	1		1	2	0	
4:45 PM	-	5:00 PM	0	0	0		0	1	0		1	0	0		0	2	0	
5:00 PM	-	5:15 PM	0	0	0		0	2	0		2	0	2		1	2	0	
5:15 PM	-	5:30 PM	0	0	0		0	1	0		0	0	0		0	5	0	
5:30 PM	-	5:45 PM	0	0	0		0	1	0		3	0	0		0	0	0	
5:45 PM	-	6:00 PM	0	0	0		0	3	1		1	0	2		1	2	0	
6:00 PM	-	6:15 PM	0	0	0		0	3	0		1	0	2		0	2	0	
6:15 PM	-	6:30 PM	0	0	0		0	2	1		0	0	3		0	5	0	
6:30 PM	-	6:45 PM	0	0	0		0	0	0		0	0	0		1	2	0	
6:45 PM	-	7:00 PM	0	0	0		0	0	0		1	0	1		0	1	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	0	0	0	0	0	160	42	0	116	0	32	0	29	136	0	0	515	2027
4:15 PM	-	4:30 PM	0	0	0	0	0	143	28	0	125	0	44	0	15	134	0	0	489	2049
4:30 PM	-	4:45 PM	0	0	0	0	0	119	49	0	119	0	41	0	18	148	0	0	494	2085
4:45 PM	-	5:00 PM	0	0	0	0	0	138	43	0	141	0	43	0	18	146	0	0	529	2090
5:00 PM	-	5:15 PM	0	0	0	0	0	160	44	0	125	0	48	0	18	142	0	0	537	2102
5:15 PM	-	5:30 PM	0	0	0	0	0	143	47	0	131	0	45	0	16	143	0	0	525	2112
5:30 PM	-	5:45 PM	0	0	0	0	0	120	49	0	140	0	37	0	22	131	0	0	499	2147
5:45 PM	-	6:00 PM	0	0	0	0	0	158	36	0	132	0	50	0	17	148	0	0	541	2142
6:00 PM	-	6:15 PM	0	0	0	0	0	171	44	0	123	0	47	0	11	151	0	0	547	2036
6:15 PM	-	6:30 PM	0	0	0	0	0	183	42	0	115	0	43	0	19	158	0	0	560	1489
6:30 PM	-	6:45 PM	0	0	0	0	0	142	34	0	107	0	40	0	23	148	0	0	494	929
6:45 PM	-	7:00 PM	0	0	0	0	0	119	29	0	103	0	34	0	20	130	0	0	435	435

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	632	171	0	510	0	177	0	69	588	0	0
PHV by Approach	0				803				687				657			
PHF by Movement						0.86	0.87		0.91		0.89		0.78	0.93		
Adjusted PHF						0.86	0.87		0.91		0.89		0.81	0.93		
PHF by Intersection	0.96															
Total Passenger Cars	0	0	0	0	0	623	169	0	505	0	170	0	68	579	0	0
Total Trucks/Buses	0	0	0	0	0	9	2	0	5	0	7	0	1	9	0	0
% Passenger Cars						99%	99%		99%		96%		99%	98%		
% Heavy Vehicles						1%	1%		1%		4%		1%	2%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Main Avenue and NJ 3 East Ramp
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

0

Turning Movement Count Summary

Time Period		Passenger Cars															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	69	81		7	0	25		31	35	0	
7:15 AM	- 7:30 AM	0	0	0		0	57	96		10	0	25		48	49	0	
7:30 AM	- 7:45 AM	0	0	0		0	87	108		18	0	42		54	76	0	
7:45 AM	- 8:00 AM	0	0	0		0	83	120		22	0	27		44	88	0	
8:00 AM	- 8:15 AM	0	0	0		0	88	83		13	0	24		44	78	0	
8:15 AM	- 8:30 AM	0	0	0		0	111	107		14	0	35		55	71	0	
8:30 AM	- 8:45 AM	0	0	0		0	104	86		12	0	28		51	60	0	
8:45 AM	- 9:00 AM	0	0	0		0	87	64		23	0	44		42	102	0	

Time Period		Trucks/Buses															
		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	0	0	0		0	3	0		2	0	0		1	3	0	
7:15 AM	- 7:30 AM	0	0	0		0	6	2		0	0	0		2	3	0	
7:30 AM	- 7:45 AM	0	0	0		0	2	0		1	0	1		4	5	0	
7:45 AM	- 8:00 AM	0	0	0		0	4	2		3	0	3		1	3	0	
8:00 AM	- 8:15 AM	0	0	0		0	3	1		0	0	2		1	3	0	
8:15 AM	- 8:30 AM	0	0	0		0	2	3		0	0	0		3	9	0	
8:30 AM	- 8:45 AM	0	0	0		0	2	0		1	0	0		3	4	0	
8:45 AM	- 9:00 AM	0	0	0		0	2	1		1	0	2		1	3	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	0	0	0	0	0	72	81	0	9	0	25	0	32	38	0	0	257	1353
7:15 AM	-	7:30 AM	0	0	0	0	0	63	98	0	10	0	25	0	50	52	0	0	298	1436
7:30 AM	-	7:45 AM	0	0	0	0	0	89	108	0	19	0	43	0	58	81	0	0	398	1548
7:45 AM	-	8:00 AM	0	0	0	0	0	87	122	0	25	0	30	0	45	91	0	0	400	1501
8:00 AM	-	8:15 AM	0	0	0	0	0	91	84	0	13	0	26	0	45	81	0	0	340	1473
8:15 AM	-	8:30 AM	0	0	0	0	0	113	110	0	14	0	35	0	58	80	0	0	410	1133
8:30 AM	-	8:45 AM	0	0	0	0	0	106	86	0	13	0	28	0	54	64	0	0	351	723
8:45 AM	-	9:00 AM	0	0	0	0	0	89	65	0	24	0	46	0	43	105	0	0	372	372

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	397	402	0	65	0	119	0	202	316	0	0
PHV by Approach	0				799				184				518			
PHF by Movement						0.88	0.82		0.65		0.85		0.87	0.87		
Adjusted PHF						0.88	0.83		0.81		0.85		0.87	0.87		
PHF by Intersection	0.92															
Total Passenger Cars	0	0	0	0	0	386	396	0	61	0	114	0	194	297	0	0
Total Trucks/Buses	0	0	0	0	0	11	6	0	4	0	5	0	8	19	0	0
% Passenger Cars						97%	99%		94%		96%		96%	94%		
% Heavy Vehicles						3%	1%		6%		4%		4%	6%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Main Avenue and NJ 3 East Ramp
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	141	48		34	0	57		51	194	0	
4:15 PM	-	4:30 PM	0	0	0		0	100	44		31	0	64		61	187	0	
4:30 PM	-	4:45 PM	0	0	0		0	118	53		35	0	50		59	203	0	
4:45 PM	-	5:00 PM	0	0	0		0	125	50		35	0	56		78	211	0	
5:00 PM	-	5:15 PM	0	0	0		0	143	47		31	0	50		64	199	0	
5:15 PM	-	5:30 PM	0	0	0		0	136	51		15	0	52		62	208	0	
5:30 PM	-	5:45 PM	0	0	0		0	126	50		37	0	40		58	205	0	
5:45 PM	-	6:00 PM	0	0	0		0	138	57		36	0	52		55	227	0	
6:00 PM	-	6:15 PM	0	0	0		0	160	44		25	0	51		60	205	0	
6:15 PM	-	6:30 PM	0	0	0		0	158	45		50	0	66		52	218	0	
6:30 PM	-	6:45 PM	0	0	0		0	108	36		18	0	64		49	201	0	
6:45 PM	-	7:00 PM	0	0	0		0	105	22		27	0	44		40	188	0	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	0	0	0		0	3	1		0	0	1		3	3	0	
4:15 PM	-	4:30 PM	0	0	0		0	3	2		0	0	0		2	5	0	
4:30 PM	-	4:45 PM	0	0	0		0	0	1		0	0	1		3	1	0	
4:45 PM	-	5:00 PM	0	0	0		0	0	1		0	0	1		1	2	0	
5:00 PM	-	5:15 PM	0	0	0		0	2	1		0	0	0		1	2	0	
5:15 PM	-	5:30 PM	0	0	0		0	1	2		0	0	0		3	4	0	
5:30 PM	-	5:45 PM	0	0	0		0	1	0		0	0	2		0	3	0	
5:45 PM	-	6:00 PM	0	0	0		0	1	0		0	0	4		0	3	0	
6:00 PM	-	6:15 PM	0	0	0		0	3	1		0	0	0		0	4	0	
6:15 PM	-	6:30 PM	0	0	0		0	1	0		0	0	2		1	2	0	
6:30 PM	-	6:45 PM	0	0	0		0	0	0		3	0	0		0	4	0	
6:45 PM	-	7:00 PM	0	0	0		0	0	1		0	0	0		0	1	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	0	0	0	0	0	144	49	0	34	0	58	0	54	197	0	0	536	2119
4:15 PM	-	4:30 PM	0	0	0	0	0	103	46	0	31	0	64	0	63	192	0	0	499	2123
4:30 PM	-	4:45 PM	0	0	0	0	0	118	54	0	35	0	51	0	62	204	0	0	524	2158
4:45 PM	-	5:00 PM	0	0	0	0	0	125	51	0	35	0	57	0	79	213	0	0	560	2156
5:00 PM	-	5:15 PM	0	0	0	0	0	145	48	0	31	0	50	0	65	201	0	0	540	2169
5:15 PM	-	5:30 PM	0	0	0	0	0	137	53	0	15	0	52	0	65	212	0	0	534	2182
5:30 PM	-	5:45 PM	0	0	0	0	0	127	50	0	37	0	42	0	58	208	0	0	522	2243
5:45 PM	-	6:00 PM	0	0	0	0	0	139	57	0	36	0	56	0	55	230	0	0	573	2204
6:00 PM	-	6:15 PM	0	0	0	0	0	163	45	0	25	0	51	0	60	209	0	0	553	2059
6:15 PM	-	6:30 PM	0	0	0	0	0	159	45	0	50	0	68	0	53	220	0	0	595	1506
6:30 PM	-	6:45 PM	0	0	0	0	0	108	36	0	21	0	64	0	49	205	0	0	483	911
6:45 PM	-	7:00 PM	0	0	0	0	0	105	23	0	27	0	44	0	40	189	0	0	428	428

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	0	0	0	0	0	588	197	0	148	0	217	0	226	867	0	0
PHV by Approach	0				785				365				1093			
PHF by Movement						0.90	0.86		0.74		0.80		0.94	0.94		
Adjusted PHF						0.90	0.86		0.81		0.82		0.94	0.94		
PHF by Intersection	0.94															
Total Passenger Cars	0	0	0	0	0	582	196	0	148	0	209	0	225	855	0	0
Total Trucks/Buses	0	0	0	0	0	6	1	0	0	0	8	0	1	12	0	0
% Passenger Cars						99%	99%		100%		96%		100%	99%		
% Heavy Vehicles						1%	1%		0%		4%		0%	1%		

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Ward Avenue and Kensington Avenue/NJ 3 Ramp
Count Date Tuesday, September 17, 2019
Time Period Weekday AM
Peak Hour 7:45 AM

0

Turning Movement Count Summary

		Passenger Cars															
Time Period		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	127	8	2		1	0	1		0	17	16		19	0	49	
7:15 AM	- 7:30 AM	120	4	0		2	1	0		0	9	5		12	0	27	
7:30 AM	- 7:45 AM	125	6	1		3	1	0		0	5	10		17	1	30	
7:45 AM	- 8:00 AM	152	6	0		1	0	0		0	19	10		11	0	33	
8:00 AM	- 8:15 AM	131	6	1		2	0	0		0	13	10		16	0	34	
8:15 AM	- 8:30 AM	137	7	0		2	1	0		0	13	17		5	1	42	
8:30 AM	- 8:45 AM	143	2	0		1	0	0		0	14	7		24	0	40	
8:45 AM	- 9:00 AM	116	6	2		4	0	0		0	13	11		26	0	40	

		Trucks/Buses															
Time Period		Eastbound				Northbound				Westbound				Southbound			
		Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
7:00 AM	- 7:15 AM	2	0	0		0	0	0		0	0	0		0	0	2	
7:15 AM	- 7:30 AM	6	0	0		0	0	0		0	0	0		1	0	3	
7:30 AM	- 7:45 AM	5	0	0		0	0	0		0	1	0		0	0	2	
7:45 AM	- 8:00 AM	4	0	0		0	0	0		0	0	0		0	0	0	
8:00 AM	- 8:15 AM	3	2	0		0	0	0		0	1	0		1	0	5	
8:15 AM	- 8:30 AM	4	1	0		0	0	0		0	0	0		0	0	1	
8:30 AM	- 8:45 AM	5	0	1		0	0	0		0	0	0		0	0	3	
8:45 AM	- 9:00 AM	4	0	0		0	0	1		0	2	0		0	0	2	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
7:00 AM	-	7:15 AM	129	8	2	0	1	0	1	0	0	17	16	0	19	0	51	0	244	877
7:15 AM	-	7:30 AM	126	4	0	0	2	1	0	0	0	9	5	0	13	0	30	0	190	858
7:30 AM	-	7:45 AM	130	6	1	0	3	1	0	0	0	6	10	0	17	1	32	0	207	899
7:45 AM	-	8:00 AM	156	6	0	0	1	0	0	0	0	19	10	0	11	0	33	0	236	932
8:00 AM	-	8:15 AM	134	8	1	0	2	0	0	0	0	14	10	0	17	0	39	0	225	923
8:15 AM	-	8:30 AM	141	8	0	0	2	1	0	0	0	13	17	0	5	1	43	0	231	698
8:30 AM	-	8:45 AM	148	2	1	0	1	0	0	0	0	14	7	0	24	0	43	0	240	467
8:45 AM	-	9:00 AM	120	6	2	0	4	0	1	0	0	15	11	0	26	0	42	0	227	227

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	579	24	2	0	6	1	0	0	0	60	44	0	57	1	158	0
PHV by Approach	605				7				104				216			
PHF by Movement	0.93	0.75	0.50		0.75	0.25				0.79	0.65		0.59	0.25	0.92	
Adjusted PHF	0.93	0.80	0.80		0.80	0.80				0.81	0.81		0.81	0.80	0.92	
PHF by Intersection	0.97															
Total Passenger Cars	563	21	1	0	6	1	0	0	0	59	44	0	56	1	149	0
Total Trucks/Buses	16	3	1	0	0	0	0	0	0	1	0	0	1	0	9	0
% Passenger Cars	97%	88%	50%		100%	100%				98%	100%		98%	100%	94%	
% Heavy Vehicles	3%	13%	50%		0%	0%				2%	0%		2%	0%	6%	

Project Nutley Transportation Planning and Engineering for HLRON 3 Redevelopment
Location Ward Avenue and Kensington Avenue/NJ 3 Ramp
Count Date Tuesday, September 17, 2019
Time Period Weekday PM
Peak Hour 5:30 PM

Turning Movement Count Summary

Time Period			Passenger Cars															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	98	11	2		0	0	0		0	26	6		51	0	102	
4:15 PM	-	4:30 PM	96	13	0		1	0	0		0	11	9		45	1	83	
4:30 PM	-	4:45 PM	94	13	1		0	0	0		0	22	6		41	1	87	
4:45 PM	-	5:00 PM	88	14	1		1	1	0		0	13	6		43	2	68	
5:00 PM	-	5:15 PM	116	10	1		2	1	0		0	8	9		32	1	69	
5:15 PM	-	5:30 PM	95	12	3		0	1	0		0	15	6		28	1	69	
5:30 PM	-	5:45 PM	88	13	2		3	0	0		0	8	6		26	0	64	
5:45 PM	-	6:00 PM	82	15	0		0	0	0		0	12	5		41	0	79	
6:00 PM	-	6:15 PM	96	12	1		1	0	0		1	11	8		30	0	65	
6:15 PM	-	6:30 PM	93	15	1		0	0	0		0	12	10		38	1	90	
6:30 PM	-	6:45 PM	91	10	0		2	0	0		1	11	8		40	0	83	
6:45 PM	-	7:00 PM	93	12	3		2	1	0		0	10	4		34	0	69	

Time Period			Trucks/Buses															
			Eastbound				Northbound				Westbound				Southbound			
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
4:00 PM	-	4:15 PM	7	0	0		0	0	0		0	0	0		0	0	0	
4:15 PM	-	4:30 PM	4	0	0		0	0	0		0	0	0		0	0	2	
4:30 PM	-	4:45 PM	3	1	0		0	0	0		0	0	0		0	0	0	
4:45 PM	-	5:00 PM	4	0	0		0	0	0		0	0	0		0	0	0	
5:00 PM	-	5:15 PM	0	0	0		0	0	0		0	0	0		0	0	0	
5:15 PM	-	5:30 PM	4	0	0		0	0	0		0	0	0		1	0	0	
5:30 PM	-	5:45 PM	4	0	0		0	0	0		0	0	0		0	0	3	
5:45 PM	-	6:00 PM	3	0	0		0	0	0		0	0	0		0	0	1	
6:00 PM	-	6:15 PM	3	0	0		0	0	0		0	0	0		0	0	1	
6:15 PM	-	6:30 PM	3	1	0		0	0	0		0	0	0		0	0	0	
6:30 PM	-	6:45 PM	2	0	0		0	0	0		0	0	0		0	0	0	
6:45 PM	-	7:00 PM	1	0	0		0	0	0		0	0	0		0	0	0	

Time Period			Total																15-Min Volume	Hourly Volume
			Eastbound				Northbound				Westbound				Southbound					
			Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn		
4:00 PM	-	4:15 PM	105	11	2	0	0	0	0	0	26	6	0	51	0	102	0	303	1078	
4:15 PM	-	4:30 PM	100	13	0	0	1	0	0	0	11	9	0	45	1	85	0	265	1024	
4:30 PM	-	4:45 PM	97	14	1	0	0	0	0	0	22	6	0	41	1	87	0	269	994	
4:45 PM	-	5:00 PM	92	14	1	0	1	1	0	0	13	6	0	43	2	68	0	241	942	
5:00 PM	-	5:15 PM	116	10	1	0	2	1	0	0	8	9	0	32	1	69	0	249	939	
5:15 PM	-	5:30 PM	99	12	3	0	0	1	0	0	15	6	0	29	1	69	0	235	919	
5:30 PM	-	5:45 PM	92	13	2	0	3	0	0	0	8	6	0	26	0	67	0	217	948	
5:45 PM	-	6:00 PM	85	15	0	0	0	0	0	0	12	5	0	41	0	80	0	238	979	
6:00 PM	-	6:15 PM	99	12	1	0	1	0	0	0	11	8	0	30	0	66	0	229	970	
6:15 PM	-	6:30 PM	96	16	1	0	0	0	0	0	12	10	0	38	1	90	0	264	741	
6:30 PM	-	6:45 PM	93	10	0	0	2	0	0	0	11	8	0	40	0	83	0	248	477	
6:45 PM	-	7:00 PM	94	12	3	0	2	1	0	0	10	4	0	34	0	69	0	229	229	

Summary Calculations

	Eastbound				Northbound				Westbound				Southbound			
	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn
PHV	372	56	4	0	4	0	0	0	1	43	29	0	135	1	303	0
PHV by Approach	432				4				73				439			
PHF by Movement	0.94	0.88	0.50		0.33				0.25	0.90	0.73		0.82	0.25	0.84	
Adjusted PHF	0.94	0.88	0.80		0.80				0.80	0.90	0.81		0.82	0.80	0.84	
PHF by Intersection	0.90															
Total Passenger Cars	359	55	4	0	4	0	0	0	1	43	29	0	135	1	298	0
Total Trucks/Buses	13	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0
% Passenger Cars	97%	98%	100%		100%				100%	100%	100%		100%	100%	98%	
% Heavy Vehicles	3%	2%	0%		0%				0%	0%	0%		0%	0%	2%	

U.S. Census Bureau Data

WORKPLACE**Workers 16 and Over**

	<i>Clifton City, New Jersey</i>	<i>Nutley, New Jersey</i>	<i>Total</i>
Means of Transportation 18			
Total, means of transportation	34,415	5,325	39,740
Car, truck, or van -- Drove alone	25,180	3,745	28,925
Car, truck, or van -- In a 2-person carpool	2970	435	3405
Car, truck, or van -- In a 3-person carpool	475	0	475
Car, truck, or van -- In a 4-person carpool	330	10	340
Car, truck, or van -- In a 5-or-6-person carpool	140	35	175
Car, truck, or van -- In a 7-or-more-person carpool	25	0	25
Bus or trolley bus	2345	185	2530
Streetcar or trolley car	0	0	0
Subway or elevated	135	40	175
Railroad	100	0	100
Ferryboat	0	0	0
Bicycle	65	0	65
Walked	1040	280	1320
Taxicab	35	25	60
Motorcycle	65	0	65
Other method	435	44	479
Worked at home	1075	535	1610
Total	34,415	5,334	39,749

Reverse Journey to Work

Mode	Clifton City, New Jersey		Nutley, New Jersey		Total	
	Workers	%	Workers	%	Workers	%
Auto	29,185	84.8%	4,225	79.2%	33,410	84.1%
Taxi	35	0.1%	25	0.5%	60	0.2%
Subway	235	0.7%	40	0.7%	275	0.7%
Bus	2,345	6.8%	185	3.5%	2,530	6.4%
Walk/Other	2,615	7.6%	859	16.1%	3,474	8.7%
Total	34,415	100.0%	5,334	100.0%	39,749	100.0%

Vehicle Occupancy

	Clifton City, New Jersey		Nutley, New Jersey		Total	
	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles
Alone	25,180	25180	3,745	3745	28,925	28925
2	2,970	1485	435	218	3,405	1703
3	475	158	0	0	475	158
4+	495	124	45	11	540	135
Total	29120	26947	4225	3974	33345	30921
Occupancy	1.08		1.06		1.08	

Means of Transportation to Work

Census Data

Place (New Jersey)	Clifton City, New Jersey	%	Nutley, New Jersey	%	Total	%
Total:	43,528		15,021		58,549	
Car, truck, or van:	35,873	82%	11,840	79%	47,713	81%
Drove alone	31,358		10,850		42,208	
Carpooled:	4,515		990		5,505	
2-person	3,083		762		3,845	
3-person	546		148		694	
4-or-more-person	886		80		966	
Public transportation:	5,086		2,275		7,361	
Bus or trolley bus	4,250	10%	1,610	11%	5,860	10%
Streetcar/trolley car	12	0%	0	0%	12	0%
Subway or elevated	93	0%	308	2%	401	1%
Railroad	731	2%	357	2%	1,088	2%
Ferryboat	0	0%	0	0%	0	0%
Bicycle	67	0%	0	0%	67	0%
Walked	849	2%	315	2%	1,164	2%
Taxicab/Other	627	1%	75	0%	702	1%
Worked at home	1,026	2%	516	3%	1,542	3%
Total Check	43,528	100%	15,021	100%	58,549	100%
	OK	OK	OK	OK	OK	OK

Modal Split

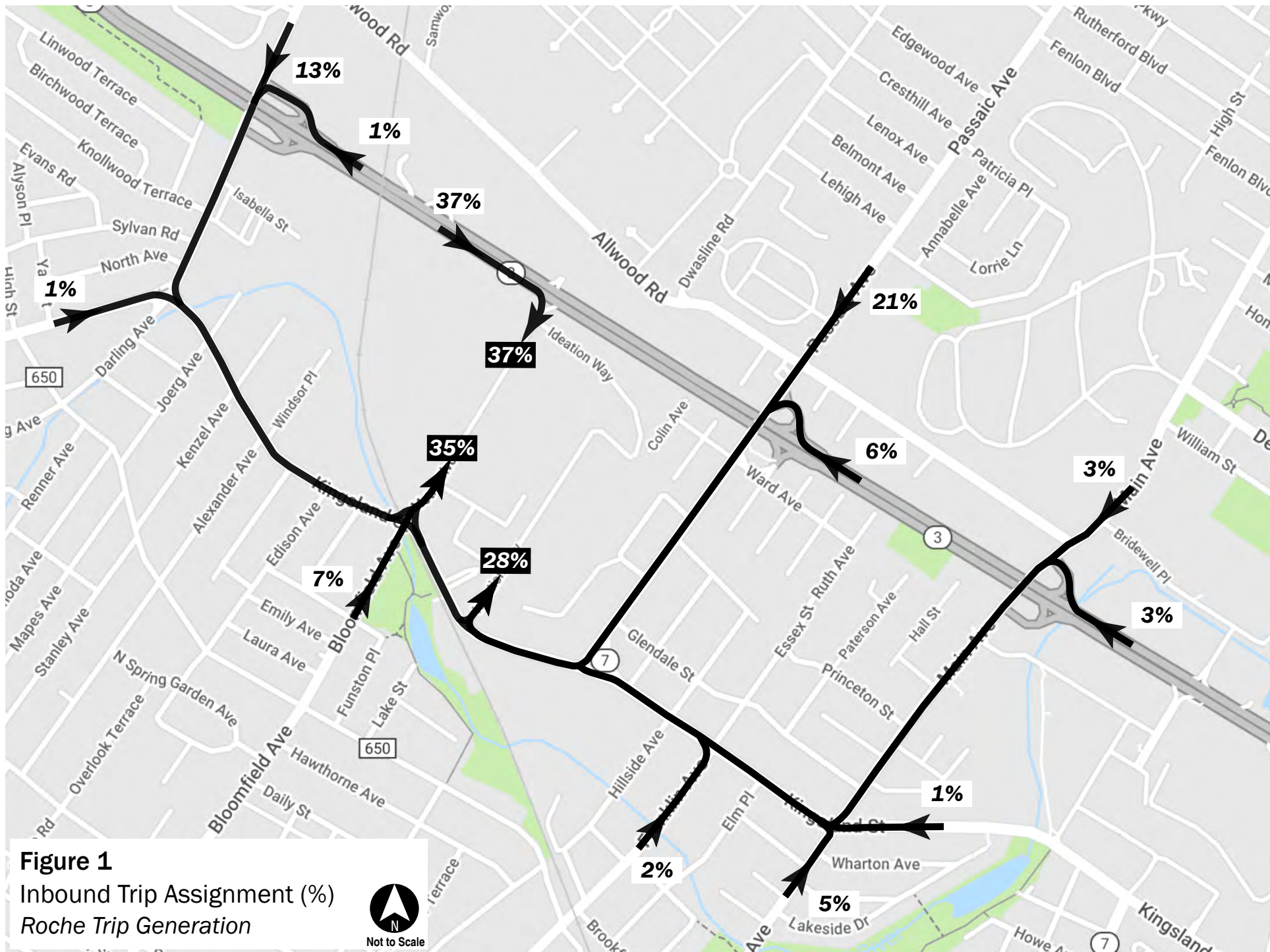
Mode	Clifton City, New Jersey	%	Nutley, New Jersey	%	Total	%
Auto	35,873	82.4%	11,840	78.8%	47,713	81.5%
Taxi	627	1.4%	75	0.5%	702	1.2%
Bus	4,250	9.8%	1,610	10.7%	5,860	10.0%
Subway	836	1.9%	665	4.4%	1,501	2.6%
Walk/Other	1,942	4.5%	831	5.5%	2,773	4.7%
Total	43,528	100.0%	15,021	100.0%	58,549	100.0%
	OK	OK	OK	OK	OK	OK

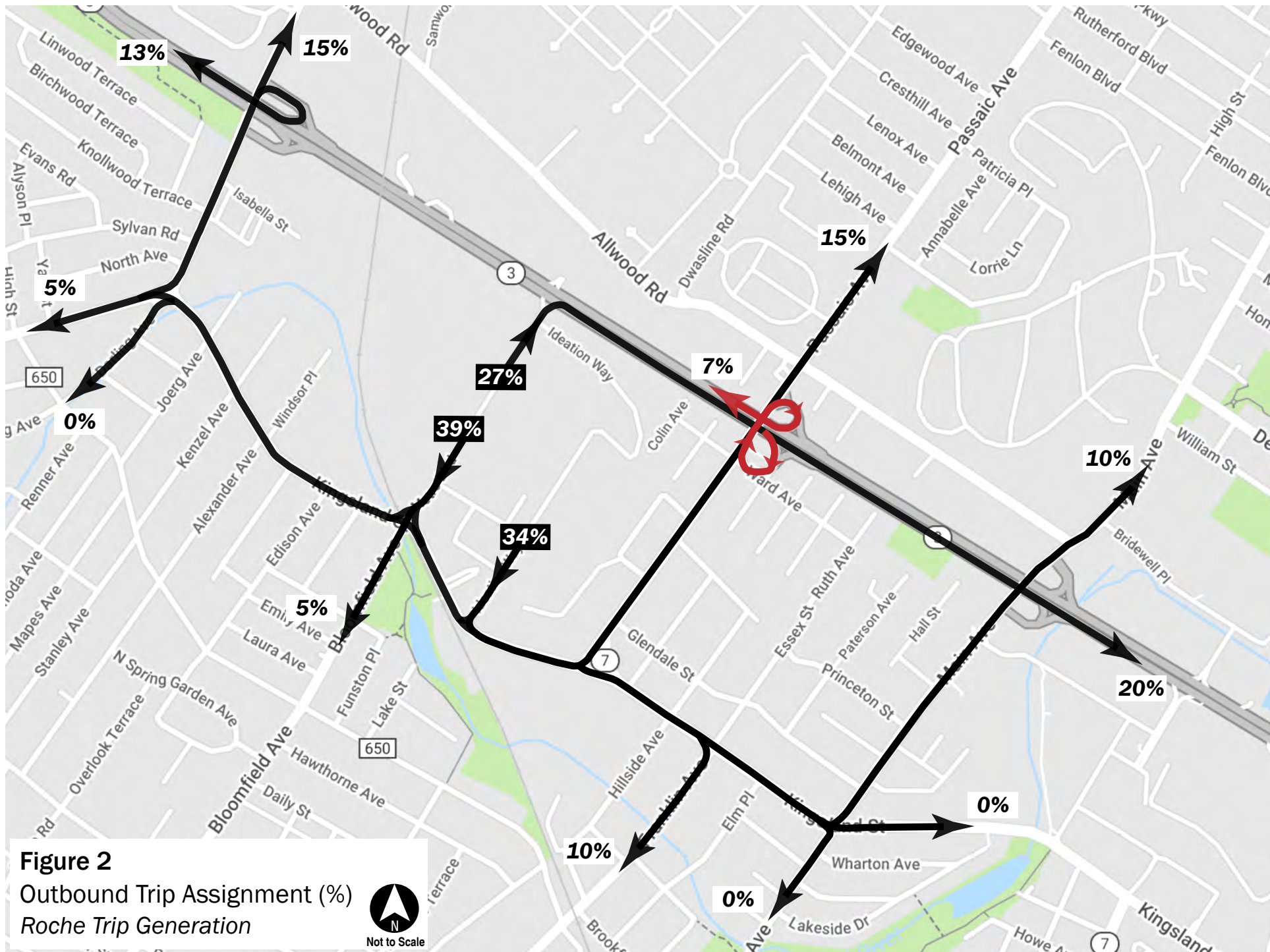
Vehicle Occupancy

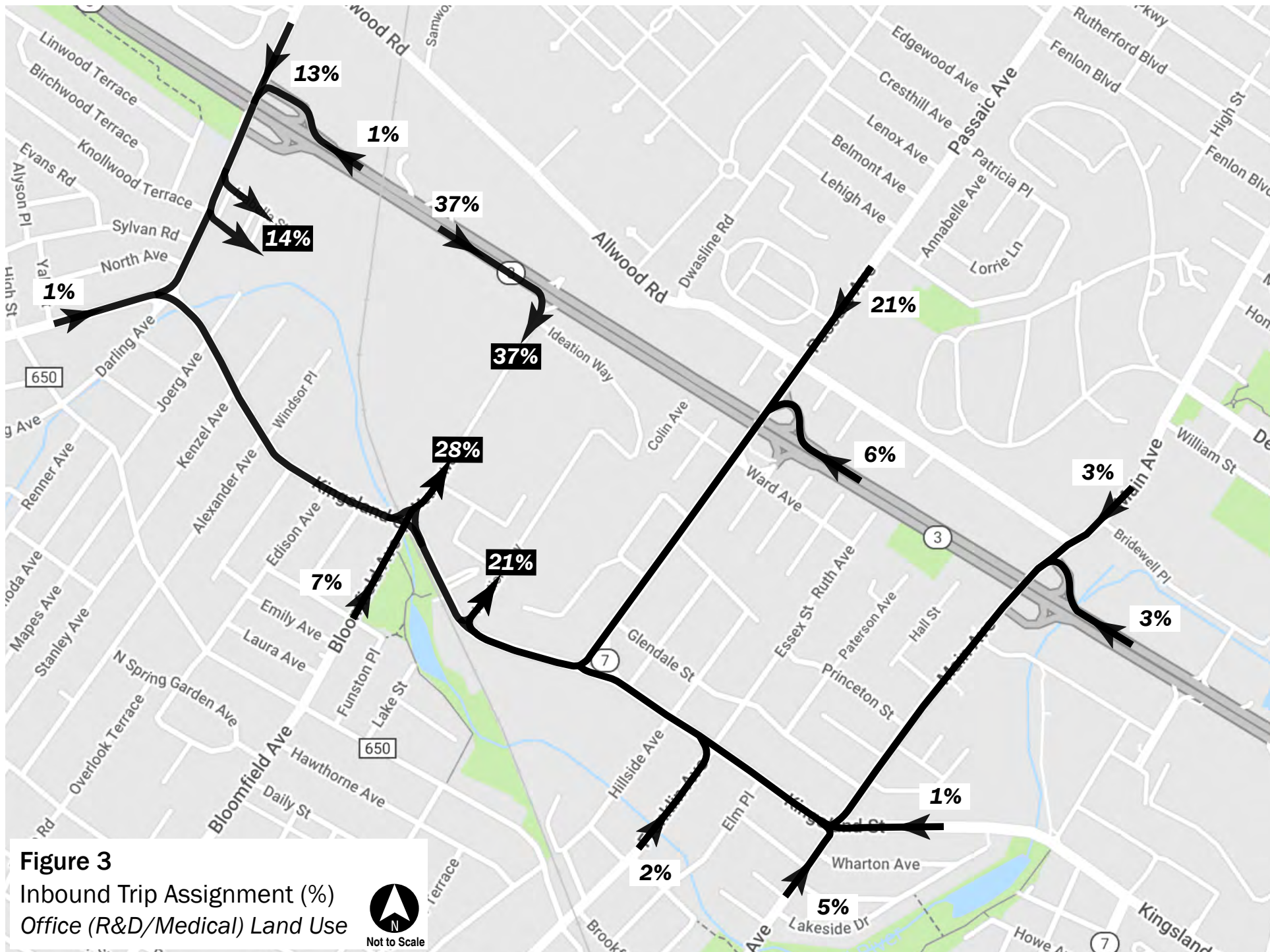
	Clifton City, New Jersey		Nutley, New Jersey		Total	
	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles
Alone	31,358	31358	10,850	10850	42,208	42208
2	3,083	1542	762	381	3,845	1923
3	546	182	148	49	694	231
4+	886	222	80	20	966	242
Total	35873	33303	11840	11300	47713	44603
Occupancy	1.08		1.05		1.07	

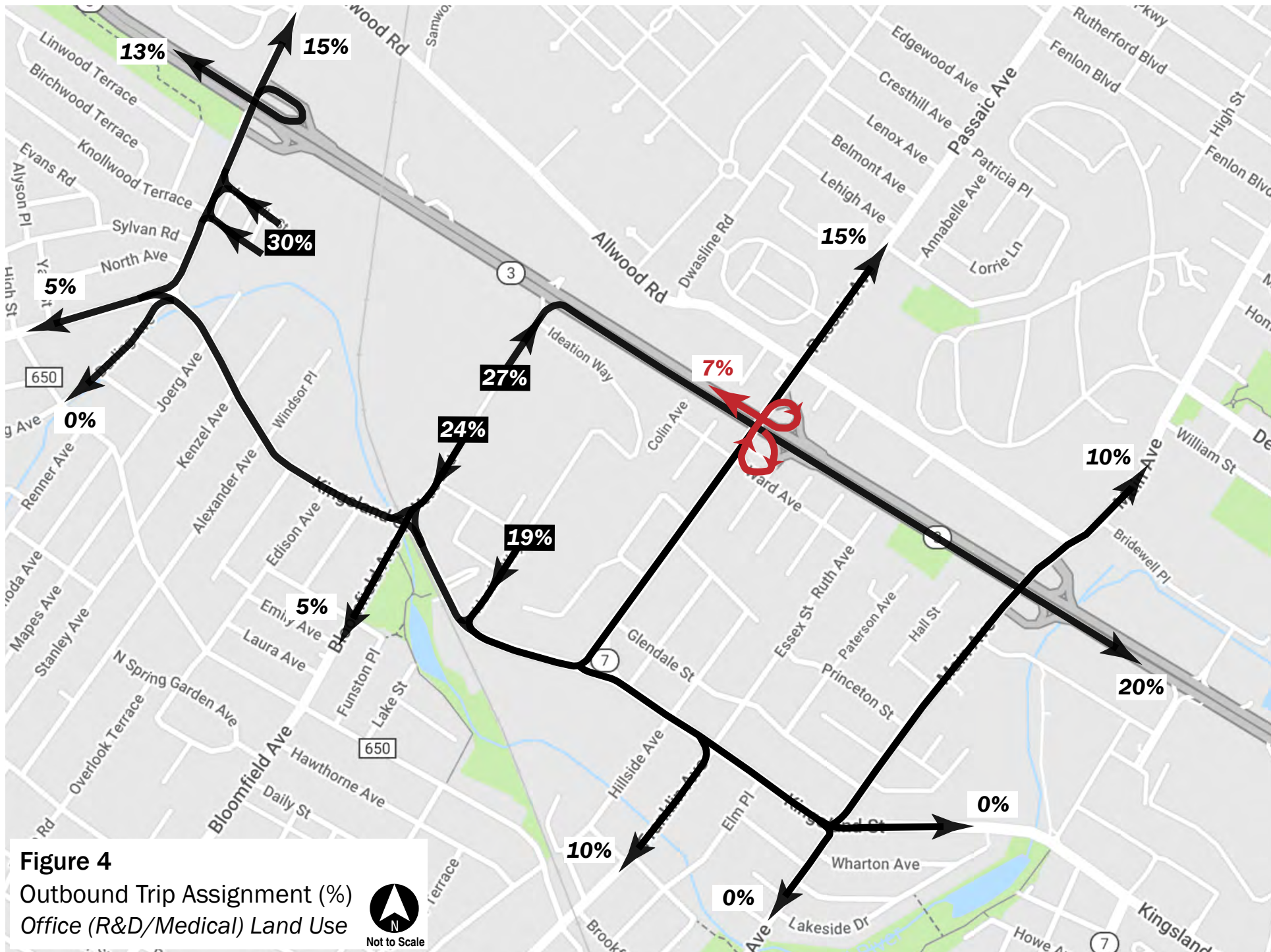
Source: 2013-2017 American Community Survey 5-Year Estimates. Table B08006 SEX OF WORKERS BY MEANS OF TRANSPORTATION TO WORK - Universe: Workers 16 years and over

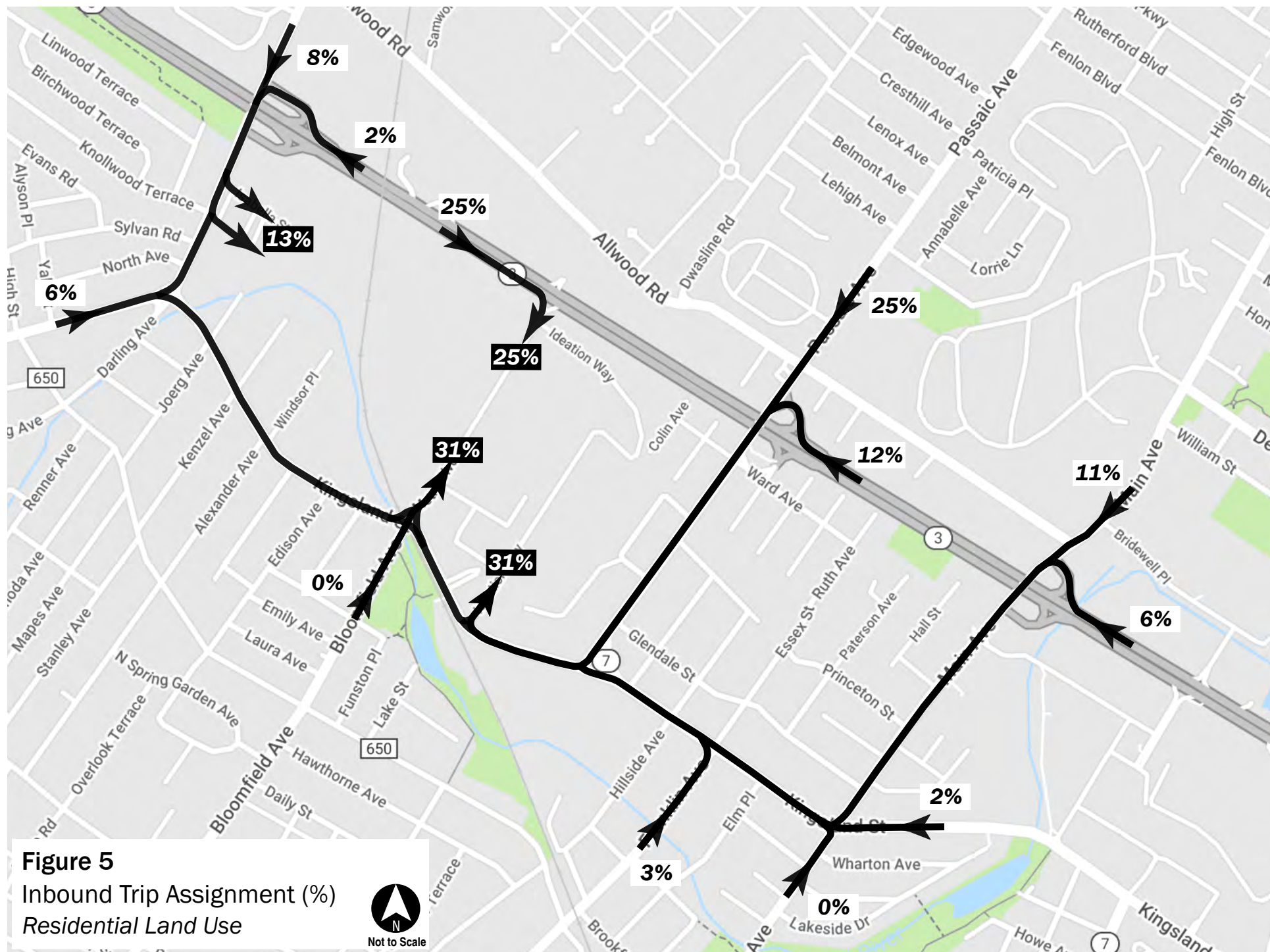
Trip Assignment graphics

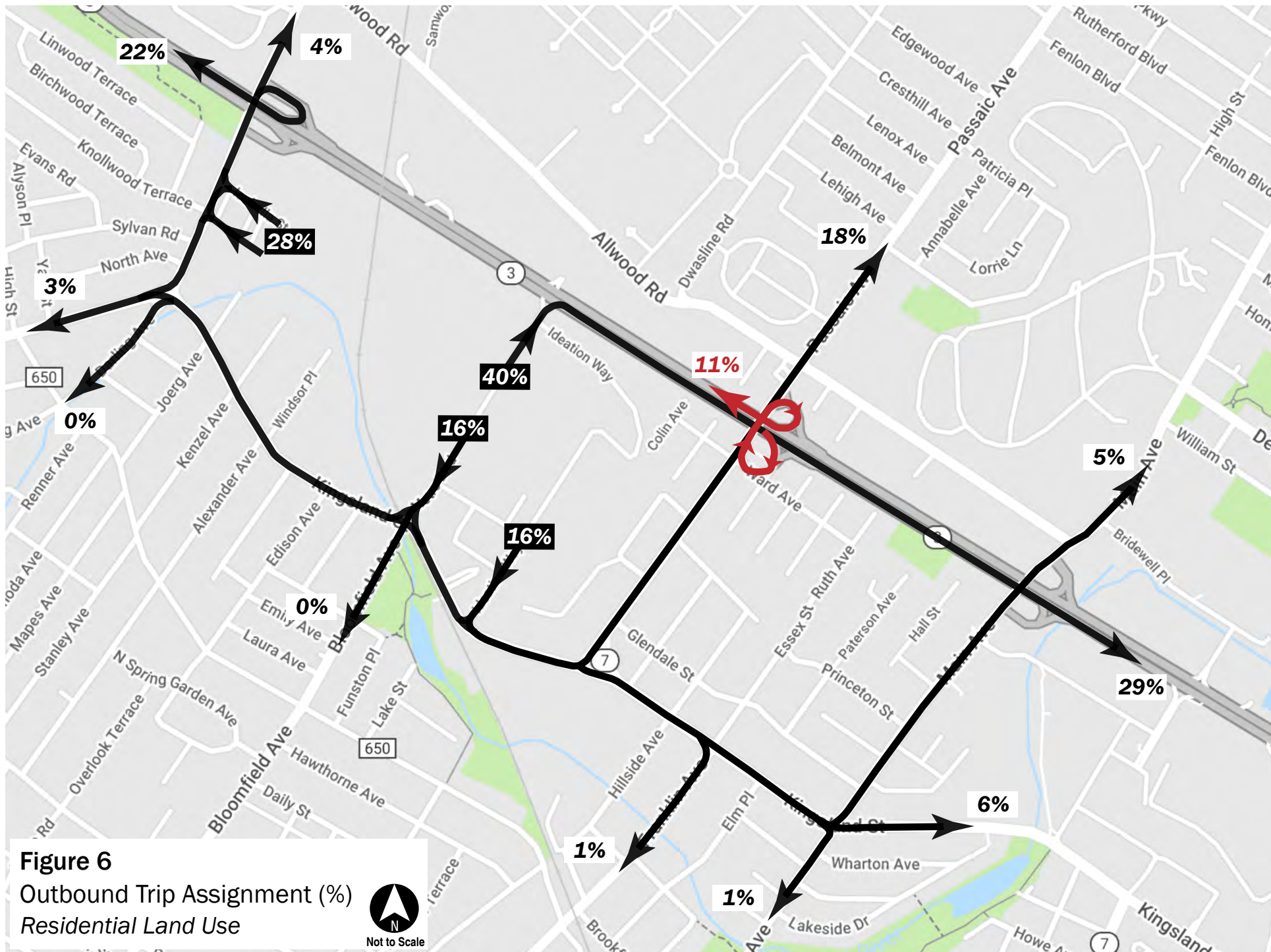


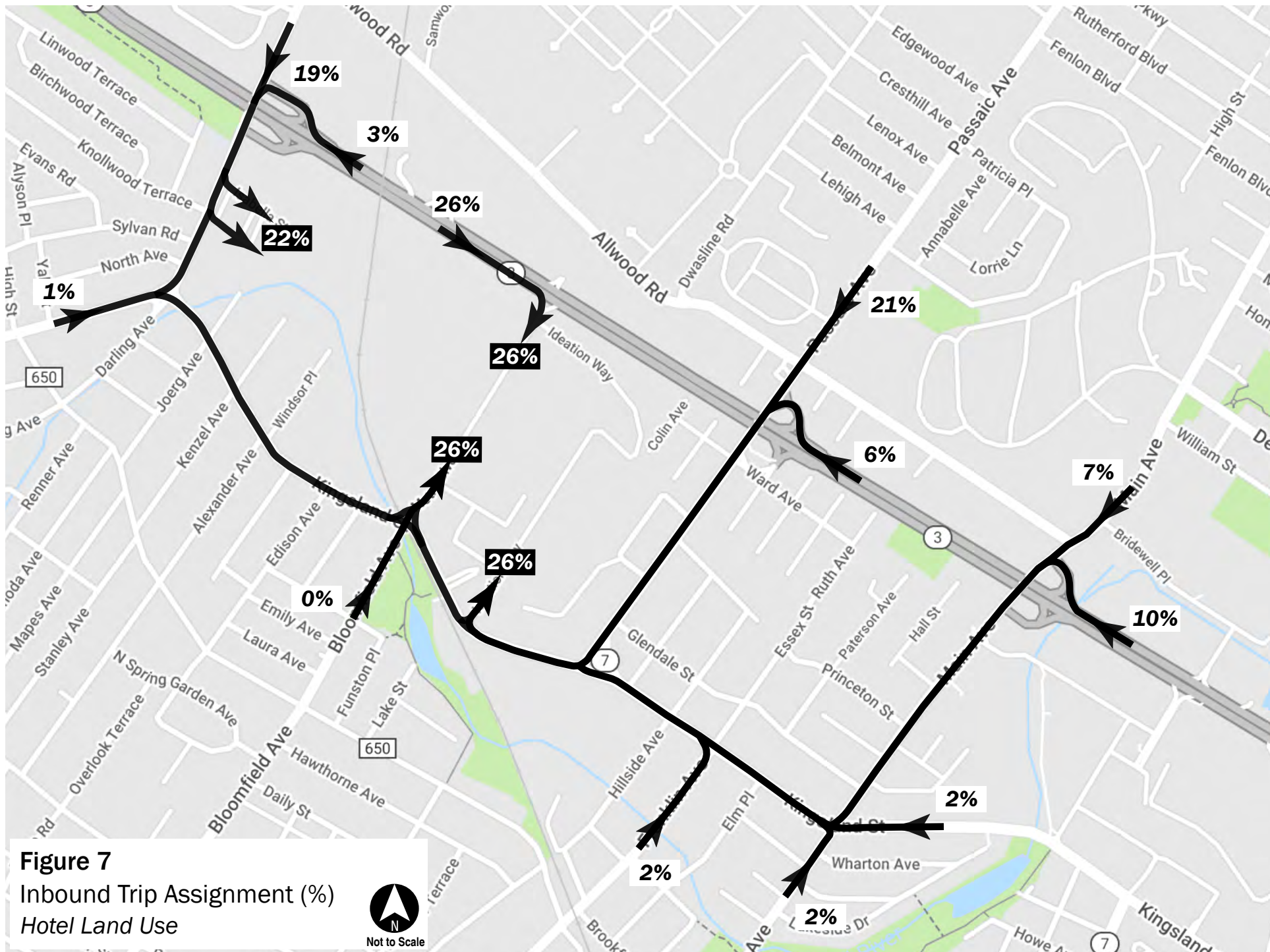


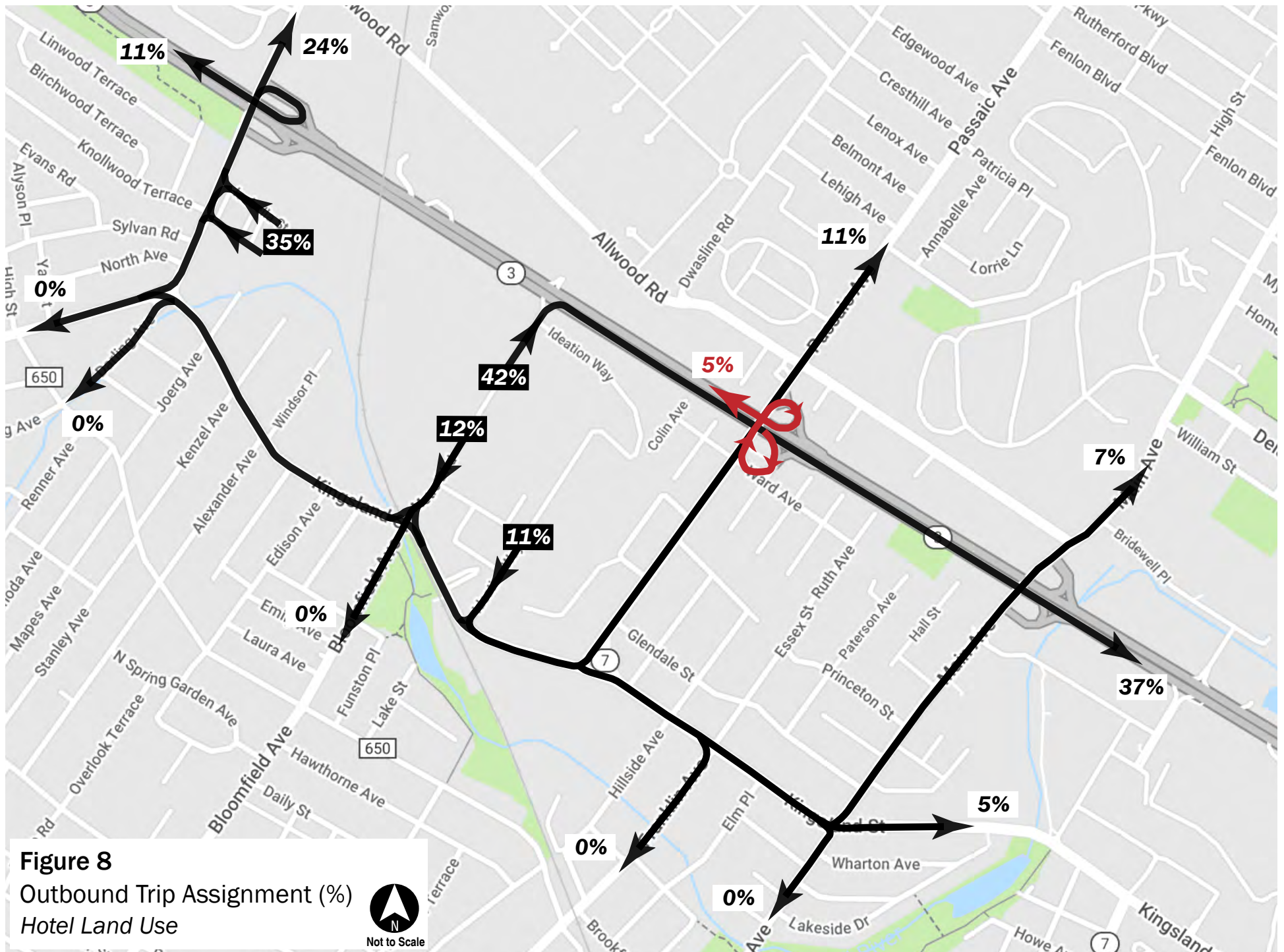












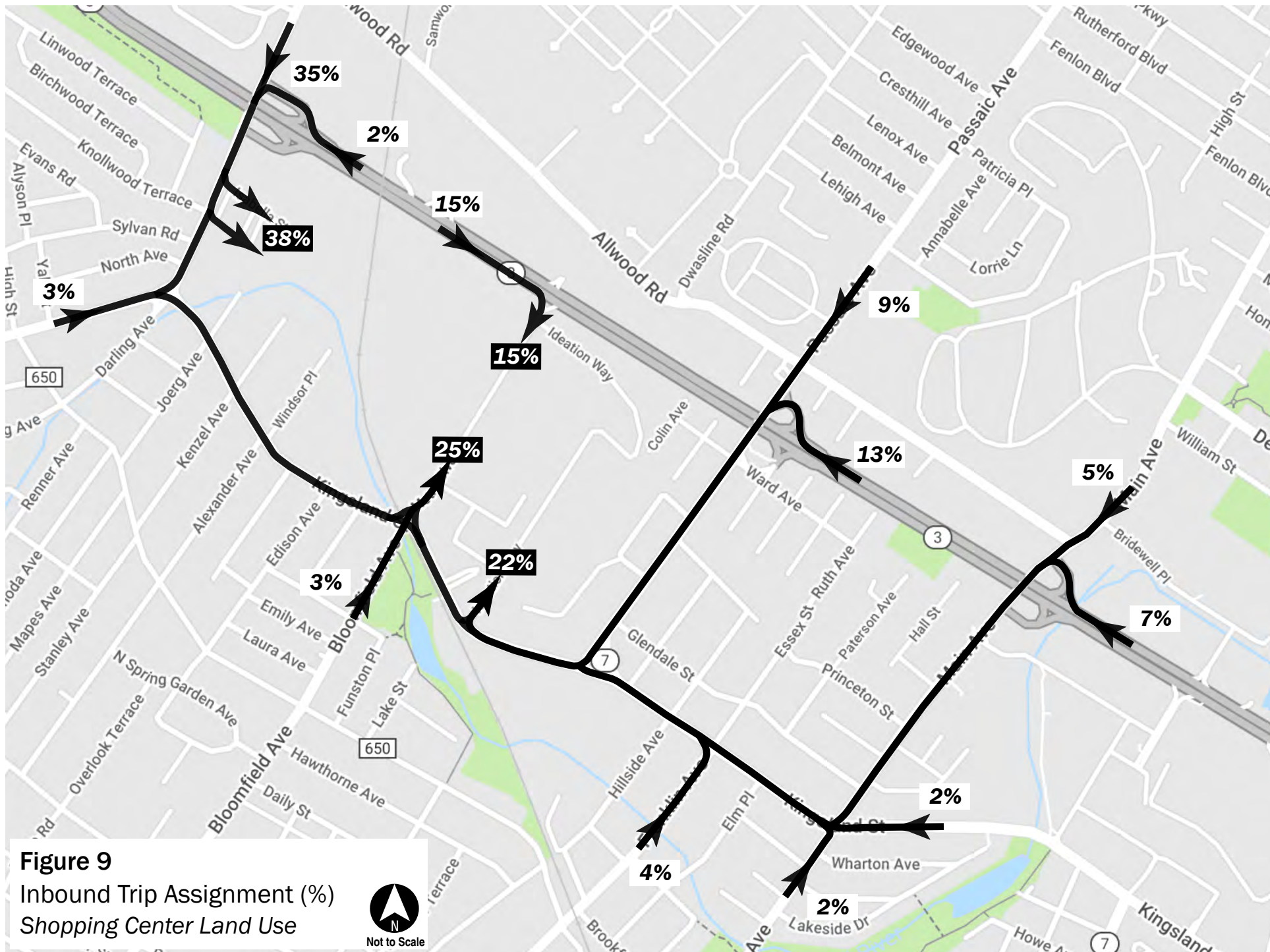
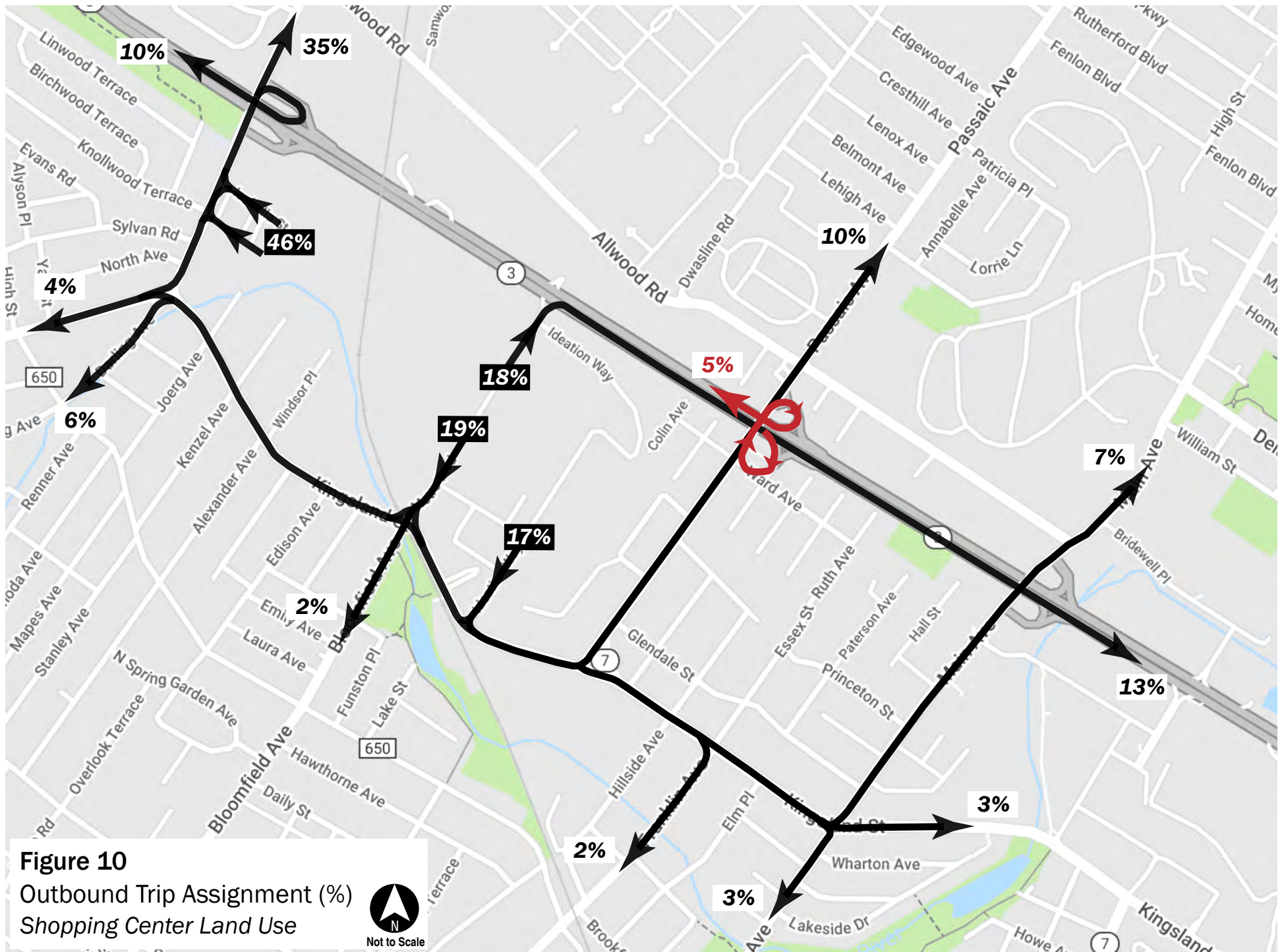


Figure 9

Inbound Trip Assignment (%)
Shopping Center Land Use

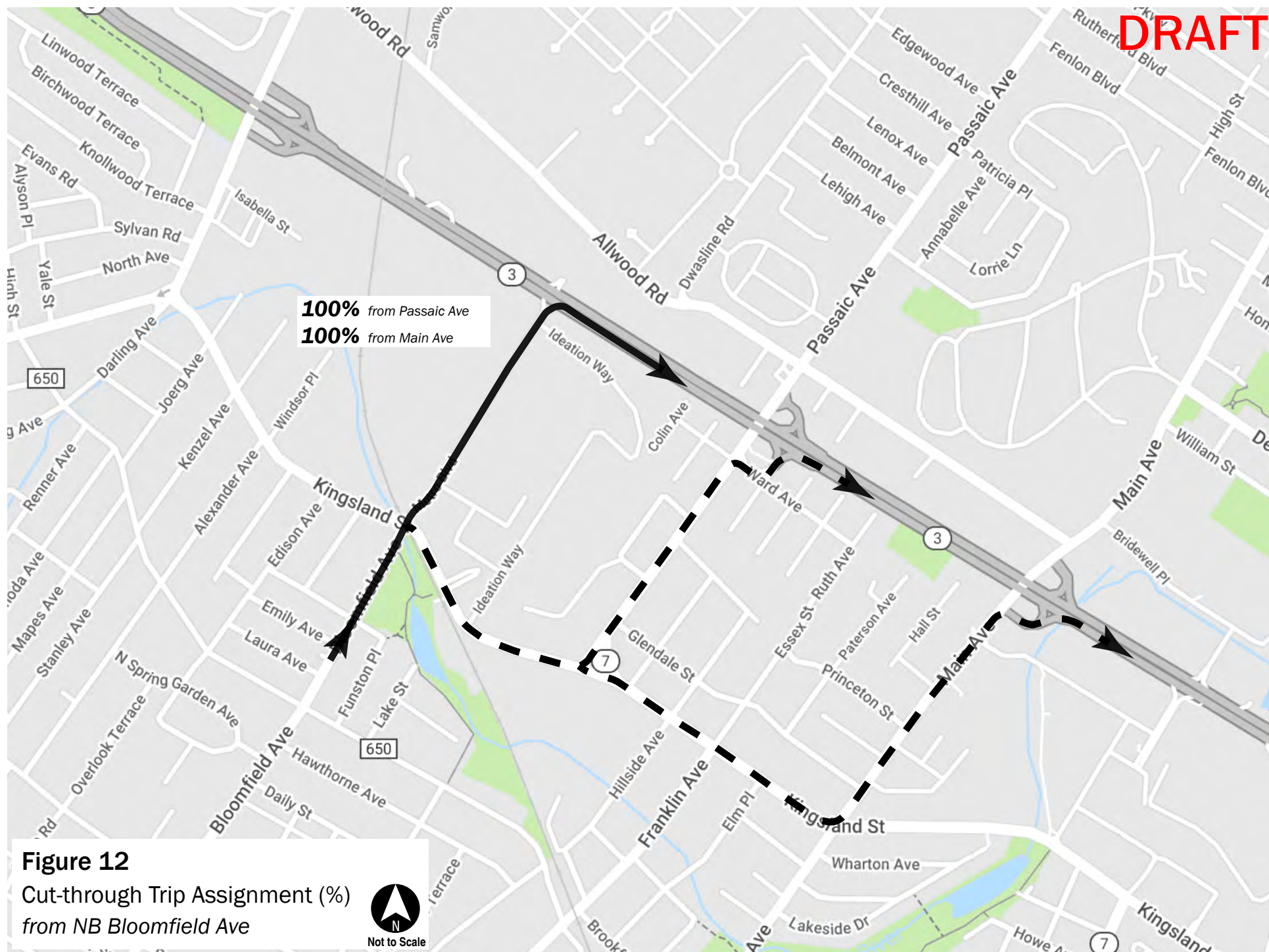




DRAFT



DRAFT



DRAFT

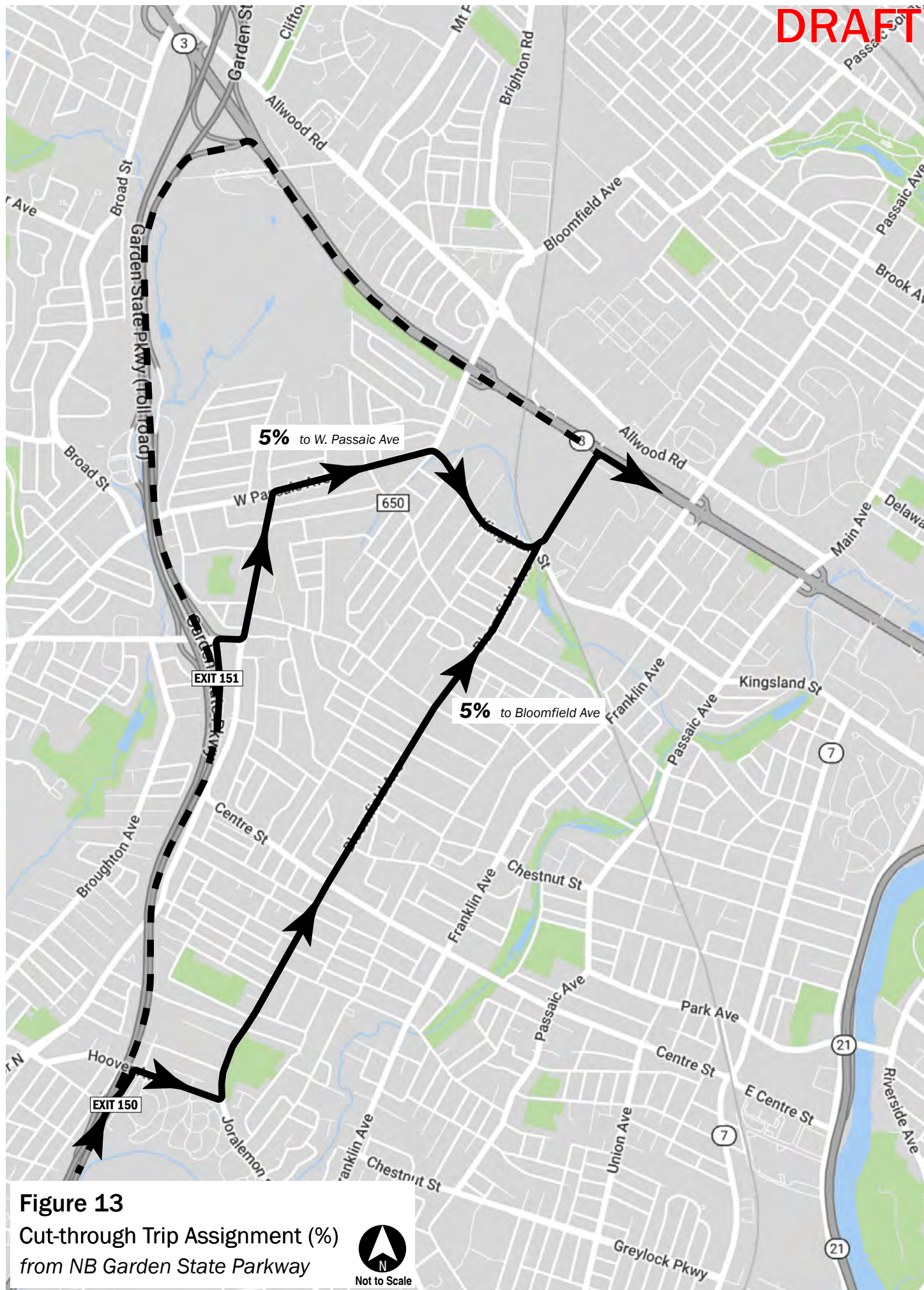
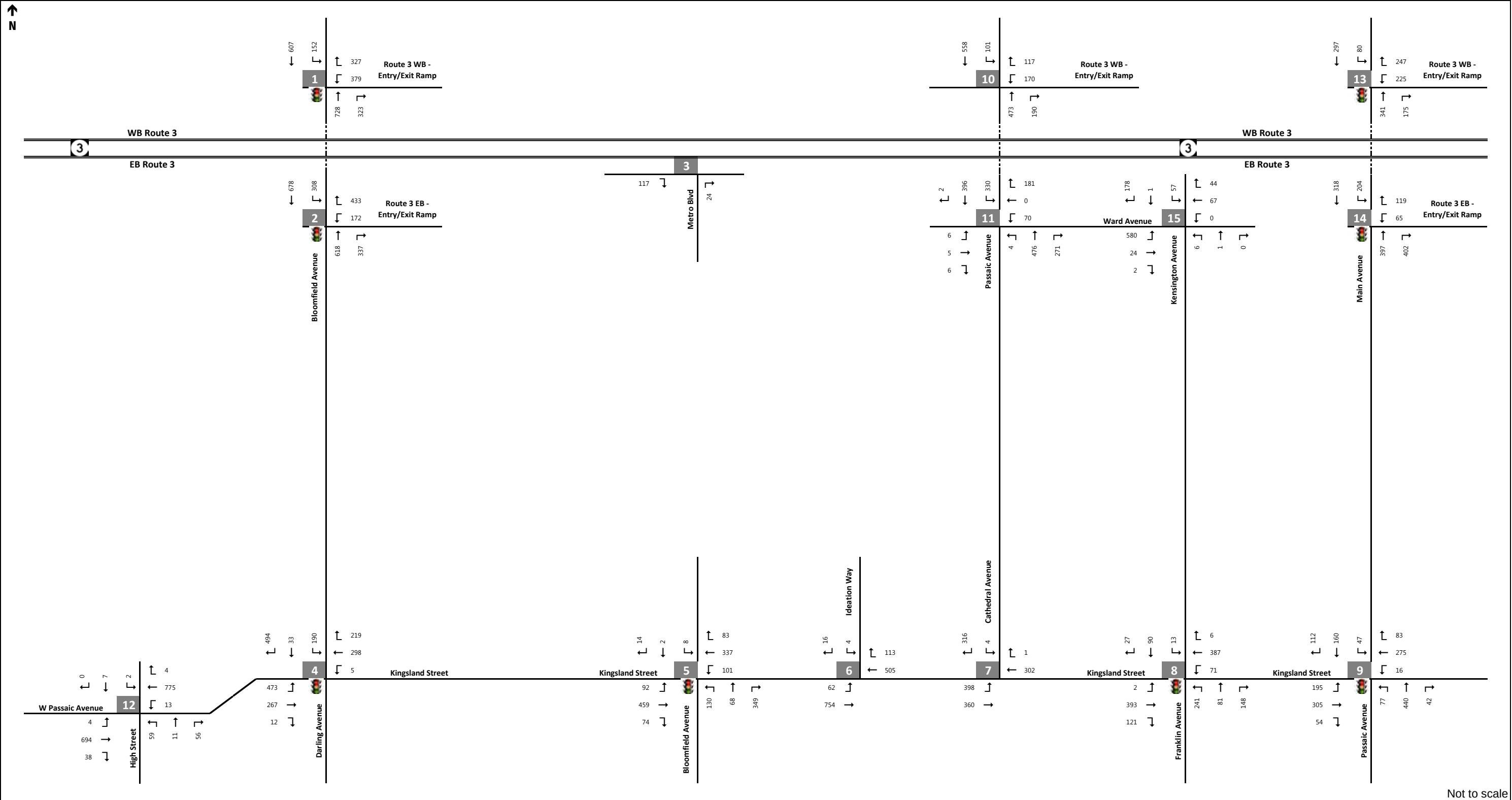


Figure 13

Cut-through Trip Assignment (%)
from NB Garden State Parkway

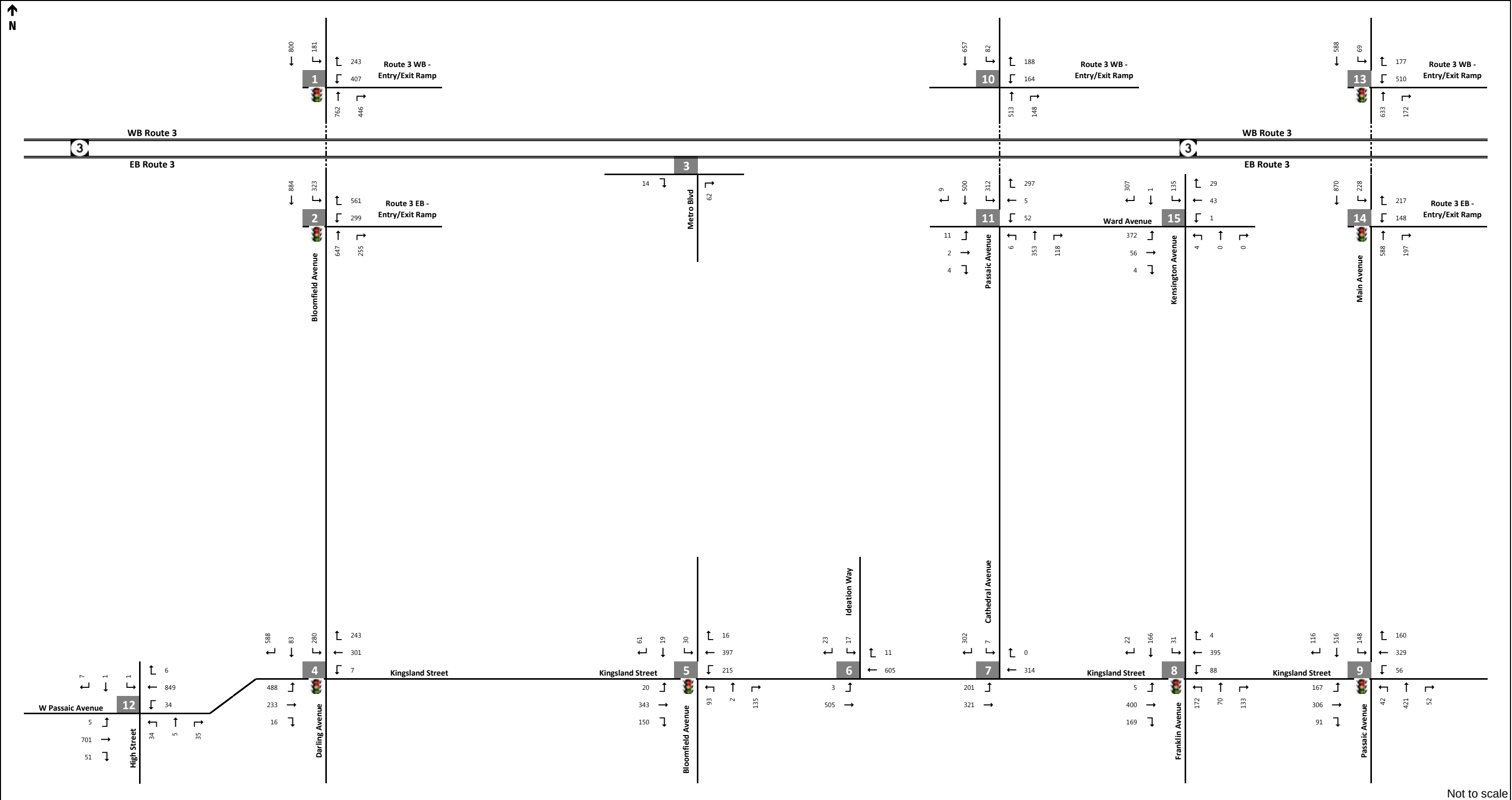


Traffic Volume Figures



Not to scale

Figure 1
Weekday AM Peak Hour
Existing 2019 Traffic Volumes



Not to scale

Figure 2
Weekday PM Peak Hour
Existing 2019 Traffic Volumes

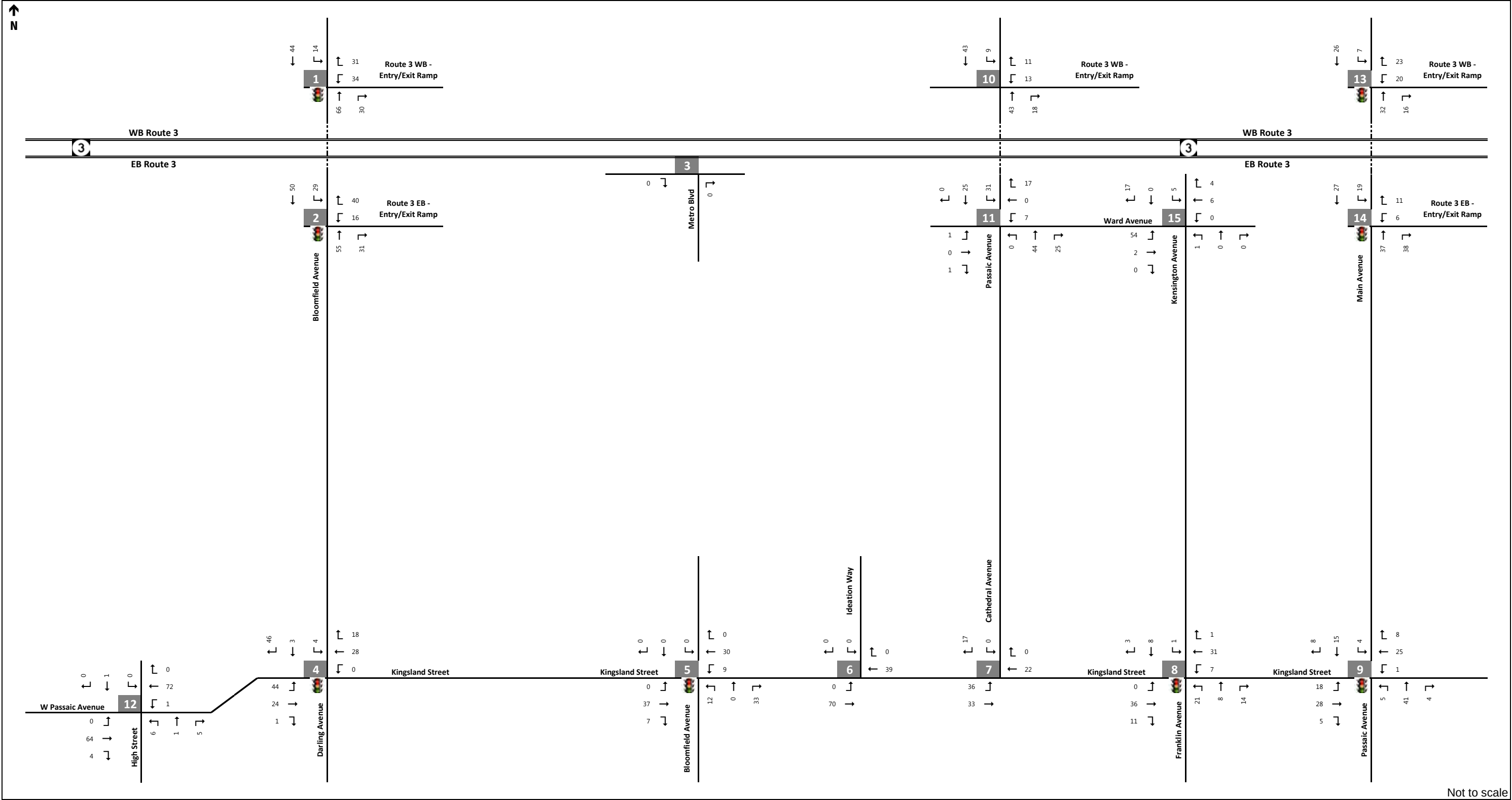
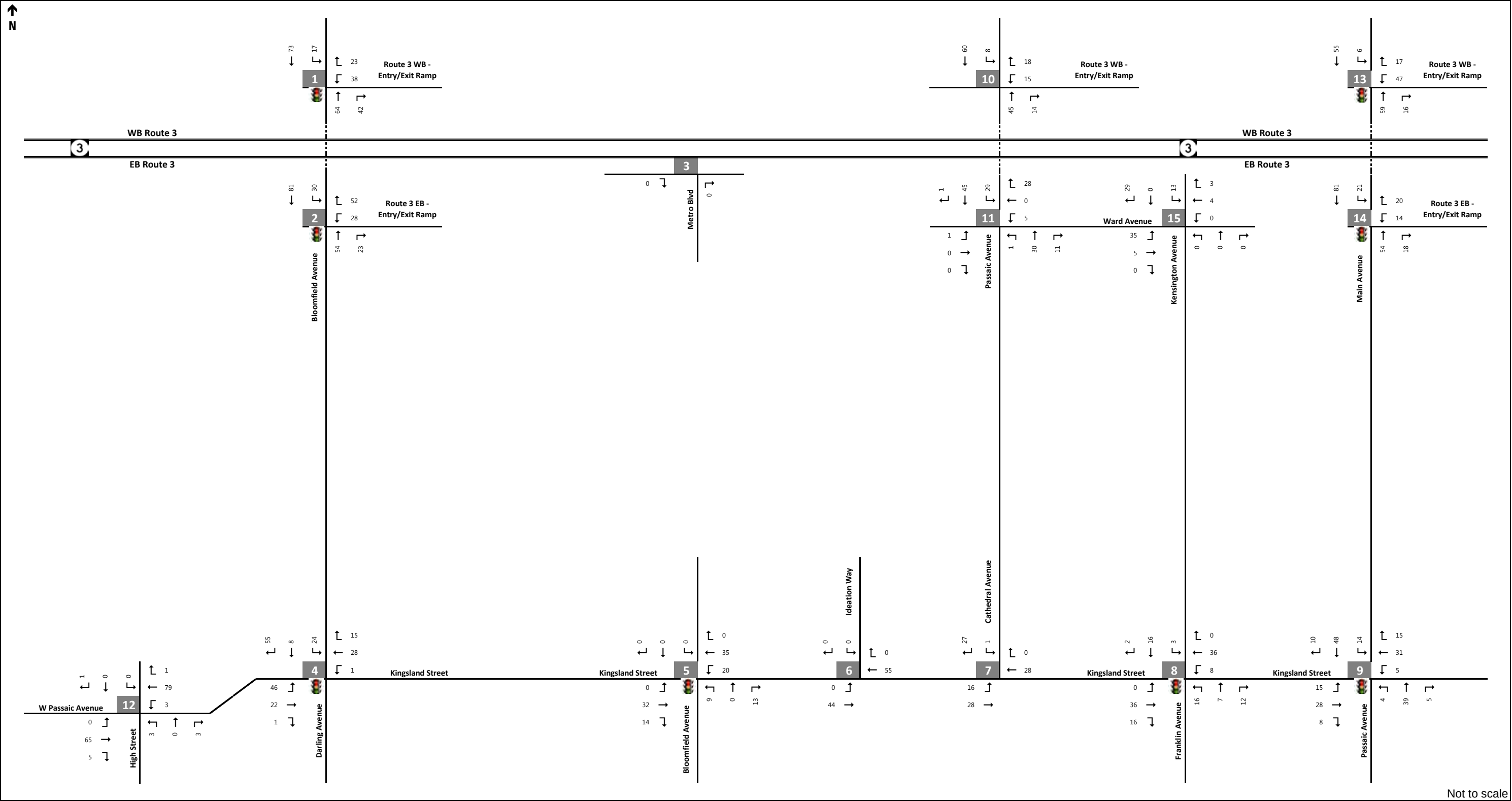
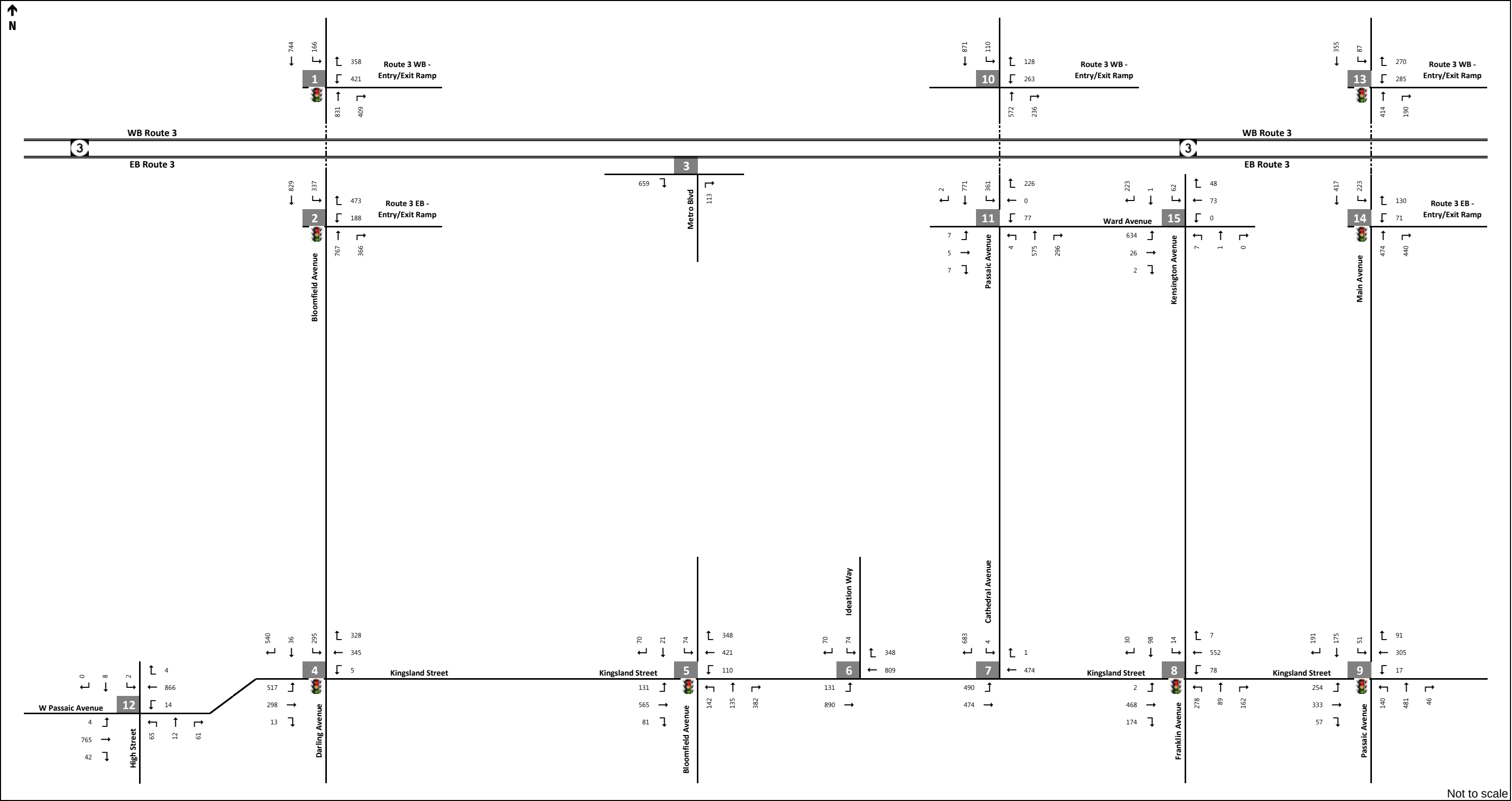


Figure 3
Weekday AM Peak Hour
2025 No Build Background Growth



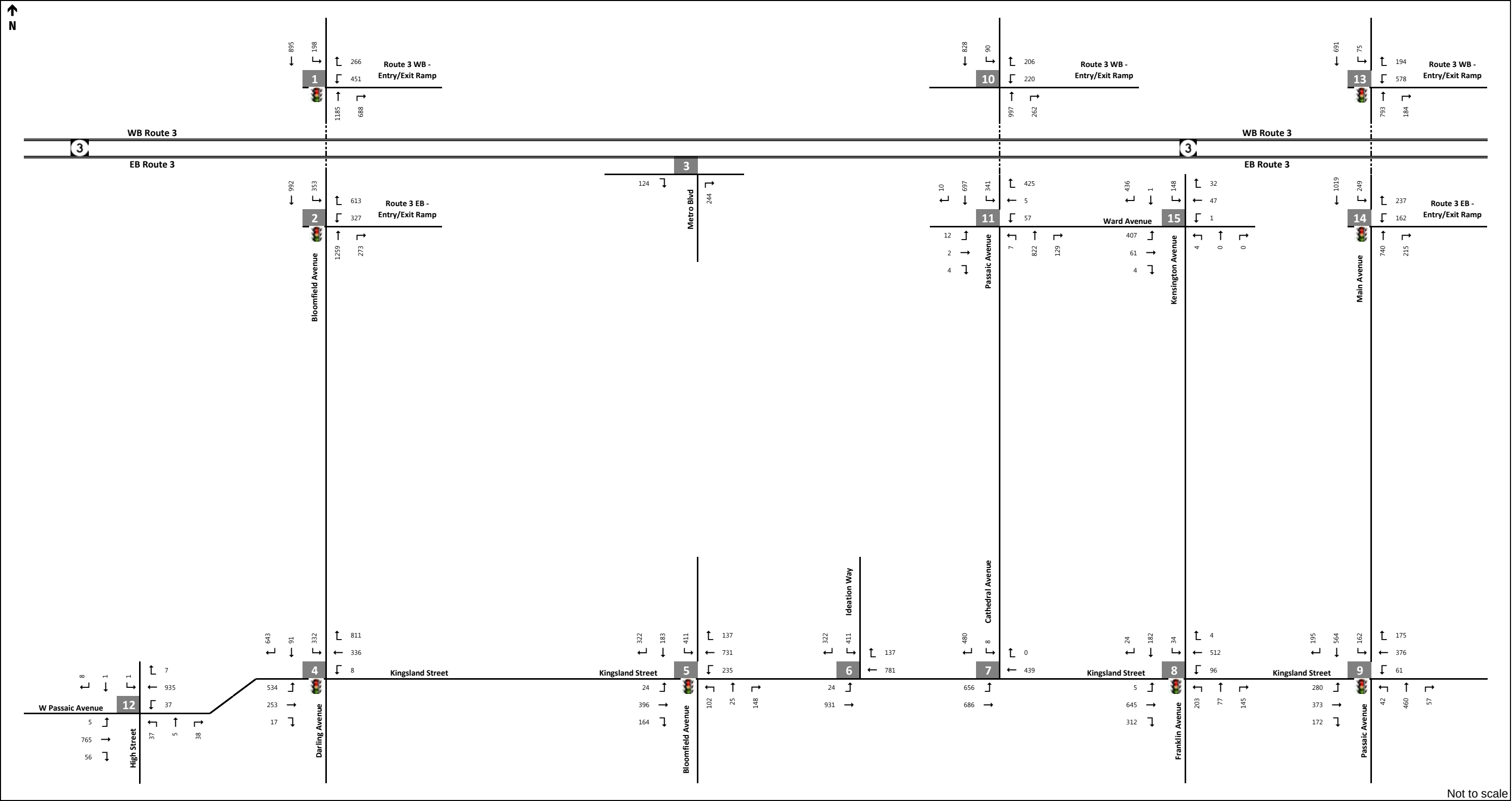
Not to scale

Figure 4
Weekday PM Peak Hour
2025 No Build Background Growth



Not to scale

Figure 7
Weekday AM Peak Hour
2025 No Build Traffic Volumes



Not to scale

Figure 8
Weekday PM Peak Hour
2025 No Build Traffic Volumes

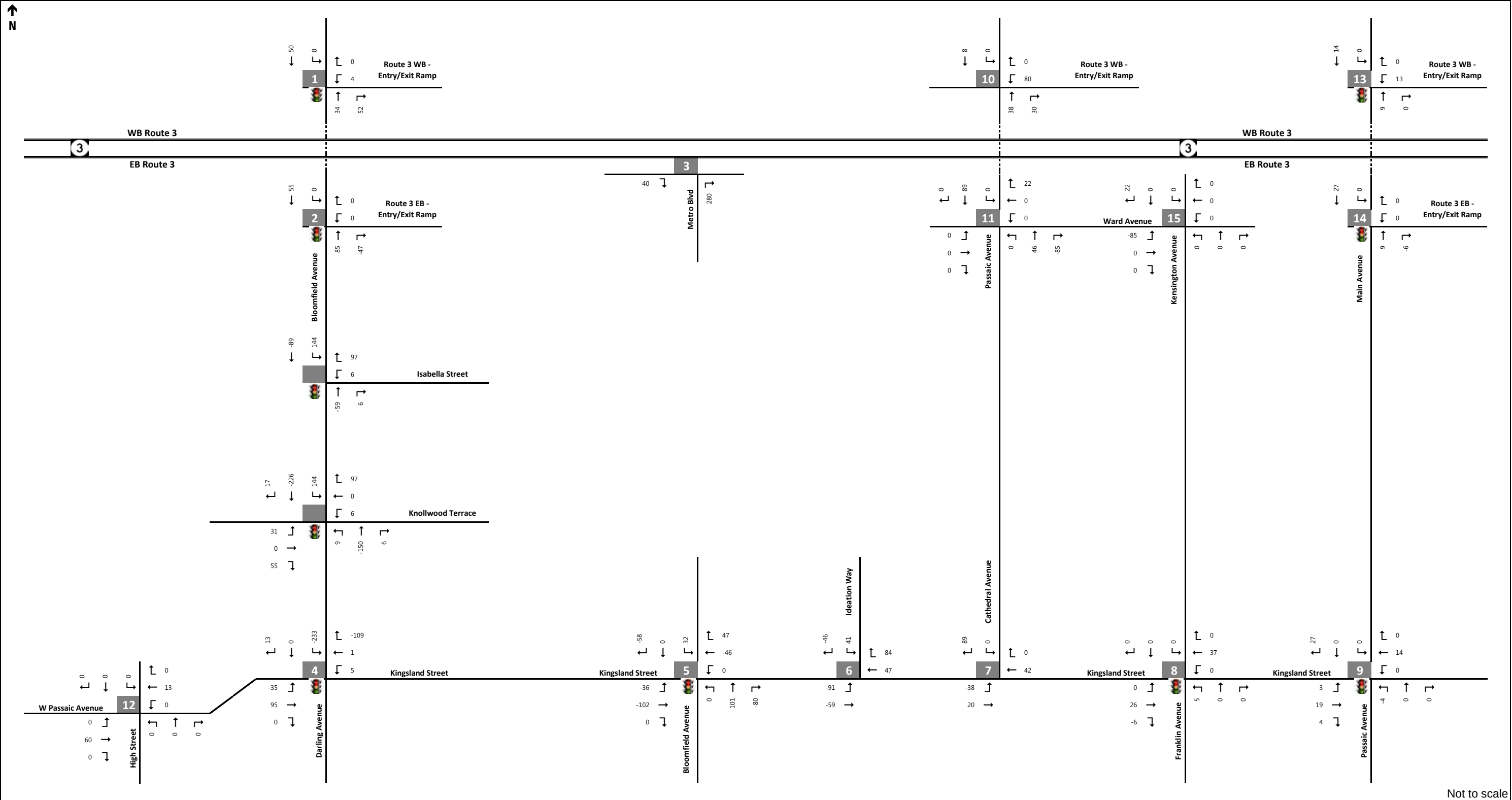


Figure 9
Weekday AM Peak Hour
Project Increment Traffic Volumes

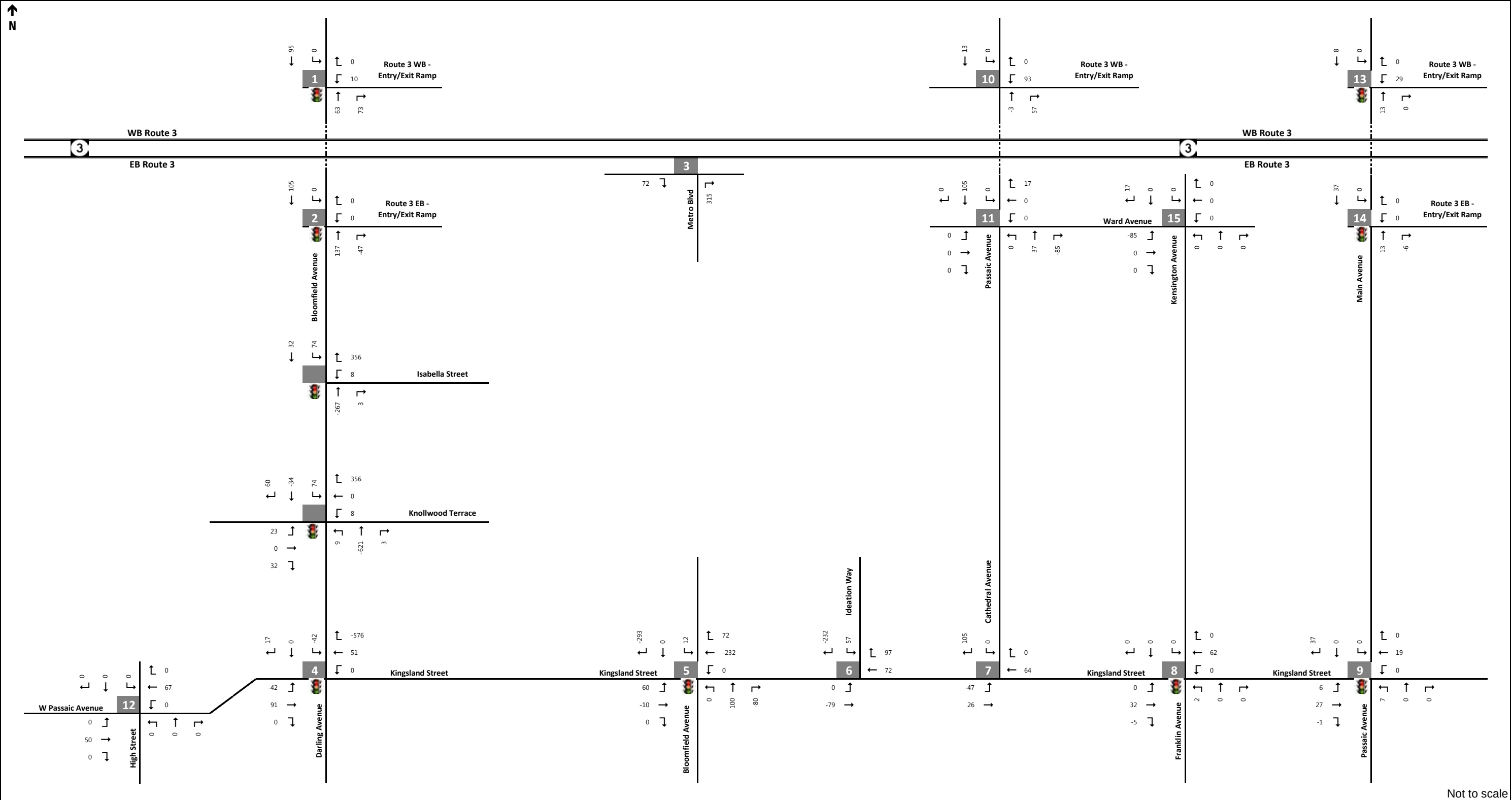
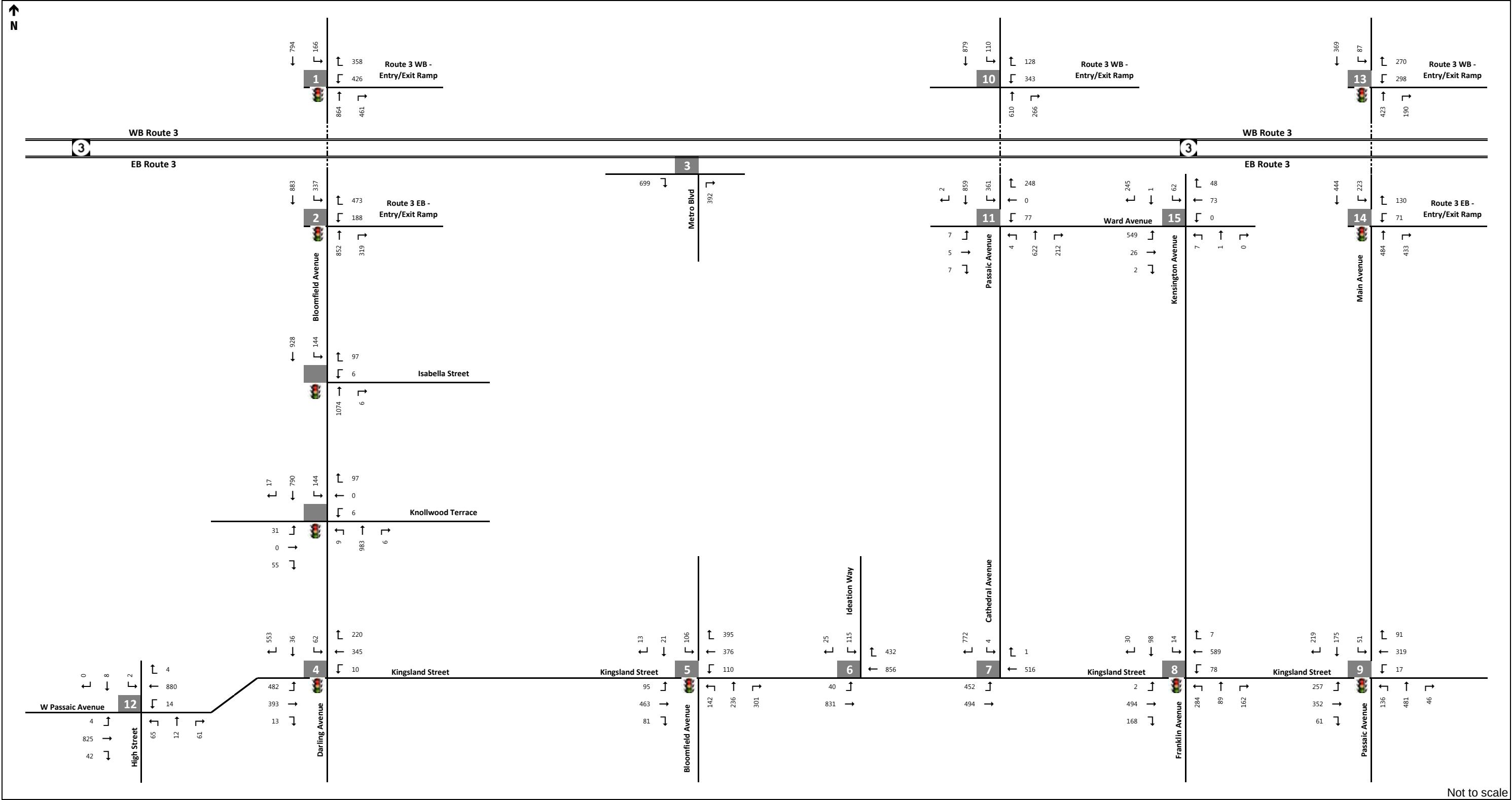
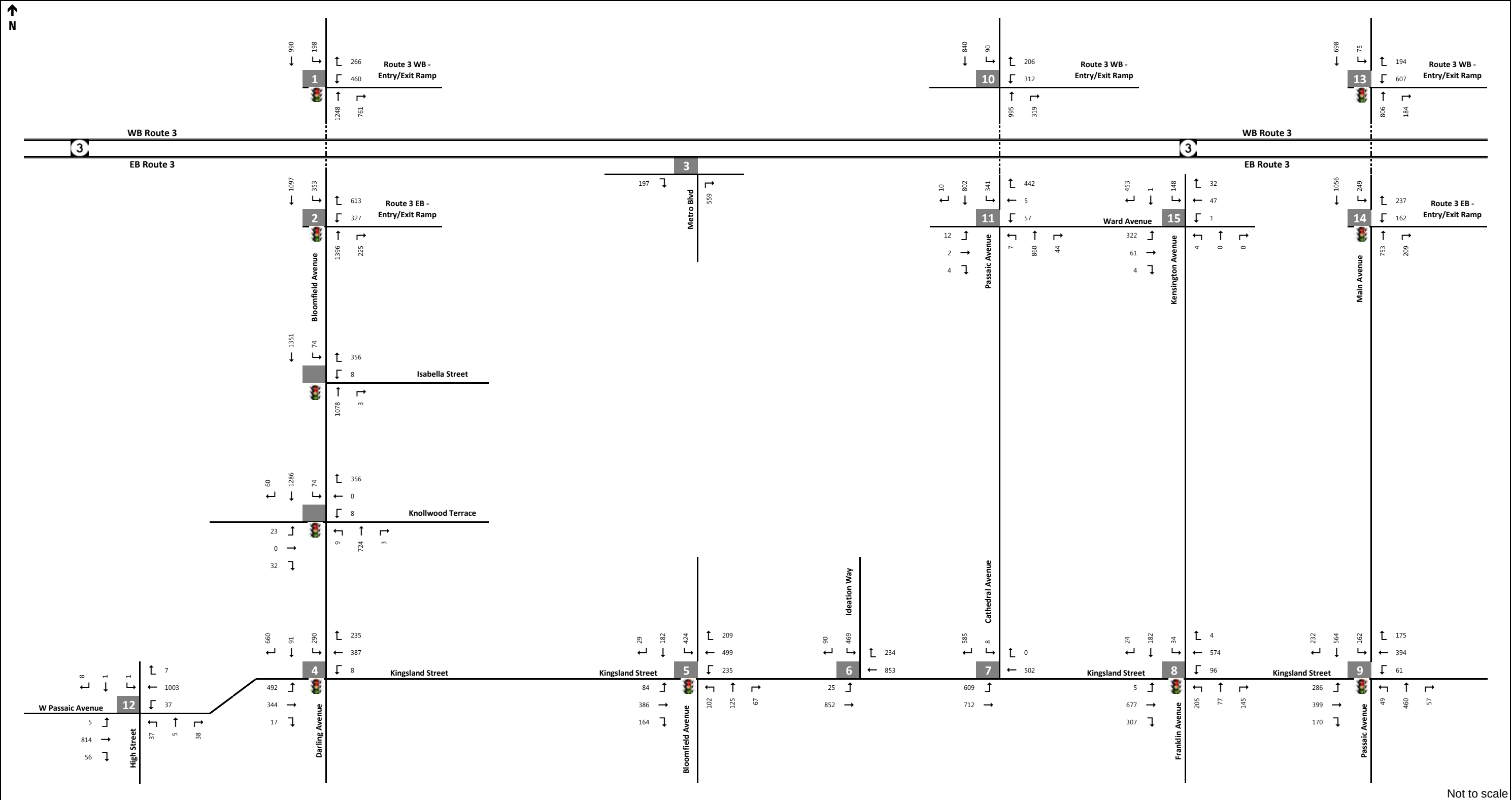


Figure 10
Weekday PM Peak Hour
Project Increment Traffic Volumes



Not to scale

Figure 11
Weekday AM Peak Hour
2025 Build Traffic Volumes



Not to scale

Figure 12
Weekday PM Peak Hour
2025 Build Traffic Volumes

Level of Service Table

Level of Service Comparison Analysis (AM)

#	Intersection & Approach	2019 Existing Condition					2025 No Build Condition					Change in LOS	2025 Build Condition					Change in LOS	Project Delay Change (s)	2025 Build with Improvements Condition					Change in LOS	Project Delay Change (s)	2025 Build with Improvements - Roundabout					Change in LOS	Project Delay Change (s)	Improvements																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)			Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)			Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)				Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)

Level of Service Comparison Analysis (PM)

#	Intersection & Approach	2019 Existing Condition					2025 No Build Condition					Change in LOS	2025 Build Condition					Change in LOS	Project Delay Change (s)	2025 Build with Improvements Condition					Change in LOS	Project Delay Change (s)	2025 Build with Improvements - Roundabout					Change in LOS	Project Delay Change (s)	Improvements
		Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)		Lane Group	v/c Ratio	Delay (sec)	LOS	95th Queue Length (ft)			Change in LOS	Project Delay Change (s)	Lane Group	v/c Ratio	Delay (sec)			LOS	95th Queue Length (ft)	Change in LOS	Project Delay Change (s)	Lane Group			
1	Bloomfield Avenue and Route 3 WB Entry/Exit Ramps																																	- Signal timing shift or geometric improvements would deteriorate LOS for other lane groups/movements, therefore no improvements are recommended
	Westbound	L	1.01	95.7	F	447	L	1.12	115.9	F	510	No	L	1.15	124.3	F	522	No	+8.4	L	1.15	124.3	F	522	No	+8.4								
		R	0.59	15.1	B	100.0	R	0.72	27.9	C	166.0	B → C	R	0.72	28.6	C	169.0	No	+0.7	R	0.72	28.6	C	169.0	No	+0.7								
	Northbound	TR	0.71	20.1	C	223	TR	1.10	67.2	E	212	C → E	TR	1.18	100.2	F	384	E → F	+33.0	TR	1.18	100.2	F	384	E → F	+33.0								
	Southbound	LT	1.17dl	78.2	E	446	LT	2.83dl	79.1	E	530	No	LT	2.83dl	111.0	F	598	E → F	+31.9	LT	2.83dl	111.0	F	598	E → F	+31.9								
	Intersection		49.8	D	0.00		Intersection		73.3	E	0.00		Intersection		100.9	F	0.00			Intersection		100.9	F	0.00										
2	Bloomfield Avenue and Route 3 EB Entry/Exit Ramps																																	- Signal timing shift or geometric improvements would deteriorate LOS for other lane groups/movements, therefore no improvements are recommended
	Westbound	L	0.78	46.3	D	305	L	0.85	52.9	D	345	No	L	0.85	52.9	D	345	No	0.0	L	0.85	52.9	D	345	No	0.0								
		R	1.05	90.6	F	485	R	1.30	180.2	F	661	No	R	1.32	187.3	F	668	No	+7.1	R	1.32	187.3	F	668	No	+7.1								
	Northbound	TR	1.04	61.3	E	805	TR	1.74	357.0	F	1674	E → F	TR	1.03	78.6	E	675	F → E	-278.4	TR	1.03	78.6	E	675	F → E	-278.4								
	Southbound	L	1.05	64.5	E	148	L	1.32	170.1	F	164	E → F	L	1.32	170.4	F	138	No	+0.3	L	1.32	170.4	F	138	No	+0.3								
	T	0.90	69.4	E	446	T	1.01	65.7	E	445	No	T	1.12	78.0	E	475	No	+12.3	T	1.12	78.0	E	475	No	+12.3									
3	Metro Boulevard and Route 3 (unsignalized)																																	- No Improvement necessary
	Northbound	R	0.08	9.0	A	6.0	R	0.31	10.4	B	33.0	A → B	R	0.71	17.3	C	157.0	B → C	+6.9	R	0.71	17.3	C	157.0	B → C	+6.9								
4	Darling Avenue and Kingsland Street/W. Passaic Avenue																																	- Transfer 7 seconds of green time from WB phase to exclusive EB left turn phase
	Eastbound	L	0.97	47.9	D	468	L	1.21	130.7	F	623	D → F	L	1.17	114.9	F	585	No	-15.8	L	1.03	71.4	E	500	F → E	-59.3								
		TR	0.35	12.9	B	141.0	TR	0.39	14.9	B	155.0	No	TR	0.51	16.1	B	218.0	No	+1.2	TR	0.51	16.1	B	218.0	No	+1.2								
	Westbound	LT	0.53	26.5	C	249.0	LT	0.63	30.5	C	283.0	No	LT	0.70	32.1	C	333.0	No	+1.6	LT	0.97	69.1	E	450	C → E	+38.6								
		R	0.36	5.6	A	61.0	R	0.85	15.2	B	362	A → B	R	0.37	9.0	A	87.0	B → A	-6.2	R	0.48	14.6	B	114.0	No	-0.6								
	Southbound	LT	0.87	46.4	D	275.0	LT	0.91	51.5	D	361	No	LT	0.88	47.1	D	292.0	No	-4.4	LT	0.88	47.1	D	292.0	No	-4.4								
	R	0.88	25.5	C	292.0	R	0.95	37.6	D	393	C → D	R	1.03	56.8	E	440	D → E	+19.2	R	0.92	30.1	C	429	D → C	-7.5									
	Intersection		30.2	C	0.00		Intersection		46.8	D	0.00		Intersection		52.0	D	0.00			Intersection		42.9	D	0.00										
5	Metro Boulevard and Kingsland Street																																	- Restripe WB from one exclusive left turn lane and one through-right shared lane to one exclusive left turn lane, one through lane, and one exclusive 50' right turn lane - Restripe SB from one through-left shared lane and one exclusive right turn lane to one exclusive left turn lane, and one through-right shared lane - Transfer 1 second of green time from NB/SB phase to EB/WB phase
	Eastbound	L	0.06	8.5	A	15.0	L	0.28	20.3	C	24.0	A → C	L	0.97	107.5	F	110	C → F	+87.2	L	0.46	20.7	C	60.0	No	+0.4	L	0.19	9.4	A	25.0	C → A	-10.9	
		TR	0.68	15.6	B	307	TR	0.94	42.4	D	414	B → D	TR	0.93	39.9	D	404	No	-2.5	TR	0.90	34.3	C	393	D → C	-8.1	TR	1.10	95.5	F	500.0	D → F	+53.1	
	Westbound	L	0.75	31.3	C	202	L	1.91	453.7	F	246	C → F	L	1.81	412.6	F	240	No	-41.1	L	1.62	328.0	F	225	No	-125.7	L	0.28	6.8	A	25.0	F → A	-446.9	
		TR	0.52	12.0	B	203.0	TR	1.41	212.2	F	749	B → F	TR	1.18	117.7	F	588	No	-94.5	T	0.75	22.8	C	290		TR	0.84	24.2	C	250.0	F → C	-188.0		
		R	0.40	7.7	A	58.0							R	0.40	7.7	A	58.0			R	0.40	7.7	A	58.0										
	Northbound	LTR	0.72	21.5	C	88.0	LTR	2.58	745.7	F	282	C → F	LTR	4.15	1454.8	F	345	No	+709.1	LTR	0.75	29.2	C	176.0	F → C	-716.5	LTR	0.65	21.2	C	125.0	F → C	-724.5	
	Southbound	LT	0.23	18.3	B	34.0	LT	1.88	426.7	F	550	B → F	LT	1.99	476.1	F	570	No	+49.4	L	1.63	318.7	F	421			LT	1.34	190.6	F	800.0	No	-236.1	
Intersection		17.3	B	0.00		Intersection		272.8	F	0.00		Intersection		378.1	F	0.00			Intersection		101.9	F	0.00			Intersection		78.4	F					
6	Ideation Way and Kingsland Street (unsignalized)																																	- Signalize intersection - Restripe EB from one left-through shared lane to one exclusive left turn lane and one through lane - Restripe WB from one right-through shared lane to one exclusive right turn lane and one through lane
	Eastbound	LT	0.00	0.1	A	0.0	LT	0.05	1.5	A	4.0	No	LT	0.06	1.8	A	4.0	No	+0.3	L	0.30	20.1	C	25.0			LT	1.27	153.3	F	36.0	A → F	+151.8	
		TR	0.41	0.0	0.0	0.0	TR	0.60	0.0	0.0	0.0	No	TR	0.71	0.0	0.0	0.0	No	0.0	T	1.05	64.8	E	650			T	0.72	13.2	B	7.0			
	Westbound	TR	0.41	0.0	0.0	0.0	TR	0.60	0.0	0.0	0.0	No	TR	0.71	0.0	0.0	0.0	No	0.0	R	0.35	6.9	A	71.0			R	0.20	4.8	A	1.0			
	Southbound	L	0.05	14.3	B	4.0	L	2.36	659.7	F	1041.0	B → F	L	2.82	868.3	F	1289.0	No	+208.6	L	1.02	67.6	E	375	F → E	-592.1	L	1.14	111.1	F	20.0	No	-548.6	
	Southbound	R	0.07	14.7	B	6.0	R	1.43	247.6	F	551.0	B → F	R	0.48	33.5	D	60.0	F → D	-214.1	R	0.21	8.9	A	37.0	F → A	-238.7	R	0.22	10.1	B	1.0	F → B	-237.5	
7	Cathedral Avenue and Kingsland Street (unsignalized)																																	- Signalize intersection - Restripe EB from one left-through shared lane to one exclusive left turn lane and one through lane
	Eastbound	LT	0.18	4.6	A	17.0	LT	0.68	15.9	C	139.0	A → C	LT	0.67	16.4	C	135.0	No	+0.5	L	1.09	92.0	F	587										
		TR	0.22	0.0	0.0	0.0	TR	0.31	0.0	0.0	0.0	No	TR	0.36	0.0	0.0	0.0	No	0.0	TR	1.09	94.8	F	534										
	Westbound	TR	0.61	21.0	C	102.0	LR	2.42	684.5	F	1098.0	C → F	TR	2.78	843.9	F	1414.0	No	+159.4	LR	0.87	19.9	B	112.0	F → B	-664.6								
	Intersection												Intersection							Intersection		51.1	D	0.0										
	8	Franklin Avenue and Kingsland Street																																
Eastbound		LTR	0.65	14.8	B	300.0	LTR	1.15	99.5	F	757	B → F	LTR	1.18	111.7	F	784	No	+12.2	LTR	1.08	67.5	E	710	F → E	-32.0								
Westbound		LTR	0.80	25.0	C	351	LTR	1.33	179.4	F	543	C → F	LTR	1.44	228.4	F	604	No	+49.0	LTR	1.22	132.0	F	538	No	-47.4								
Northbound		LTR	0.89dl	32.4	C	117.0	LTR	0.99dl	35.1	D	138	C → D	LTR	1.00dl	35.2	D	141	No	+0.1	LTR	1.28dl	79.4	E	196	D → E	+44.3								
Southbound		LTR	0.57	24.5	C	132.0	LTR	0.58	23.7	C	145.0	No	LTR	0.58	23.6	C	145.0	No	-0.1	LTR	0.73	35.4	D	196	C → D	+11.7								
Intersection			23.3	C	0.00		Intersection		101.6	F	0.00		Intersection		123.4	F	0.00			Intersection		85.8	F	0.00										
9	Main Avenue and Kingsland Street																																	- Signal timing shift or geometric improvements would deteriorate LOS for other lane groups/movements, therefore no improvements are recommended
	Eastbound	L	0.87	61.1	E	206	L	1.64	332.5	F	380	E → F	L	1.74	376.3	F	311	No	+43.8	L	1.74	376.3	F	311	No	+43.8								
		TR	0.65	24.4	C	275.0	TR	0.92	44.1	D	493	C → D	TR	0.96	50.7	D	523	No	+6.6	TR	0.96	50.7	D	523	No	+6.6								
	Westbound	LTR	1.01	62.8	E	476	LTR	1.61	305.3	F	660	E → F	LTR	1.77	378.3	F	699	No	+73.0	LTR	1.77	378.3	F	699	No	+73.0								
	Northbound	LTR	1.05	76.8	E	480	LTR	1.68	339.7	F	458	E → F	LTR	1.86	419.7	F	498	No	+80.0	LTR	1.86	419.7	F	498	No	+80.0								
	Southbound	L	0.69	35.2	D	147	L	0.82	49.2	D	177	No	L	0.82	49.7	D	178	No	+0.5	L	0.82	49.7	D	178	No	+0.5								
	TR	1.03	65.7	E	560	TR	1.26	153.8	F	732	E → F	TR	1.34	184.4	F	783	No	+30.6	TR	1.34	184.4	F	783	No	+30.6									
	Intersection		585																															

2019 Existing Synchro Analysis Reports

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	379	327	728	323	152	607
Future Volume (vph)	379	327	728	323	152	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Storage Length (ft)	0	300		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.98			1.00
Frt		0.850	0.954			
Flt Protected	0.950					0.990
Satd. Flow (prot)	1687	1468	3182	0	0	3165
Flt Permitted	0.950					0.552
Satd. Flow (perm)	1624	1397	3182	0	0	1762
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		212	110			
Link Speed (mph)	30		30			30
Link Distance (ft)	610		348			446
Travel Time (s)	13.9		7.9			10.1
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.98	0.94	0.92	0.92	0.84	0.87
Heavy Vehicles (%)	7%	10%	2%	2%	3%	8%
Bus Blockages (#/hr)	0	0	0	0	0	10
Adj. Flow (vph)	387	348	791	351	181	698
Shared Lane Traffic (%)						
Lane Group Flow (vph)	387	348	1142	0	0	879
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		5.0	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0		5.0	58.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	11.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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)	21.7	21.7	52.3			58.3
Actuated g/C Ratio	0.24	0.24	0.58			0.65
v/c Ratio	0.95	0.70	0.60			0.77
Control Delay	70.0	20.5	12.2			17.1
Queue Delay	1.3	0.0	2.0			1.5
Total Delay	71.3	20.5	14.2			18.6
LOS	E	C	B			B
Approach Delay	47.3		14.2			18.6
Approach LOS	D		B			B
Queue Length 50th (ft)	216	66	186			166
Queue Length 95th (ft)	#391	169	m209			237
Internal Link Dist (ft)	530		268			366
Turn Bay Length (ft)		300				
Base Capacity (vph)	412	501	1896			1142
Starvation Cap Reductn	0	0	573			0
Spillback Cap Reductn	4	0	0			118
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.95	0.69	0.86			0.86

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 24.4

Intersection LOS: C

Intersection Capacity Utilization 123.5%

ICU Level of Service H

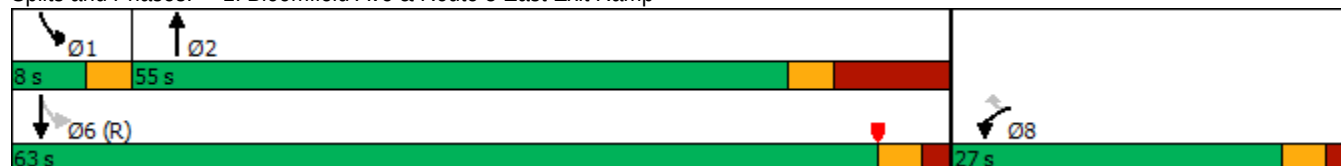
Analysis Period (min) 15

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: Bloomfield Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	172	433	618	337	308	678
Future Volume (vph)	172	433	618	337	308	678
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	13	11	11
Storage Length (ft)	200	0		0	0	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94	0.95	0.97			
Frt		0.850	0.953			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1601	1546	1764	0	1544	1749
Flt Permitted	0.950				0.087	
Satd. Flow (perm)	1501	1470	1764	0	141	1749
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		292	47			
Link Speed (mph)	30		30			30
Link Distance (ft)	533		1272			348
Travel Time (s)	12.1		28.9			7.9
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.92	0.94	0.95	0.94	0.91
Heavy Vehicles (%)	9%	1%	2%	5%	13%	5%
Adj. Flow (vph)	212	471	657	355	328	745
Shared Lane Traffic (%)						
Lane Group Flow (vph)	212	471	1012	0	328	745
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0		-4.0	0.0
Total Lost Time (s)	5.0	5.0	6.0		-1.0	12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	17.3	17.3	49.0		68.7	55.7
Actuated g/C Ratio	0.19	0.19	0.54		0.76	0.62
v/c Ratio	0.69	0.91	1.03		1.02	0.69
Control Delay	44.8	35.9	58.6		71.4	14.8
Queue Delay	0.0	0.0	0.0		0.0	6.2
Total Delay	44.8	35.9	58.6		71.4	21.0
LOS	D	D	E		E	C
Approach Delay	38.7		58.6			36.4
Approach LOS	D		E			D
Queue Length 50th (ft)	110	101	~610		~164	284
Queue Length 95th (ft)	155	#266	#851		m#284	m402
Internal Link Dist (ft)	453		1192			268
Turn Bay Length (ft)	200					
Base Capacity (vph)	391	579	981		320	1081
Starvation Cap Reductn	0	0	0		0	280
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.54	0.81	1.03		1.02	0.93

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020

Intersection Signal Delay: 45.1

Intersection LOS: D

Intersection Capacity Utilization 96.1%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

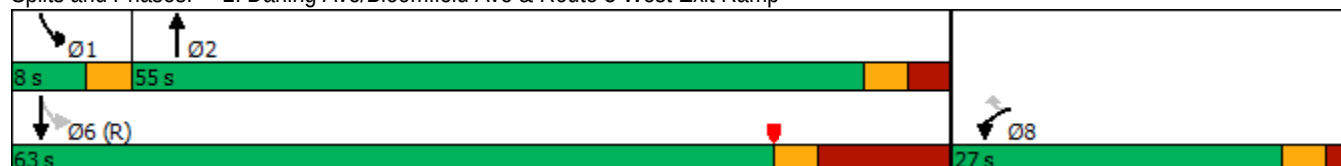
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp



Lanes, Volumes, Timings
3: Metro Blvd & EB Route 3

01/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗				↗
Traffic Volume (vph)	0	117	0	0	0	24
Future Volume (vph)	0	117	0	0	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	11	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				0.865
Flt Protected						
Satd. Flow (prot)	0	1489	0	0	0	1242
Flt Permitted						
Satd. Flow (perm)	0	1489	0	0	0	1242
Link Speed (mph)	30			30	30	
Link Distance (ft)	891			682	775	
Travel Time (s)	20.3			15.5	17.6	
Confl. Peds. (#/hr)		25	25		25	25
Peak Hour Factor	0.92	0.86	0.92	0.92	0.92	0.80
Heavy Vehicles (%)	2%	3%	2%	2%	2%	50%
Adj. Flow (vph)	0	136	0	0	0	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	136	0	0	0	30
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.09	1.04	1.04	1.04	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	15.0%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	473	267	12	5	298	219	0	0	0	190	33	494
Future Volume (vph)	473	267	12	5	298	219	0	0	0	190	33	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	13	13	16	11	11	11	10	10	10
Storage Length (ft)	100		0	0		110	0		0	0		150
Storage Lanes	1		0	0		1	0		0	0		1
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
Ped Bike Factor	0.97	1.00			1.00	0.92					0.95	0.92
Frt		0.993				0.850						0.850
Flt Protected	0.950				0.999						0.959	
Satd. Flow (prot)	1694	1579	0	0	1847	1777	0	0	0	0	1638	1378
Flt Permitted	0.402				0.993						0.959	
Satd. Flow (perm)	699	1579	0	0	1834	1633	0	0	0	0	1551	1266
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				217						214
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1090			2354			519			1272	
Travel Time (s)		24.8			53.5			11.8			28.9	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.97	0.83	0.80	0.80	0.85	0.90	0.92	0.92	0.92	0.82	0.81	0.94
Heavy Vehicles (%)	3%	3%	0%	0%	2%	3%	2%	2%	2%	4%	3%	5%
Bus Blockages (#/hr)	0	10	10	0	10	0	0	0	0	0	0	10
Parking (#/hr)		0	0									
Adj. Flow (vph)	488	322	15	6	351	243	0	0	0	232	41	526
Shared Lane Traffic (%)												
Lane Group Flow (vph)	488	337	0	0	357	243	0	0	0	0	273	526
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.20	1.04	0.96	1.01	0.85	1.04	1.04	1.04	1.09	1.09	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	1
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20				20	100	20
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				20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	0.0
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	
Detector 2 Size(ft)		6			6						6	

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0						0.0		
Turn Type	pm+pt	NA		Perm	NA	Perm				Perm	NA	pm+ov
Protected Phases	5	2			6						4	5
Permitted Phases	2			6		6				4		4
Detector Phase	5	2		6	6	6				4	4	5
Switch Phase												
Minimum Initial (s)	7.0	39.0		29.0	29.0	29.0				8.0	8.0	7.0
Minimum Split (s)	10.0	45.0		35.0	35.0	35.0				25.0	25.0	10.0
Total Split (s)	16.0	51.0		35.0	35.0	35.0				39.0	39.0	16.0
Total Split (%)	17.8%	56.7%		38.9%	38.9%	38.9%				43.3%	43.3%	17.8%
Maximum Green (s)	13.0	45.0		29.0	29.0	29.0				32.0	32.0	13.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
All-Red Time (s)	0.0	3.0		3.0	3.0	3.0				4.0	4.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0					0.0	0.0
Total Lost Time (s)	3.0	6.0			6.0	6.0					7.0	3.0
Lead/Lag	Lead			Lag	Lag	Lag						Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Recall Mode	None	Min		Min	Min	Min				None	None	None
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)	48.3	45.2			29.2	29.2					17.5	34.6
Actuated g/C Ratio	0.64	0.60			0.39	0.39					0.23	0.46
v/c Ratio	0.79	0.36			0.51	0.32					0.76	0.74
Control Delay	21.0	10.2			22.2	5.2					41.5	15.4
Queue Delay	0.0	0.0			0.0	0.0					0.0	0.0
Total Delay	21.0	10.2			22.2	5.2					41.5	15.4
LOS	C	B			C	A					D	B
Approach Delay		16.6			15.3						24.3	
Approach LOS		B			B						C	
Queue Length 50th (ft)	102	72			125	7					120	98
Queue Length 95th (ft)	#300	140			219	57					173	199
Internal Link Dist (ft)		1010			2274			439			1192	
Turn Bay Length (ft)	100					110						150
Base Capacity (vph)	616	944			705	761					658	713
Starvation Cap Reductn	0	0			0	0					0	0
Spillback Cap Reductn	0	0			0	0					0	0
Storage Cap Reductn	0	0			0	0					0	0
Reduced v/c Ratio	0.79	0.36			0.51	0.32					0.41	0.74

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 75.8

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 19.0

Intersection LOS: B

Intersection Capacity Utilization 91.4%

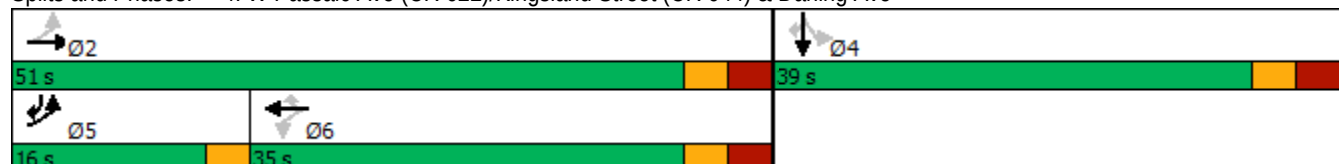
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave



Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	459	74	101	337	83	130	68	349	8	2	14
Future Volume (vph)	92	459	74	101	337	83	130	68	349	8	2	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	10	10	11
Storage Length (ft)	220		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
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
Ped Bike Factor	0.99	0.99		0.99	0.99			0.96			0.99	0.95
Frt		0.976			0.970			0.914				0.850
Flt Protected	0.950			0.950				0.988			0.963	
Satd. Flow (prot)	1685	1589	0	1570	1563	0	0	1585	0	0	1708	1561
Flt Permitted	0.342			0.275				0.916			0.722	
Satd. Flow (perm)	599	1589	0	450	1563	0	0	1457	0	0	1270	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			24			168				50
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2354			843			553			795	
Travel Time (s)		53.5			19.2			12.6			18.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.96	0.94	0.81	0.87	0.83	0.81	0.88	0.89	0.88	0.80	0.80	0.88
Heavy Vehicles (%)	0%	3%	8%	3%	4%	7%	2%	0%	1%	0%	0%	0%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	0	0
Adj. Flow (vph)	96	488	91	116	406	102	148	76	397	10	3	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	579	0	116	508	0	0	621	0	0	13	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.15	1.09	1.15	1.15	1.09	1.04	1.04	1.04	1.09	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2		6		6
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (%)	52.3%	52.3%		52.3%	52.3%		47.7%	47.7%		47.7%	47.7%	47.7%
Maximum Green (s)	28.0	28.0		28.0	28.0		24.0	24.0		24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-3.0				0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0				7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		Max	Max		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	21.0	21.0		21.0	21.0		17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effect Green (s)	28.1	28.1		28.1	28.1		25.4			22.4	22.4	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.40			0.35	0.35	
v/c Ratio	0.36	0.81		0.59	0.72		0.91			0.03	0.03	
Control Delay	17.7	27.4		30.0	21.9		33.3			13.4	0.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0			0.0	0.0	
Total Delay	17.7	27.4		30.0	21.9		33.3			13.4	0.6	
LOS	B	C		C	C		C			B	A	
Approach Delay		26.0			23.4		33.3			6.3		
Approach LOS		C			C		C			A		
Queue Length 50th (ft)	25	189		34	153		163			3	0	
Queue Length 95th (ft)	62	#371		#101	230		#359			12	2	
Internal Link Dist (ft)		2274			763		473			715		
Turn Bay Length (ft)	220			50								
Base Capacity (vph)	265	712		198	703		717			480	591	
Starvation Cap Reductn	0	0		0	0		0			0	0	
Spillback Cap Reductn	0	0		0	0		0			0	0	
Storage Cap Reductn	0	0		0	0		0			0	0	
Reduced v/c Ratio	0.36	0.81		0.59	0.72		0.87			0.03	0.03	
Intersection Summary												
Area Type:	Other											
Cycle Length:	65											
Actuated Cycle Length:	63.5											
Natural Cycle:	65											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.91											

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection Signal Delay: 27.2

Intersection LOS: C

Intersection Capacity Utilization 88.5%

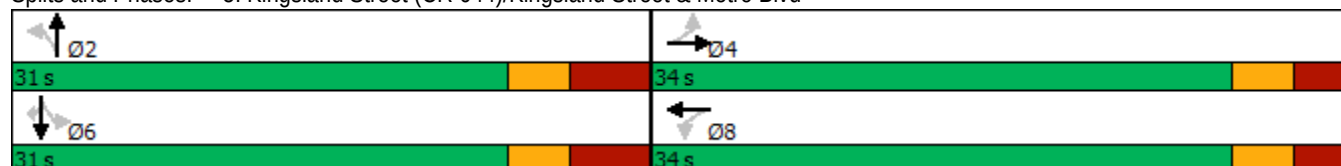
ICU Level of Service E

Analysis Period (min) 15

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

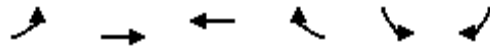
Queue shown is maximum after two cycles.

Splits and Phases: 5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd



Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

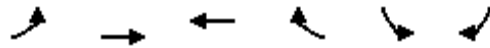
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	62	754	505	113	4	16
Future Volume (vph)	62	754	505	113	4	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.973			0.850
Flt Protected		0.996			0.950	
Satd. Flow (prot)	0	2103	2030	0	1685	1409
Flt Permitted		0.996			0.950	
Satd. Flow (perm)	0	2103	2030	0	1685	1409
Link Speed (mph)		30	30		30	
Link Distance (ft)		843	832		283	
Travel Time (s)		19.2	18.9		6.4	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.81	0.93	0.92	0.81	0.80	0.80
Heavy Vehicles (%)	2%	2%	4%	0%	0%	7%
Adj. Flow (vph)	77	811	549	140	5	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	888	689	0	5	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.85	0.85	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	96.0%			ICU Level of Service F		
Analysis Period (min)	15					

Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	398	360	302	1	4	316
Future Volume (vph)	398	360	302	1	4	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	14	14	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.867	
Flt Protected		0.975			0.999	
Satd. Flow (prot)	0	1811	1754	0	1652	0
Flt Permitted		0.975			0.999	
Satd. Flow (perm)	0	1811	1754	0	1652	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		832	315		293	
Travel Time (s)		18.9	7.2		6.7	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.85	0.84	0.82	0.80	0.80	0.91
Heavy Vehicles (%)	1%	2%	4%	0%	0%	3%
Bus Blockages (#/hr)	10	10	0	0	0	0
Parking (#/hr)			0			
Adj. Flow (vph)	468	429	368	1	5	347
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	897	369	0	352	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.96	1.01	1.05	0.92	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 89.0% ICU Level of Service E

Analysis Period (min) 15

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	2	393	121	71	387	6	241	81	148	13	90	27
Future Volume (vph)	2	393	121	71	387	6	241	81	148	13	90	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	11	11	11	11	11	11	16	16	16
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.96			0.98	
Frt		0.970			0.998			0.947			0.971	
Flt Protected					0.992			0.977			0.995	
Satd. Flow (prot)	0	1823	0	0	1673	0	0	2905	0	0	1725	0
Flt Permitted		0.998			0.846			0.782			0.918	
Satd. Flow (perm)	0	1819	0	0	1425	0	0	2286	0	0	1589	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		30			2							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		742			1021			370			382	
Travel Time (s)		16.9			23.2			8.4			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.89	0.95	0.81	0.87	0.80	0.96	0.92	0.81	0.80	0.83	0.80
Heavy Vehicles (%)	0%	2%	4%	6%	4%	0%	1%	0%	2%	0%	4%	20%
Bus Blockages (#/hr)	10	10	10	10	10	10	0	10	10	0	0	0
Parking (#/hr)								0	0		0	
Adj. Flow (vph)	3	442	127	88	445	8	251	88	183	16	108	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	572	0	0	541	0	0	522	0	0	158	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.97	0.92	1.04	1.10	1.04	1.04	1.14	1.04	0.85	0.97	0.85
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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	

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases	4			8						6		
Permitted Phases	4			8			2	2		6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		36.0	36.0		28.0	28.0		28.0	28.0	
Total Split (%)	56.3%	56.3%		56.3%	56.3%		43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	30.0	30.0		30.0	30.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	6.0			6.0			6.0			6.0		
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	33.7			33.7			18.3			18.3		
Actuated g/C Ratio	0.53			0.53			0.29			0.29		
v/c Ratio	0.59			0.72			0.80			0.35		
Control Delay	13.9			20.6			30.5			19.3		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	13.9			20.6			30.5			19.3		
LOS	B			C			C			B		
Approach Delay	13.9			20.6			30.5			19.3		
Approach LOS	B			C			C			B		
Queue Length 50th (ft)	134			150			96			48		
Queue Length 95th (ft)	248			#322			139			78		
Internal Link Dist (ft)	662			941			290			302		
Turn Bay Length (ft)												
Base Capacity (vph)	970			750			785			546		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.59			0.72			0.66			0.29		
Intersection Summary												
Area Type:	Other											
Cycle Length: 64												
Actuated Cycle Length: 64												
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow												
Natural Cycle: 60												

Lanes, Volumes, Timings

8: Franklin Avenue & Kingsland Street

01/10/2020

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 21.2

Intersection LOS: C

Intersection Capacity Utilization 88.4%

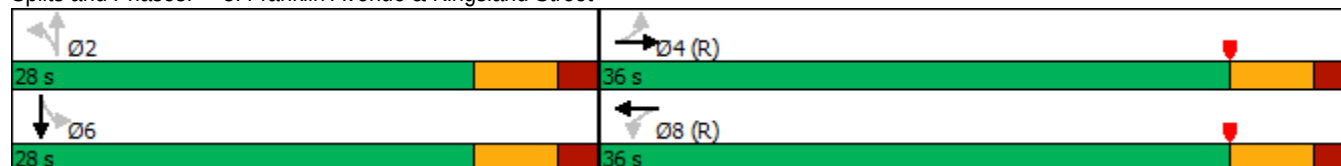
ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 8: Franklin Avenue & Kingsland Street



Lanes, Volumes, Timings
9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	305	54	16	275	83	77	440	42	47	160	112
Future Volume (vph)	195	305	54	16	275	83	77	440	42	47	160	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	150		0	0		0	0		0	70		0
Storage Lanes	1		0	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99			0.99		0.99	0.98	
Frt		0.975			0.967			0.989			0.938	
Flt Protected	0.950				0.998			0.993		0.950		
Satd. Flow (prot)	1711	1658	0	0	1605	0	0	1543	0	1620	1504	0
Flt Permitted	0.437				0.971			0.906		0.310		
Satd. Flow (perm)	775	1658	0	0	1560	0	0	1404	0	524	1504	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1021			651			384			1036	
Travel Time (s)		23.2			14.8			8.7			23.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.86	0.93	0.81	0.80	0.93	0.81	0.86	0.86	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	3%	2%	0%	5%	5%	2%	1%	2%	4%	2%	7%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	10	10
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	227	328	67	20	296	102	90	512	52	58	198	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	395	0	0	418	0	0	654	0	58	336	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.10	1.04	1.04	1.10	1.04	1.09	1.25	1.09	1.09	1.15	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			-4.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0			2.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings

9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	23.0	23.0		23.0	23.0		22.0	22.0		22.0	22.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0			33.0			39.0		35.0	35.0	
Actuated g/C Ratio	0.41	0.41			0.41			0.49		0.44	0.44	
v/c Ratio	0.71	0.58			0.65			0.96		0.25	0.51	
Control Delay	34.6	22.3			24.7			47.3		18.0	19.7	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	34.6	22.3			24.7			47.3		18.0	19.7	
LOS	C	C			C			D		B	B	
Approach Delay		26.8			24.7			47.3			19.5	
Approach LOS		C			C			D			B	
Queue Length 50th (ft)	92	147			163			298		18	117	
Queue Length 95th (ft)	#188	236			263			#489		40	166	
Internal Link Dist (ft)		941			571			304			956	
Turn Bay Length (ft)	150									70		
Base Capacity (vph)	319	683			643			684		229	658	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.71	0.58			0.65			0.96		0.25	0.51	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 132.6%

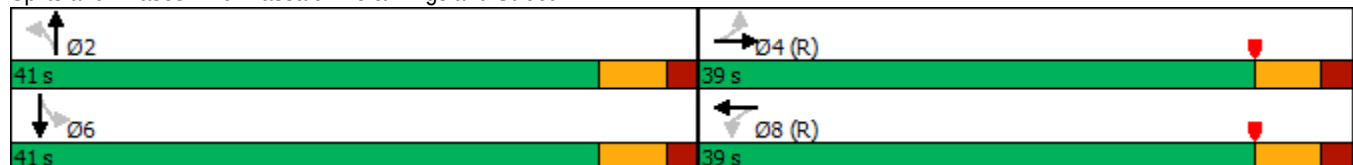
ICU Level of Service H

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Passaic Ave & Kingsland Street



Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	170	117	473	190	101	558
Future Volume (vph)	170	117	473	190	101	558
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.960			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1829	1482	3293	0	1745	1783
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1829	1482	3293	0	1745	1783
Link Speed (mph)	30		30			30
Link Distance (ft)	450		534			209
Travel Time (s)	10.2		12.1			4.8
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.81	0.84	0.93	0.84	0.92
Heavy Vehicles (%)	2%	9%	2%	1%	0%	3%
Adj. Flow (vph)	210	144	563	204	120	607
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	144	767	0	120	607
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	47.7%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	5	6	70	0	181	4	476	271	330	396	2
Future Volume (vph)	6	5	6	70	0	181	4	476	271	330	396	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	11	11	11
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
Ped Bike Factor												
Frt		0.951				0.850		0.949			0.999	
Flt Protected		0.982			0.950					0.950		
Satd. Flow (prot)	0	1627	0	0	1558	1516	0	2013	0	1678	1765	0
Flt Permitted		0.982			0.950					0.950		
Satd. Flow (perm)	0	1627	0	0	1558	1516	0	2013	0	1678	1765	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		309			239			1482			534	
Travel Time (s)		7.0			5.4			33.7			12.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.80	0.80	0.81	0.92	0.92	0.80	0.94	0.87	0.95	0.98	0.80
Heavy Vehicles (%)	0%	20%	0%	12%	2%	3%	25%	1%	2%	4%	4%	0%
Adj. Flow (vph)	8	6	8	86	0	197	5	506	311	347	404	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	86	197	0	822	0	347	407	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.85	0.85	0.85	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	85.2%											
Analysis Period (min)	15											
ICU Level of Service E												

Lanes, Volumes, Timings

12: High Street & W Passaic Street/W Passaic Ave (CR 622)

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	694	38	13	775	4	59	11	56	2	7	0
Future Volume (vph)	4	694	38	13	775	4	59	11	56	2	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt	0.992				0.999				0.940			
Flt Protected					0.999				0.977		0.988	
Satd. Flow (prot)	0	1610	0	0	1588	0	0	1492	0	0	1633	0
Flt Permitted					0.999				0.977		0.988	
Satd. Flow (perm)	0	1610	0	0	1588	0	0	1492	0	0	1633	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	341				1090				336		292	
Travel Time (s)	7.8				24.8				7.6		6.6	
Confl. Peds. (#/hr)	25			25	25			25	25			25
Peak Hour Factor	0.80	0.95	0.81	0.81	0.91	0.98	0.81	0.80	0.81	0.80	0.80	0.92
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	0%	4%	0%	0%	2%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	5	731	47	16	852	4	73	14	69	3	9	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	783	0	0	872	0	0	156	0	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	11				11				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15	9		15	9		15	9		15	9	
Sign Control	Free				Free				Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	71.7%											
Analysis Period (min)	15											
ICU Level of Service C												

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	225	247	341	175	80	297
Future Volume (vph)	225	247	341	175	80	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)	0	80		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Ped Bike Factor	0.96	0.95		0.92		0.99
Frt		0.850		0.850		
Flt Protected	0.950					0.989
Satd. Flow (prot)	1662	1516	3388	1531	0	3437
Flt Permitted	0.950					0.771
Satd. Flow (perm)	1599	1442	3388	1406	0	2660
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		250		216		
Link Speed (mph)	30		30			30
Link Distance (ft)	344		504			159
Travel Time (s)	7.8		11.5			3.6
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.87	0.85	0.83	0.81	0.81	0.87
Heavy Vehicles (%)	5%	3%	3%	2%	0%	5%
Adj. Flow (vph)	259	291	411	216	99	341
Shared Lane Traffic (%)						
Lane Group Flow (vph)	259	291	411	216	0	440
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	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	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0	44.0	5.0	58.0
Minimum Split (s)	23.0	23.0	55.0	55.0	8.0	63.0
Total Split (s)	27.0	27.0	55.0	55.0	8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%	61.1%	8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0	44.0	5.0	58.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	8.0	8.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	11.0	11.0		5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	Min	Min	None	C-Min
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 Effect Green (s)	17.6	17.6	56.4	56.4		62.4
Actuated g/C Ratio	0.20	0.20	0.63	0.63		0.69
v/c Ratio	0.80	0.60	0.19	0.22		0.24
Control Delay	52.1	12.0	7.4	1.5		6.0
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	52.1	12.0	7.4	1.5		6.0
LOS	D	B	A	A		A
Approach Delay	30.8		5.4			6.0
Approach LOS	C		A			A
Queue Length 50th (ft)	140	19	43	0		43
Queue Length 95th (ft)	206	74	67	7		69
Internal Link Dist (ft)	264		424			79
Turn Bay Length (ft)		80		50		
Base Capacity (vph)	406	541	2121	961		1843
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.64	0.54	0.19	0.22		0.24

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

Intersection Signal Delay: 14.2

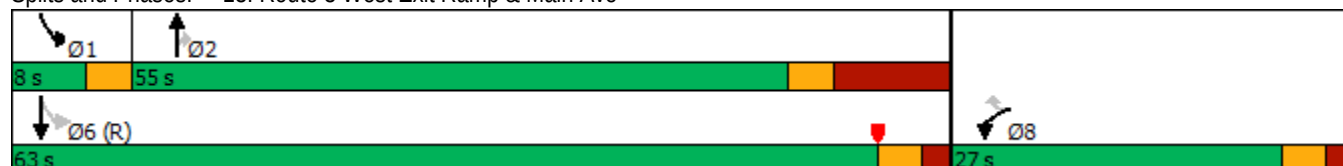
Intersection LOS: B

Intersection Capacity Utilization 98.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 13: Route 3 West Exit Ramp & Main Ave



Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	65	119	397	402	204	318
Future Volume (vph)	65	119	397	402	204	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	11	12	12
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.96			1.00
Frt		0.850	0.922			
Flt Protected	0.950					0.981
Satd. Flow (prot)	1646	1553	3023	0	0	3366
Flt Permitted	0.950					0.549
Satd. Flow (perm)	1584	1477	3023	0	0	1875
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		140	472			
Link Speed (mph)	30		30			30
Link Distance (ft)	464		896			504
Travel Time (s)	10.5		20.4			11.5
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.85	0.88	0.83	0.87	0.87
Heavy Vehicles (%)	6%	4%	3%	1%	4%	6%
Adj. Flow (vph)	80	140	451	484	234	366
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	140	935	0	0	600
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.04	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	6.0			12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	9.2	9.2	69.8			63.8
Actuated g/C Ratio	0.10	0.10	0.78			0.71
v/c Ratio	0.48	0.51	0.38			0.45
Control Delay	47.0	13.4	2.0			8.1
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	47.0	13.4	2.0			8.1
LOS	D	B	A			A
Approach Delay	25.7		2.0			8.1
Approach LOS	C		A			A
Queue Length 50th (ft)	44	0	27			99
Queue Length 95th (ft)	76	44	51			123
Internal Link Dist (ft)	384		816			424
Turn Bay Length (ft)		110				
Base Capacity (vph)	402	466	2450			1329
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.20	0.30	0.38			0.45

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

Intersection Signal Delay: 7.1

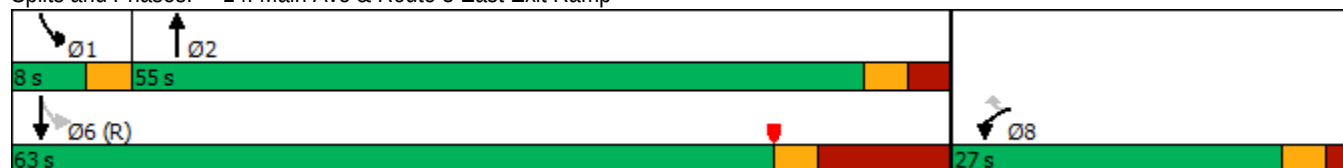
Intersection LOS: A

Intersection Capacity Utilization 113.5%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 14: Main Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	580	24	2	0	67	44	6	1	0	57	1	178
Future Volume (vph)	580	24	2	0	67	44	6	1	0	57	1	178
Ideal Flow (vphpl)	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	12	12	15
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		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
Ped Bike Factor												
Frt		0.999			0.947						0.901	
Flt Protected		0.955						0.957			0.987	
Satd. Flow (prot)	0	1982	0	0	2015	0	0	1758	0	0	1610	0
Flt Permitted		0.955						0.957			0.987	
Satd. Flow (perm)	0	1982	0	0	2015	0	0	1758	0	0	1610	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			258			233			196	
Travel Time (s)		5.4			5.9			5.3			4.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.93	0.80	0.80	0.92	0.81	0.81	0.80	0.80	0.92	0.81	0.80	0.92
Heavy Vehicles (%)	3%	13%	50%	2%	2%	0%	0%	0%	2%	2%	0%	6%
Adj. Flow (vph)	624	30	3	0	83	54	8	1	0	70	1	193
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	657	0	0	137	0	0	9	0	0	264	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.88	0.85	0.85	0.85	0.85	0.85	1.04	1.04	1.04	1.00	1.00	0.88
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	89.5%											
Analysis Period (min)	15											
ICU Level of Service E												

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	407	243	762	446	181	800
Future Volume (vph)	407	243	762	446	181	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Storage Length (ft)	0	300		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.97			
Frt		0.850	0.941			
Flt Protected	0.950					0.991
Satd. Flow (prot)	1770	1482	3128	0	0	3296
Flt Permitted	0.950					0.519
Satd. Flow (perm)	1703	1409	3128	0	0	1726
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		204	237			
Link Speed (mph)	30		30			30
Link Distance (ft)	610		348			446
Travel Time (s)	13.9		7.9			10.1
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.93	0.83	0.93	0.83	0.92	0.92
Heavy Vehicles (%)	2%	9%	2%	1%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	10
Adj. Flow (vph)	438	293	819	537	197	870
Shared Lane Traffic (%)						
Lane Group Flow (vph)	438	293	1356	0	0	1067
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		5.0	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0		5.0	58.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	11.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	22.0	52.0			58.0
Actuated g/C Ratio	0.24	0.24	0.58			0.64
v/c Ratio	1.01	0.59	0.71			1.17dl
Control Delay	82.7	15.1	11.6			35.6
Queue Delay	13.1	0.0	8.5			42.6
Total Delay	95.7	15.1	20.1			78.2
LOS	F	B	C			E
Approach Delay	63.4		20.1			78.2
Approach LOS	E		C			E
Queue Length 50th (ft)	~255	41	236			266
Queue Length 95th (ft)	#447	100	m223			#446
Internal Link Dist (ft)	530		268			366
Turn Bay Length (ft)		300				
Base Capacity (vph)	432	498	1907			1112
Starvation Cap Reductn	0	0	522			0
Spillback Cap Reductn	17	0	0			165
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	1.06	0.59	0.98			1.13

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 49.8

Intersection LOS: D

Intersection Capacity Utilization 125.0%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Bloomfield Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	299	561	647	255	323	884
Future Volume (vph)	299	561	647	255	323	884
Ideal Flow (vphpl)	1900	1900	1900	1900	2110	1900
Lane Width (ft)	11	11	13	13	11	11
Storage Length (ft)	200	0		0	0	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94	0.95	0.98			
Frt		0.850	0.962			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1546	1804	0	1863	1801
Flt Permitted	0.950				0.087	
Satd. Flow (perm)	1620	1470	1804	0	171	1801
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		257	35			
Link Speed (mph)	30		30			30
Link Distance (ft)	533		1272			348
Travel Time (s)	12.1		28.9			7.9
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.91	0.90	0.85	0.86	0.99	0.96
Heavy Vehicles (%)	1%	1%	2%	3%	4%	2%
Adj. Flow (vph)	329	623	761	297	326	921
Shared Lane Traffic (%)						
Lane Group Flow (vph)	329	623	1058	0	326	921
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.96	0.96	0.91	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	-3.0	-1.0		-5.0	0.0
Total Lost Time (s)	5.0	2.0	5.0		-2.0	12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	25.0	50.0		65.0	51.0
Actuated g/C Ratio	0.24	0.28	0.56		0.72	0.57
v/c Ratio	0.78	1.05	1.04		1.05	0.90
Control Delay	46.3	71.8	60.5		64.5	21.9
Queue Delay	0.0	18.8	0.7		0.0	47.5
Total Delay	46.3	90.6	61.3		64.5	69.4
LOS	D	F	E		E	E
Approach Delay	75.3		61.3			68.1
Approach LOS	E		E			E
Queue Length 50th (ft)	175	~274	~648		~138	410
Queue Length 95th (ft)	#305	#485	#805		m#148	m446
Internal Link Dist (ft)	453		1192			268
Turn Bay Length (ft)	200					
Base Capacity (vph)	422	593	1017		311	1020
Starvation Cap Reductn	0	0	0		0	277
Spillback Cap Reductn	0	33	2		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.78	1.11	1.04		1.05	1.24

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020

Intersection Signal Delay: 68.0

Intersection LOS: E

Intersection Capacity Utilization 94.8%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

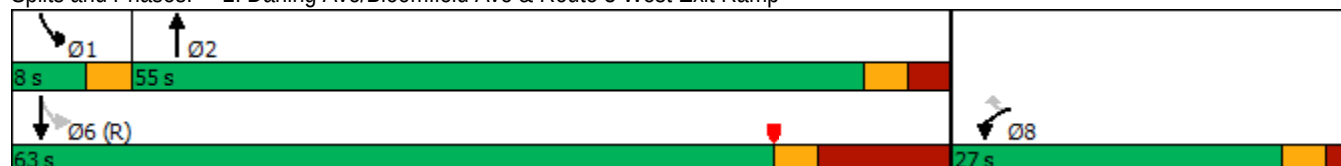
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp



Lanes, Volumes, Timings
3: Metro Blvd & EB Route 3

01/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗				↗
Traffic Volume (vph)	0	14	0	0	0	62
Future Volume (vph)	0	14	0	0	0	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	11	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				0.865
Flt Protected						
Satd. Flow (prot)	0	1534	0	0	0	1725
Flt Permitted						
Satd. Flow (perm)	0	1534	0	0	0	1725
Link Speed (mph)	30			30	30	
Link Distance (ft)	891			682	775	
Travel Time (s)	20.3			15.5	17.6	
Confl. Peds. (#/hr)		25	25		25	25
Peak Hour Factor	0.92	0.80	0.92	0.92	0.92	0.81
Heavy Vehicles (%)	2%	0%	2%	2%	2%	8%
Adj. Flow (vph)	0	18	0	0	0	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	18	0	0	0	77
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.09	1.04	1.04	1.04	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.6%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	488	233	16	7	301	243	0	0	0	280	83	588
Future Volume (vph)	488	233	16	7	301	243	0	0	0	280	83	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	13	13	16	11	11	11	10	10	10
Storage Length (ft)	100		0	0		110	0		0	0		150
Storage Lanes	1		0	0		1	0		0	0		1
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
Ped Bike Factor	0.97	0.99			1.00	0.92					0.95	0.92
Frt		0.990				0.850						0.850
Flt Protected	0.950				0.999						0.964	
Satd. Flow (prot)	1711	1602	0	0	1865	1777	0	0	0	0	1684	1419
Flt Permitted	0.384				0.989						0.964	
Satd. Flow (perm)	673	1602	0	0	1844	1633	0	0	0	0	1604	1303
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				240						226
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1090			2354			519			1272	
Travel Time (s)		24.8			53.5			11.8			28.9	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.91	0.82	0.80	0.80	0.89	0.93	0.92	0.92	0.92	0.90	0.83	0.85
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	2%	2%	2%	2%	0%	2%
Bus Blockages (#/hr)	0	10	10	0	10	0	0	0	0	0	0	10
Parking (#/hr)		0	0									
Adj. Flow (vph)	536	284	20	9	338	261	0	0	0	311	100	692
Shared Lane Traffic (%)												
Lane Group Flow (vph)	536	304	0	0	347	261	0	0	0	0	411	692
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.20	1.04	0.96	1.01	0.85	1.04	1.04	1.04	1.09	1.09	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	1
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20				20	100	20
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				20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	0.0
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	
Detector 2 Size(ft)		6			6						6	

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0						0.0		
Turn Type	pm+pt	NA		Perm	NA	Perm				Perm	NA	pm+ov
Protected Phases	5	2			6						4	5
Permitted Phases	2			6		6				4		4
Detector Phase	5	2		6	6	6				4	4	5
Switch Phase												
Minimum Initial (s)	7.0	39.0		29.0	29.0	29.0				8.0	8.0	7.0
Minimum Split (s)	10.0	45.0		35.0	35.0	35.0				25.0	25.0	10.0
Total Split (s)	16.0	51.0		35.0	35.0	35.0				39.0	39.0	16.0
Total Split (%)	17.8%	56.7%		38.9%	38.9%	38.9%				43.3%	43.3%	17.8%
Maximum Green (s)	13.0	45.0		29.0	29.0	29.0				32.0	32.0	13.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
All-Red Time (s)	0.0	3.0		3.0	3.0	3.0				4.0	4.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0					0.0	0.0
Total Lost Time (s)	3.0	6.0			6.0	6.0					7.0	3.0
Lead/Lag	Lead			Lag	Lag	Lag						Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Recall Mode	None	Min		Min	Min	Min				None	None	None
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 Effect Green (s)	48.2	45.2			29.1	29.1					24.5	41.6
Actuated g/C Ratio	0.58	0.55			0.35	0.35					0.30	0.50
v/c Ratio	0.97	0.35			0.53	0.36					0.87	0.88
Control Delay	47.9	12.9			26.5	5.6					46.4	25.5
Queue Delay	0.0	0.0			0.0	0.0					0.0	0.0
Total Delay	47.9	12.9			26.5	5.6					46.4	25.5
LOS	D	B			C	A					D	C
Approach Delay		35.3			17.5						33.3	
Approach LOS		D			B						C	
Queue Length 50th (ft)	160	83			144	7					199	184
Queue Length 95th (ft)	#468	141			249	61					275	292
Internal Link Dist (ft)		1010			2274			439			1192	
Turn Bay Length (ft)	100					110						150
Base Capacity (vph)	555	877			649	730					622	785
Starvation Cap Reductn	0	0			0	0					0	0
Spillback Cap Reductn	0	0			0	0					0	0
Storage Cap Reductn	0	0			0	0					0	0
Reduced v/c Ratio	0.97	0.35			0.53	0.36					0.66	0.88

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 82.8

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 30.2

Intersection LOS: C

Intersection Capacity Utilization 99.0%

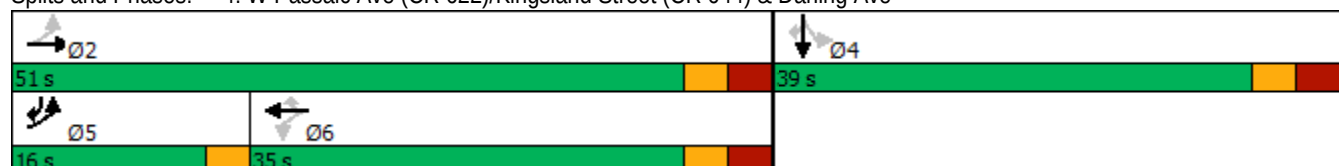
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave



Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	343	150	215	397	16	93	2	135	30	19	61
Future Volume (vph)	20	343	150	215	397	16	93	2	135	30	19	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	10	10	11
Storage Length (ft)	220		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
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
Ped Bike Factor	0.99	0.98		0.99	1.00			0.96			0.99	0.95
Frt		0.952			0.994			0.921				0.850
Flt Protected	0.950			0.950				0.980			0.971	
Satd. Flow (prot)	1685	1555	0	1617	1668	0	0	1578	0	0	1691	1561
Flt Permitted	0.448			0.355				0.842			0.678	
Satd. Flow (perm)	784	1555	0	598	1668	0	0	1339	0	0	1166	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			4			124				75
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2354			843			553			795	
Travel Time (s)		53.5			19.2			12.6			18.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.87	0.81	0.90	0.89	0.80	0.81	0.80	0.81	0.83	0.80	0.81
Heavy Vehicles (%)	0%	2%	4%	0%	1%	6%	3%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	0	0
Adj. Flow (vph)	25	394	185	239	446	20	115	3	167	36	24	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	579	0	239	466	0	0	285	0	0	60	75
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.15	1.09	1.15	1.15	1.09	1.04	1.04	1.04	1.09	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2		6		6
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (%)	52.3%	52.3%		52.3%	52.3%		47.7%	47.7%		47.7%	47.7%	47.7%
Maximum Green (s)	28.0	28.0		28.0	28.0		24.0	24.0		24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			7.0			7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		Max	Max		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	21.0	21.0		21.0	21.0		17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effect Green (s)	28.9	28.9		28.9	28.9			12.1			12.1	12.1
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.22			0.22	0.22
v/c Ratio	0.06	0.68		0.75	0.52			0.72			0.23	0.19
Control Delay	8.5	15.6		31.3	12.0			21.5			18.3	5.9
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	8.5	15.6		31.3	12.0			21.5			18.3	5.9
LOS	A	B		C	B			C			B	A
Approach Delay		15.3			18.5			21.5			11.4	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	3	104		50	80			44			15	0
Queue Length 95th (ft)	15	#307		#202	203			88			34	19
Internal Link Dist (ft)		2274			763			473			715	
Turn Bay Length (ft)	220			50								
Base Capacity (vph)	419	852		319	893			666			520	700
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.06	0.68		0.75	0.52			0.43			0.12	0.11

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 54.1

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.75

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 77.2%

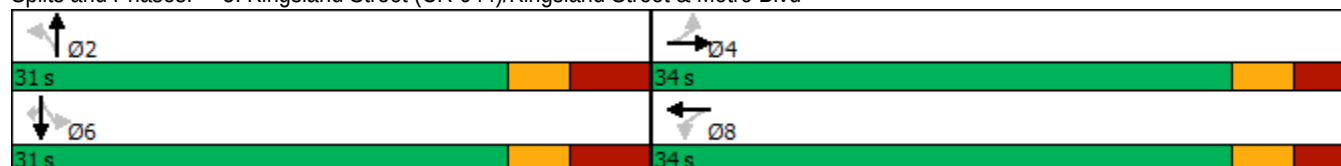
ICU Level of Service D

Analysis Period (min) 15

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

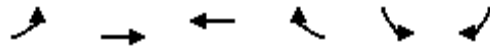
Queue shown is maximum after two cycles.

Splits and Phases: 5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd



Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

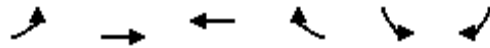
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	505	605	11	17	23
Future Volume (vph)	3	505	605	11	17	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998			0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	2111	2125	0	1685	1507
Flt Permitted					0.950	
Satd. Flow (perm)	0	2111	2125	0	1685	1507
Link Speed (mph)		30	30		30	
Link Distance (ft)		843	832		283	
Travel Time (s)		19.2	18.9		6.4	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.80	0.93	0.89	0.92	0.80	0.80
Heavy Vehicles (%)	0%	2%	1%	9%	0%	0%
Adj. Flow (vph)	4	543	680	12	21	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	547	692	0	21	29
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.85	0.85	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.4%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶↷	
Traffic Volume (vph)	201	321	314	0	7	302
Future Volume (vph)	201	321	314	0	7	302
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	14	14	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.869	
Flt Protected		0.982			0.999	
Satd. Flow (prot)	0	1833	1788	0	1704	0
Flt Permitted		0.982			0.999	
Satd. Flow (perm)	0	1833	1788	0	1704	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		832	315		293	
Travel Time (s)		18.9	7.2		6.7	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.97	0.91	0.83	0.80	0.80	0.91
Heavy Vehicles (%)	1%	1%	2%	0%	0%	0%
Bus Blockages (#/hr)	10	10	0	0	0	0
Parking (#/hr)			0			
Adj. Flow (vph)	207	353	378	0	9	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	560	378	0	341	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.96	1.01	1.05	0.92	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	75.9%			ICU Level of Service D		
Analysis Period (min)	15					

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	400	169	88	395	4	172	70	133	31	166	22
Future Volume (vph)	5	400	169	88	395	4	172	70	133	31	166	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	11	11	11	11	11	11	16	16	16
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98			1.00			0.96			0.99	
Frt		0.956			0.999			0.946			0.985	
Flt Protected					0.991			0.977			0.993	
Satd. Flow (prot)	0	1801	0	0	1708	0	0	2900	0	0	1868	0
Flt Permitted		0.995			0.795			0.695			0.871	
Satd. Flow (perm)	0	1792	0	0	1368	0	0	2037	0	0	1633	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		51			1							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		742			1021			370			382	
Travel Time (s)		16.9			23.2			8.4			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.93	0.81	0.81	0.83	0.80	0.84	0.88	0.83	0.81	0.88	0.80
Heavy Vehicles (%)	0%	2%	1%	3%	2%	0%	1%	0%	2%	0%	1%	0%
Bus Blockages (#/hr)	10	10	10	10	10	10	0	10	10	0	0	0
Parking (#/hr)								0	0		0	
Adj. Flow (vph)	6	430	209	109	476	5	205	80	160	38	189	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	645	0	0	590	0	0	445	0	0	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.97	0.92	1.04	1.10	1.04	1.04	1.14	1.04	0.85	0.97	0.85
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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	

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases	4			8						6		
Permitted Phases	4			8			2	2		6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		36.0	36.0		28.0	28.0		28.0	28.0	
Total Split (%)	56.3%	56.3%		56.3%	56.3%		43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	30.0	30.0		30.0	30.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	6.0			6.0			6.0			6.0		
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	34.5			34.5			17.5			17.5		
Actuated g/C Ratio	0.54			0.54			0.27			0.27		
v/c Ratio	0.65			0.80			0.89dl			0.57		
Control Delay	14.8			25.0			32.4			24.5		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	14.8			25.0			32.4			24.5		
LOS	B			C			C			C		
Approach Delay	14.8			25.0			32.4			24.5		
Approach LOS	B			C			C			C		
Queue Length 50th (ft)	152			173			83			84		
Queue Length 95th (ft)	300			#351			117			132		
Internal Link Dist (ft)	662			941			290			302		
Turn Bay Length (ft)												
Base Capacity (vph)	988			736			700			561		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.65			0.80			0.64			0.45		
Intersection Summary												
Area Type:	Other											
Cycle Length: 64												
Actuated Cycle Length: 64												
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow												
Natural Cycle: 60												

Lanes, Volumes, Timings

8: Franklin Avenue & Kingsland Street

01/10/2020

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 23.3

Intersection LOS: C

Intersection Capacity Utilization 105.6%

ICU Level of Service G

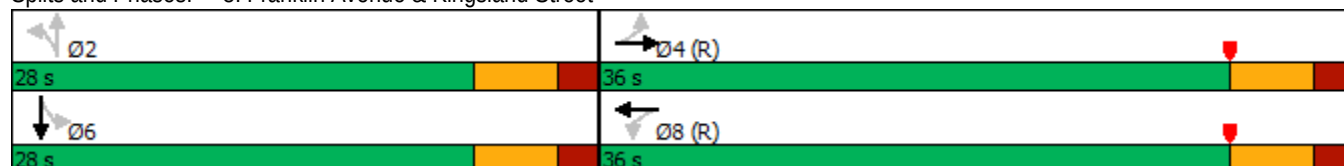
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Franklin Avenue & Kingsland Street



Lanes, Volumes, Timings
9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	306	91	56	329	160	42	421	52	148	516	116
Future Volume (vph)	167	306	91	56	329	160	42	421	52	148	516	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	150		0	0		0	0		0	70		0
Storage Lanes	1		0	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.98			0.99		0.99	0.99	
Frt		0.962			0.962			0.986			0.971	
Flt Protected	0.950				0.995			0.996		0.950		
Satd. Flow (prot)	1711	1658	0	0	1634	0	0	1557	0	1652	1619	0
Flt Permitted	0.291				0.870			0.648		0.346		
Satd. Flow (perm)	519	1658	0	0	1427	0	0	1012	0	595	1619	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1021			651			384			1036	
Travel Time (s)		23.2			14.8			8.7			23.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.90	0.92	0.81	0.81	0.83	0.87	0.97	0.97	0.97	0.82	0.85	0.81
Heavy Vehicles (%)	2%	1%	1%	0%	3%	0%	0%	0%	2%	2%	1%	2%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	10	10
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	186	333	112	69	396	184	43	434	54	180	607	143
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	445	0	0	649	0	0	531	0	180	750	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.10	1.04	1.04	1.10	1.04	1.09	1.25	1.09	1.09	1.15	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			-3.0			-5.0		0.0	-1.0	
Total Lost Time (s)	6.0	6.0			3.0			1.0		6.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings

9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	23.0	23.0		23.0	23.0		22.0	22.0		22.0	22.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0			36.0			40.0		35.0	36.0	
Actuated g/C Ratio	0.41	0.41			0.45			0.50		0.44	0.45	
v/c Ratio	0.87	0.65			1.01			1.05		0.69	1.03	
Control Delay	61.1	24.4			62.8			76.8		35.2	65.7	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	61.1	24.4			62.8			76.8		35.2	65.7	
LOS	E	C			E			E		D	E	
Approach Delay		35.2			62.8			76.8			59.8	
Approach LOS		D			E			E			E	
Queue Length 50th (ft)	83	173			~321			~294		70	~407	
Queue Length 95th (ft)	#206	275			#476			#480		#147	#560	
Internal Link Dist (ft)		941			571			304			956	
Turn Bay Length (ft)	150									70		
Base Capacity (vph)	214	683			642			506		260	728	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.87	0.65			1.01			1.05		0.69	1.03	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 58.2

Intersection LOS: E

Intersection Capacity Utilization 130.8%

ICU Level of Service H

Analysis Period (min) 15

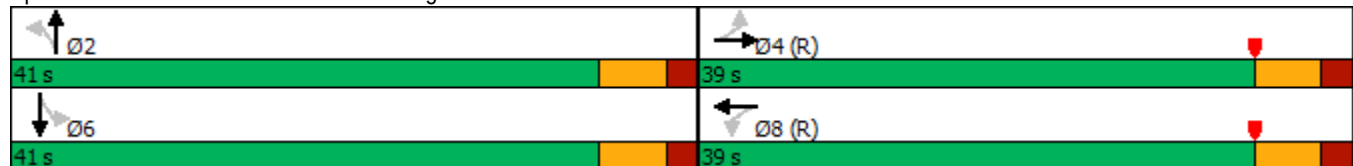
~ Volume exceeds capacity, queue is theoretically infinite.

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: 9: Passaic Ave & Kingsland Street



Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	164	188	513	148	82	657
Future Volume (vph)	164	188	513	148	82	657
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.965			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1865	1553	3342	0	1728	1801
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1865	1553	3342	0	1728	1801
Link Speed (mph)	30		30			30
Link Distance (ft)	450		534			209
Travel Time (s)	10.2		12.1			4.8
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.89	0.82	0.89	0.85	0.81	0.95
Heavy Vehicles (%)	0%	4%	1%	0%	1%	2%
Adj. Flow (vph)	184	229	576	174	101	692
Shared Lane Traffic (%)						
Lane Group Flow (vph)	184	229	750	0	101	692
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	52.7%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2	4	52	5	297	6	353	118	312	500	9
Future Volume (vph)	11	2	4	52	5	297	6	353	118	312	500	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	11	11	11
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
Ped Bike Factor												
Frt		0.969				0.850		0.967			0.997	
Flt Protected		0.969			0.957			0.999		0.950		
Satd. Flow (prot)	0	1725	0	0	1758	1531	0	2055	0	1678	1813	0
Flt Permitted		0.969			0.957			0.999		0.950		
Satd. Flow (perm)	0	1725	0	0	1758	1531	0	2055	0	1678	1813	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		309			239			1482			534	
Travel Time (s)		7.0			5.4			33.7			12.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.80	0.80	0.87	0.80	0.84	0.80	0.88	0.88	0.93	0.88	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	1%	2%	4%	1%	0%
Adj. Flow (vph)	14	3	5	60	6	354	8	401	134	335	568	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	66	354	0	543	0	335	579	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.85	0.85	0.85	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	74.7%						ICU Level of Service D					
Analysis Period (min)	15											

Lanes, Volumes, Timings

12: High Street & W Passaic Street/W Passaic Ave (CR 622)

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	701	51	34	849	6	34	5	35	1	1	7
Future Volume (vph)	5	701	51	34	849	6	34	5	35	1	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt	0.991				0.999				0.932		0.890	
Flt Protected					0.998				0.979		0.995	
Satd. Flow (prot)	0	1619	0	0	1633	0	0	1508	0	0	1464	0
Flt Permitted					0.998				0.979		0.995	
Satd. Flow (perm)	0	1619	0	0	1633	0	0	1508	0	0	1464	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	341				1090				336		292	
Travel Time (s)	7.8				24.8				7.6		6.6	
Confl. Peds. (#/hr)	25			25	25			25	25			25
Peak Hour Factor	0.80	0.86	0.85	0.81	0.90	0.80	0.94	0.80	0.81	0.80	0.80	0.80
Heavy Vehicles (%)	0%	1%	4%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	6	815	60	42	943	8	36	6	43	1	1	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	881	0	0	993	0	0	85	0	0	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	11				11				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15	9		15	9		15	9		15	9	
Sign Control	Free				Free				Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	87.7%											
Analysis Period (min)	15											
ICU Level of Service E												

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	510	177	633	172	69	588
Future Volume (vph)	510	177	633	172	69	588
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)	0	80		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Ped Bike Factor	0.96	0.95		0.92		1.00
Frt		0.850		0.850		
Flt Protected	0.950					0.994
Satd. Flow (prot)	1728	1501	3455	1546	0	3522
Flt Permitted	0.950					0.774
Satd. Flow (perm)	1663	1428	3455	1420	0	2736
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		81		120		
Link Speed (mph)	30		30			30
Link Distance (ft)	344		504			159
Travel Time (s)	7.8		11.5			3.6
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.94	0.89	0.86	0.87	0.81	0.93
Heavy Vehicles (%)	1%	4%	1%	1%	1%	2%
Adj. Flow (vph)	543	199	736	198	85	632
Shared Lane Traffic (%)						
Lane Group Flow (vph)	543	199	736	198	0	717
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	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	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0	44.0	5.0	58.0
Minimum Split (s)	23.0	23.0	55.0	55.0	8.0	63.0
Total Split (s)	27.0	27.0	55.0	55.0	8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%	61.1%	8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0	44.0	5.0	58.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	8.0	8.0	0.0	2.0
Lost Time Adjust (s)	-5.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	0.0	5.0	11.0	11.0		5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	Min	Min	None	C-Min
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 Effect Green (s)	27.0	22.0	52.0	52.0		58.0
Actuated g/C Ratio	0.30	0.24	0.58	0.58		0.64
v/c Ratio	1.05	0.49	0.37	0.23		0.41
Control Delay	85.5	21.5	8.9	3.4		8.6
Queue Delay	0.0	0.0	0.0	0.0		0.1
Total Delay	85.5	21.5	8.9	3.4		8.6
LOS	F	C	A	A		A
Approach Delay	68.4		7.7			8.6
Approach LOS	E		A			A
Queue Length 50th (ft)	~339	55	77	10		92
Queue Length 95th (ft)	#535	120	106	21		126
Internal Link Dist (ft)	264		424			79
Turn Bay Length (ft)		80		50		
Base Capacity (vph)	518	410	1996	871		1763
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		182
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	1.05	0.49	0.37	0.23		0.45

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

Intersection Signal Delay: 26.8

Intersection LOS: C

Intersection Capacity Utilization 105.9%

ICU Level of Service G

Analysis Period (min) 15

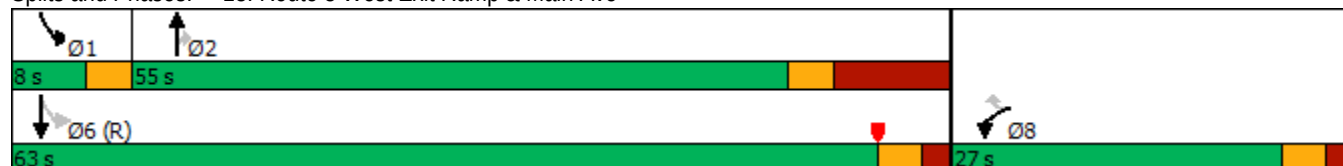
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 13: Route 3 West Exit Ramp & Main Ave



Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	148	217	588	197	228	870
Future Volume (vph)	148	217	588	197	228	870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	11	12	12
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.98			1.00
Frt		0.850	0.961			
Flt Protected	0.950					0.990
Satd. Flow (prot)	1745	1553	3250	0	0	3546
Flt Permitted	0.950					0.614
Satd. Flow (perm)	1679	1477	3250	0	0	2193
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		265	86			
Link Speed (mph)	30		30			30
Link Distance (ft)	464		896			504
Travel Time (s)	10.5		20.4			11.5
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.82	0.90	0.86	0.94	0.94
Heavy Vehicles (%)	0%	4%	1%	1%	0%	1%
Adj. Flow (vph)	183	265	653	229	243	926
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	265	882	0	0	1169
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.04	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	6.0			12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	13.8	13.8	65.2			59.2
Actuated g/C Ratio	0.15	0.15	0.72			0.66
v/c Ratio	0.69	0.59	0.37			0.81
Control Delay	48.8	10.0	5.1			18.8
Queue Delay	0.0	0.0	0.0			0.1
Total Delay	48.8	10.0	5.1			18.8
LOS	D	A	A			B
Approach Delay	25.8		5.1			18.8
Approach LOS	C		A			B
Queue Length 50th (ft)	100	0	72			328
Queue Length 95th (ft)	139	44	128			m383
Internal Link Dist (ft)	384		816			424
Turn Bay Length (ft)		110				
Base Capacity (vph)	426	561	2379			1442
Starvation Cap Reductn	0	0	0			13
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.43	0.47	0.37			0.82

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

Intersection Signal Delay: 15.2

Intersection LOS: B

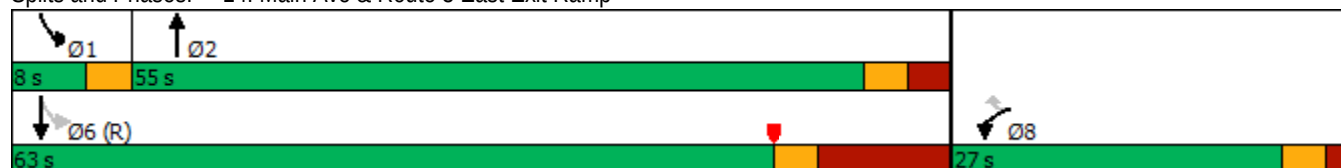
Intersection Capacity Utilization 114.5%

ICU Level of Service H

Analysis Period (min) 15

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

Splits and Phases: 14: Main Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	372	56	4	1	43	29	4	0	0	135	1	307
Future Volume (vph)	372	56	4	1	43	29	4	0	0	135	1	307
Ideal Flow (vphpl)	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	12	12	15
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		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
Ped Bike Factor												
Frt		0.999			0.943						0.907	
Flt Protected		0.959			0.999			0.950			0.985	
Satd. Flow (prot)	0	2006	0	0	2029	0	0	1745	0	0	1674	0
Flt Permitted		0.959			0.999			0.950			0.985	
Satd. Flow (perm)	0	2006	0	0	2029	0	0	1745	0	0	1674	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			258			233			196	
Travel Time (s)		5.4			5.9			5.3			4.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.94	0.88	0.80	0.80	0.90	0.81	0.80	0.80	0.92	0.82	0.80	0.84
Heavy Vehicles (%)	3%	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%
Adj. Flow (vph)	396	64	5	1	48	36	5	0	0	165	1	365
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	465	0	0	85	0	0	5	0	0	531	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.88	0.85	0.85	0.85	0.85	0.85	1.04	1.04	1.04	1.00	1.00	0.88
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	78.0%											
Analysis Period (min)	15											
	ICU Level of Service D											

2025 No-Build Synchro Analysis Reports

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	421	358	831	409	166	744
Future Volume (vph)	421	358	831	409	166	744
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Storage Length (ft)	0	300		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.97			
Frt		0.850	0.950			
Flt Protected	0.950					0.991
Satd. Flow (prot)	1687	1468	3163	0	0	3166
Flt Permitted	0.950					0.519
Satd. Flow (perm)	1624	1397	3163	0	0	1658
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		185	132			
Link Speed (mph)	30		30			30
Link Distance (ft)	610		348			446
Travel Time (s)	13.9		7.9			10.1
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.98	0.94	0.92	0.92	0.84	0.87
Heavy Vehicles (%)	7%	10%	2%	2%	3%	8%
Bus Blockages (#/hr)	0	0	0	0	0	10
Adj. Flow (vph)	430	381	903	445	198	855
Shared Lane Traffic (%)						
Lane Group Flow (vph)	430	381	1348	0	0	1053
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		5.0	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0		5.0	58.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	11.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	22.0	52.0			58.0
Actuated g/C Ratio	0.24	0.24	0.58			0.64
v/c Ratio	1.04	0.79	0.72			1.16dl
Control Delay	91.5	29.8	13.4			41.9
Queue Delay	15.0	0.0	17.2			38.7
Total Delay	106.5	29.8	30.6			80.6
LOS	F	C	C			F
Approach Delay	70.5		30.6			80.6
Approach LOS	E		C			F
Queue Length 50th (ft)	~268	106	232			274
Queue Length 95th (ft)	#448	#255	m209			#425
Internal Link Dist (ft)	530		268			366
Turn Bay Length (ft)		300				
Base Capacity (vph)	412	481	1883			1068
Starvation Cap Reductn	0	0	557			0
Spillback Cap Reductn	16	0	0			169
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	1.09	0.79	1.02			1.17

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 57.0

Intersection LOS: E

Intersection Capacity Utilization 126.0%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Bloomfield Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	188	473	767	366	337	829
Future Volume (vph)	188	473	767	366	337	829
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	13	11	11
Storage Length (ft)	200	0		0	0	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94	0.95	0.97			
Frt		0.850	0.957			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1601	1546	1777	0	1544	1749
Flt Permitted	0.950				0.087	
Satd. Flow (perm)	1501	1470	1777	0	141	1749
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		233	41			
Link Speed (mph)	30		30			30
Link Distance (ft)	533		1272			348
Travel Time (s)	12.1		28.9			7.9
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.92	0.94	0.95	0.94	0.91
Heavy Vehicles (%)	9%	1%	2%	5%	13%	5%
Adj. Flow (vph)	232	514	816	385	359	911
Shared Lane Traffic (%)						
Lane Group Flow (vph)	232	514	1201	0	359	911
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0		-4.0	0.0
Total Lost Time (s)	5.0	5.0	6.0		-1.0	12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	21.3	21.3	49.0		64.7	51.7
Actuated g/C Ratio	0.24	0.24	0.54		0.72	0.57
v/c Ratio	0.61	0.98	1.22		1.43	0.91
Control Delay	38.3	54.3	129.7		218.5	19.6
Queue Delay	0.0	12.1	0.0		0.0	47.2
Total Delay	38.3	66.4	129.7		218.5	66.9
LOS	D	E	F		F	E
Approach Delay	57.6		129.7			109.7
Approach LOS	E		F			F
Queue Length 50th (ft)	117	171	~840		~234	423
Queue Length 95th (ft)	170	#381	#1091		m#233	m424
Internal Link Dist (ft)	453		1192			268
Turn Bay Length (ft)	200					
Base Capacity (vph)	391	535	986		251	1004
Starvation Cap Reductn	0	0	0		0	266
Spillback Cap Reductn	0	29	2		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.59	1.02	1.22		1.43	1.23

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.43

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020

Intersection Signal Delay: 105.1

Intersection LOS: F

Intersection Capacity Utilization 107.6%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

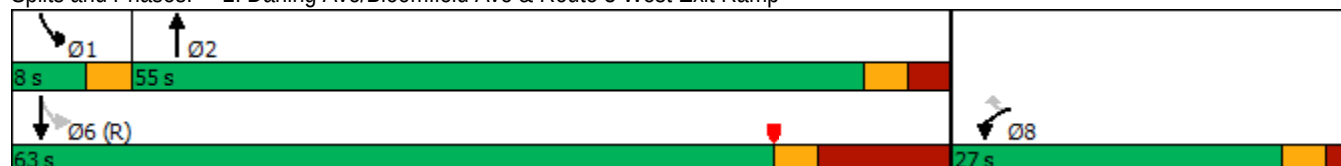
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp



Lanes, Volumes, Timings
3: Metro Blvd & EB Route 3

01/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗				↗
Traffic Volume (vph)	0	659	0	0	0	113
Future Volume (vph)	0	659	0	0	0	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	11	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				0.865
Flt Protected						
Satd. Flow (prot)	0	1489	0	0	0	1242
Flt Permitted						
Satd. Flow (perm)	0	1489	0	0	0	1242
Link Speed (mph)	30			30	30	
Link Distance (ft)	891			682	775	
Travel Time (s)	20.3			15.5	17.6	
Confl. Peds. (#/hr)		25	25		25	25
Peak Hour Factor	0.92	0.86	0.92	0.92	0.92	0.80
Heavy Vehicles (%)	2%	3%	2%	2%	2%	50%
Adj. Flow (vph)	0	766	0	0	0	141
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	766	0	0	0	141
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.09	1.04	1.04	1.04	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	46.5%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

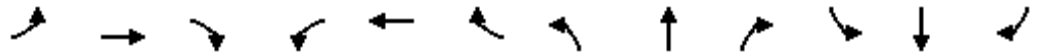
01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	517	298	13	5	345	328	0	0	0	295	36	540
Future Volume (vph)	517	298	13	5	345	328	0	0	0	295	36	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	13	13	16	11	11	11	10	10	10
Storage Length (ft)	100		0	0		110	0		0	0		150
Storage Lanes	1		0	0		1	0		0	0		1
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
Ped Bike Factor	0.98	1.00			1.00	0.92					0.94	0.92
Frt		0.994				0.850						0.850
Flt Protected	0.950				0.999						0.957	
Satd. Flow (prot)	1694	1581	0	0	1847	1777	0	0	0	0	1634	1378
Flt Permitted	0.309				0.994						0.957	
Satd. Flow (perm)	540	1581	0	0	1836	1633	0	0	0	0	1543	1266
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				282						170
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1090			2354			519			1272	
Travel Time (s)		24.8			53.5			11.8			28.9	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.97	0.83	0.80	0.80	0.85	0.90	0.92	0.92	0.92	0.82	0.81	0.94
Heavy Vehicles (%)	3%	3%	0%	0%	2%	3%	2%	2%	2%	4%	3%	5%
Bus Blockages (#/hr)	0	10	10	0	10	0	0	0	0	0	0	10
Parking (#/hr)		0	0									
Adj. Flow (vph)	533	359	16	6	406	364	0	0	0	360	44	574
Shared Lane Traffic (%)												
Lane Group Flow (vph)	533	375	0	0	412	364	0	0	0	0	404	574
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.20	1.04	0.96	1.01	0.85	1.04	1.04	1.04	1.09	1.09	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	1
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20				20	100	20
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				20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	0.0
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	
Detector 2 Size(ft)		6			6						6	

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0						0.0		
Turn Type	pm+pt	NA		Perm	NA	Perm				Perm	NA	pm+ov
Protected Phases	5	2			6						4	5
Permitted Phases	2			6		6				4		4
Detector Phase	5	2		6	6	6				4	4	5
Switch Phase												
Minimum Initial (s)	7.0	39.0		29.0	29.0	29.0				8.0	8.0	7.0
Minimum Split (s)	10.0	45.0		35.0	35.0	35.0				25.0	25.0	10.0
Total Split (s)	16.0	51.0		35.0	35.0	35.0				39.0	39.0	16.0
Total Split (%)	17.8%	56.7%		38.9%	38.9%	38.9%				43.3%	43.3%	17.8%
Maximum Green (s)	13.0	45.0		29.0	29.0	29.0				32.0	32.0	13.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
All-Red Time (s)	0.0	3.0		3.0	3.0	3.0				4.0	4.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0					0.0	0.0
Total Lost Time (s)	3.0	6.0			6.0	6.0					7.0	3.0
Lead/Lag	Lead			Lag	Lag	Lag						Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Recall Mode	None	Min		Min	Min	Min				None	None	None
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 Effect Green (s)	48.3	45.3			29.2	29.2					25.2	42.3
Actuated g/C Ratio	0.58	0.54			0.35	0.35					0.30	0.51
v/c Ratio	1.08	0.44			0.64	0.48					0.87	0.77
Control Delay	83.0	14.6			29.7	8.4					47.2	18.2
Queue Delay	0.0	0.0			0.0	0.0					0.0	0.0
Total Delay	83.0	14.6			29.7	8.4					47.2	18.2
LOS	F	B			C	A					D	B
Approach Delay		54.8			19.7						30.2	
Approach LOS		D			B						C	
Queue Length 50th (ft)	~198	112			182	30					198	142
Queue Length 95th (ft)	#526	184			285	107					265	260
Internal Link Dist (ft)		1010			2274			439			1192	
Turn Bay Length (ft)	100					110						150
Base Capacity (vph)	492	858			641	753					594	742
Starvation Cap Reductn	0	0			0	0					0	0
Spillback Cap Reductn	0	0			0	0					0	0
Storage Cap Reductn	0	0			0	0					0	0
Reduced v/c Ratio	1.08	0.44			0.64	0.48					0.68	0.77

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 83.5

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 35.5

Intersection LOS: D

Intersection Capacity Utilization 97.4%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

 Ø2	 Ø4
51 s	39 s
 Ø5	 Ø6
16 s	35 s

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	565	81	110	421	348	142	135	382	74	21	70
Future Volume (vph)	131	565	81	110	421	348	142	135	382	74	21	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	10	10	11
Storage Length (ft)	220		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
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
Ped Bike Factor	1.00	0.99		0.99	0.98			0.96			0.99	0.95
Frt		0.979			0.931			0.922				0.850
Flt Protected	0.950			0.950				0.989			0.962	
Satd. Flow (prot)	1685	1596	0	1570	1471	0	0	1607	0	0	1706	1561
Flt Permitted	0.143			0.148				0.894			0.341	
Satd. Flow (perm)	253	1596	0	243	1471	0	0	1443	0	0	601	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			83			131				80
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2354			843			553			795	
Travel Time (s)		53.5			19.2			12.6			18.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.96	0.94	0.81	0.87	0.83	0.81	0.88	0.89	0.88	0.80	0.80	0.88
Heavy Vehicles (%)	0%	3%	8%	3%	4%	7%	2%	0%	1%	0%	0%	0%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	0	0
Adj. Flow (vph)	136	601	100	126	507	430	161	152	434	93	26	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	701	0	126	937	0	0	747	0	0	119	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.15	1.09	1.15	1.15	1.09	1.04	1.04	1.04	1.09	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2		6		6
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (%)	52.3%	52.3%		52.3%	52.3%		47.7%	47.7%		47.7%	47.7%	47.7%
Maximum Green (s)	28.0	28.0		28.0	28.0		24.0	24.0		24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-3.0			0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.0			7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		Max	Max		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	21.0	21.0		21.0	21.0		17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effect Green (s)	28.0	28.0		28.0	28.0		27.0			24.0	24.0	24.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.42			0.37	0.37	0.37
v/c Ratio	1.26	1.01		1.21	1.38		1.11			0.54	0.13	0.13
Control Delay	197.6	57.4		182.3	199.9		87.1			27.2	4.5	4.5
Queue Delay	0.0	0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Delay	197.6	57.4		182.3	199.9		87.1			27.2	4.5	4.5
LOS	F	E		F	F		F			C	A	A
Approach Delay		80.2			197.8		87.1			18.0		
Approach LOS		F			F		F			B		
Queue Length 50th (ft)	~69	~266		~62	~492		~314			36	0	0
Queue Length 95th (ft)	#167	#489		#150	#625		#503			74	22	22
Internal Link Dist (ft)		2274			763		473			715		
Turn Bay Length (ft)	220			50								
Base Capacity (vph)	108	696		104	680		675			221	596	596
Starvation Cap Reductn	0	0		0	0		0			0	0	0
Spillback Cap Reductn	0	0		0	0		0			0	0	0
Storage Cap Reductn	0	0		0	0		0			0	0	0
Reduced v/c Ratio	1.26	1.01		1.21	1.38		1.11			0.54	0.13	0.13
Intersection Summary												
Area Type:	Other											
Cycle Length: 65												
Actuated Cycle Length: 65												
Natural Cycle: 80												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 1.38												

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection Signal Delay: 121.6

Intersection LOS: F

Intersection Capacity Utilization 112.6%

ICU Level of Service H

Analysis Period (min) 15

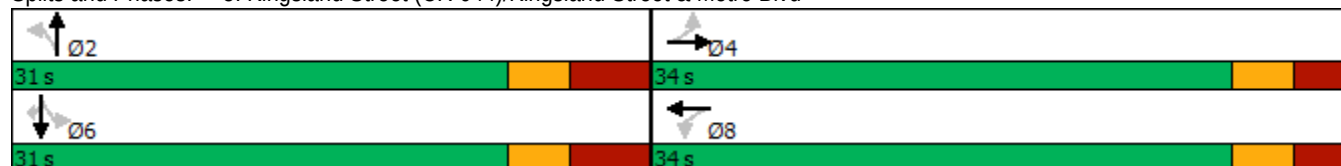
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

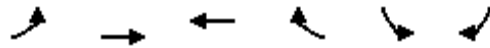
Queue shown is maximum after two cycles.

Splits and Phases: 5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd



Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

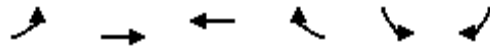
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	131	890	809	348	74	70
Future Volume (vph)	131	890	809	348	74	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.956			0.850
Flt Protected		0.993			0.950	
Satd. Flow (prot)	0	2096	2005	0	1685	1409
Flt Permitted		0.993			0.950	
Satd. Flow (perm)	0	2096	2005	0	1685	1409
Link Speed (mph)		30	30		30	
Link Distance (ft)		843	832		283	
Travel Time (s)		19.2	18.9		6.4	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.81	0.93	0.92	0.81	0.80	0.80
Heavy Vehicles (%)	2%	2%	4%	0%	0%	7%
Adj. Flow (vph)	162	957	879	430	93	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1119	1309	0	93	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.85	0.85	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	137.9%			ICU Level of Service H		
Analysis Period (min)	15					

Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	490	474	474	1	4	683
Future Volume (vph)	490	474	474	1	4	683
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	14	14	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.866	
Flt Protected		0.975				
Satd. Flow (prot)	0	1811	1754	0	1651	0
Flt Permitted		0.975				
Satd. Flow (perm)	0	1811	1754	0	1651	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		832	315		293	
Travel Time (s)		18.9	7.2		6.7	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.85	0.84	0.82	0.80	0.80	0.91
Heavy Vehicles (%)	1%	2%	4%	0%	0%	3%
Bus Blockages (#/hr)	10	10	0	0	0	0
Parking (#/hr)			0			
Adj. Flow (vph)	576	564	578	1	5	751
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1140	579	0	756	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.96	1.01	1.05	0.92	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 131.9% ICU Level of Service H

Analysis Period (min) 15

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	468	174	78	552	7	278	89	162	14	98	30
Future Volume (vph)	2	468	174	78	552	7	278	89	162	14	98	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	11	11	11	11	11	11	16	16	16
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.96			0.98	
Frt		0.965			0.998			0.949			0.971	
Flt Protected					0.994			0.976			0.995	
Satd. Flow (prot)	0	1809	0	0	1678	0	0	2910	0	0	1724	0
Flt Permitted		0.998			0.822			0.765			0.909	
Satd. Flow (perm)	0	1805	0	0	1386	0	0	2243	0	0	1572	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		37			1							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		742			1021			370			382	
Travel Time (s)		16.9			23.2			8.4			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.89	0.95	0.81	0.87	0.80	0.96	0.92	0.81	0.80	0.83	0.80
Heavy Vehicles (%)	0%	2%	4%	6%	4%	0%	1%	0%	2%	0%	4%	20%
Bus Blockages (#/hr)	10	10	10	10	10	10	0	10	10	0	0	0
Parking (#/hr)								0	0		0	
Adj. Flow (vph)	3	526	183	96	634	9	290	97	200	18	118	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	712	0	0	739	0	0	587	0	0	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.97	0.92	1.04	1.10	1.04	1.04	1.14	1.04	0.85	0.97	0.85
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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	

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases	4			8						6		
Permitted Phases	4			8			2	2		6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		36.0	36.0		28.0	28.0		28.0	28.0	
Total Split (%)	56.3%	56.3%		56.3%	56.3%		43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	30.0	30.0		30.0	30.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	6.0			6.0			6.0			6.0		
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	32.2			32.2			19.8			19.8		
Actuated g/C Ratio	0.50			0.50			0.31			0.31		
v/c Ratio	0.77			1.06			0.90dl			0.36		
Control Delay	20.7			72.5			33.1			18.8		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	20.7			72.5			33.1			18.8		
LOS	C			E			C			B		
Approach Delay	20.7			72.5			33.1			18.8		
Approach LOS	C			E			C			B		
Queue Length 50th (ft)	212			~345			105			49		
Queue Length 95th (ft)	#404			#515			#171			85		
Internal Link Dist (ft)	662			941			290			302		
Turn Bay Length (ft)												
Base Capacity (vph)	925			697			771			540		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.77			1.06			0.76			0.32		
Intersection Summary												
Area Type:	Other											
Cycle Length: 64												
Actuated Cycle Length: 64												
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow												
Natural Cycle: 65												

Lanes, Volumes, Timings

8: Franklin Avenue & Kingsland Street

01/10/2020

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 41.1

Intersection LOS: D

Intersection Capacity Utilization 118.3%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

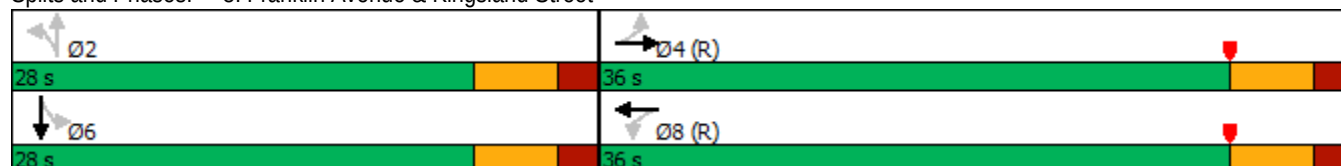
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Franklin Avenue & Kingsland Street



Lanes, Volumes, Timings
9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	333	57	17	305	91	140	481	46	51	175	191
Future Volume (vph)	254	333	57	17	305	91	140	481	46	51	175	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	150		0	0		0	0		0	70		0
Storage Lanes	1		0	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99			0.99		0.99	0.97	
Frt		0.975			0.967			0.990			0.922	
Flt Protected	0.950				0.998			0.990		0.950		
Satd. Flow (prot)	1711	1658	0	0	1604	0	0	1539	0	1620	1463	0
Flt Permitted	0.405				0.971			0.692		0.295		
Satd. Flow (perm)	719	1658	0	0	1560	0	0	1073	0	499	1463	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1021			651			384			1036	
Travel Time (s)		23.2			14.8			8.7			23.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.86	0.93	0.81	0.80	0.93	0.81	0.86	0.86	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	3%	2%	0%	5%	5%	2%	1%	2%	4%	2%	7%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	10	10
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	295	358	70	21	328	112	163	559	57	63	216	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	295	428	0	0	461	0	0	779	0	63	452	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.10	1.04	1.04	1.10	1.04	1.09	1.25	1.09	1.09	1.15	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			-4.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0			2.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings

9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	23.0	23.0		23.0	23.0		22.0	22.0		22.0	22.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0			33.0			39.0		35.0	35.0	
Actuated g/C Ratio	0.41	0.41			0.41			0.49		0.44	0.44	
v/c Ratio	1.00	0.63			0.72			1.49		0.29	0.71	
Control Delay	78.9	23.6			27.2			252.8		19.1	25.7	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	78.9	23.6			27.2			252.8		19.1	25.7	
LOS	E	C			C			F		B	C	
Approach Delay		46.2			27.2			252.8			24.9	
Approach LOS		D			C			F			C	
Queue Length 50th (ft)	143	164			187			~547		20	177	
Queue Length 95th (ft)	#284	261			299			#711		44	243	
Internal Link Dist (ft)		941			571			304			956	
Turn Bay Length (ft)	150									70		
Base Capacity (vph)	296	683			643			523		218	640	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	1.00	0.63			0.72			1.49		0.29	0.71	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.49

Intersection Signal Delay: 103.2

Intersection LOS: F

Intersection Capacity Utilization 138.5%

ICU Level of Service H

Analysis Period (min) 15

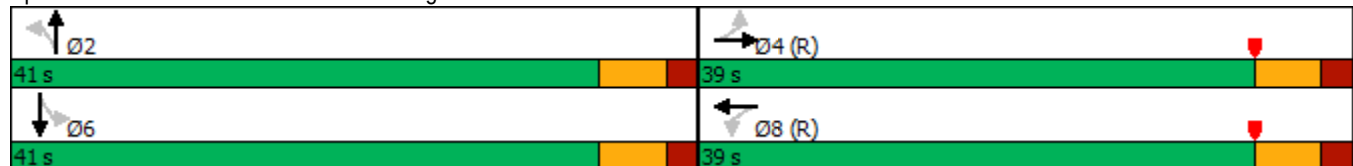
~ Volume exceeds capacity, queue is theoretically infinite.

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: 9: Passaic Ave & Kingsland Street



Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	263	128	572	236	110	871
Future Volume (vph)	263	128	572	236	110	871
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.959			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1829	1482	3290	0	1745	1783
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1829	1482	3290	0	1745	1783
Link Speed (mph)	30		30			30
Link Distance (ft)	450		534			209
Travel Time (s)	10.2		12.1			4.8
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.81	0.84	0.93	0.84	0.92
Heavy Vehicles (%)	2%	9%	2%	1%	0%	3%
Adj. Flow (vph)	325	158	681	254	131	947
Shared Lane Traffic (%)						
Lane Group Flow (vph)	325	158	935	0	131	947
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	67.1%			ICU Level of Service C		
Analysis Period (min)	15					

Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	5	7	77	0	226	4	575	296	361	771	2
Future Volume (vph)	7	5	7	77	0	226	4	575	296	361	771	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	11	11	11
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
Ped Bike Factor												
Frt		0.949				0.850		0.952			0.999	
Flt Protected		0.982			0.950					0.950		
Satd. Flow (prot)	0	1630	0	0	1558	1516	0	2020	0	1678	1765	0
Flt Permitted		0.982			0.950					0.950		
Satd. Flow (perm)	0	1630	0	0	1558	1516	0	2020	0	1678	1765	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		309			239			1482			534	
Travel Time (s)		7.0			5.4			33.7			12.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.80	0.80	0.81	0.92	0.92	0.80	0.94	0.87	0.95	0.98	0.80
Heavy Vehicles (%)	0%	20%	0%	12%	2%	3%	25%	1%	2%	4%	4%	0%
Adj. Flow (vph)	9	6	9	95	0	246	5	612	340	380	787	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	95	246	0	957	0	380	790	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.85	0.85	0.85	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	111.8%											
Analysis Period (min)	15											
	ICU Level of Service H											

Lanes, Volumes, Timings

12: High Street & W Passaic Street/W Passaic Ave (CR 622)

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	765	42	14	866	4	65	12	61	2	8	0
Future Volume (vph)	4	765	42	14	866	4	65	12	61	2	8	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt	0.992				0.999				0.940			
Flt Protected					0.999				0.977		0.989	
Satd. Flow (prot)	0	1610	0	0	1588	0	0	1492	0	0	1635	0
Flt Permitted					0.999				0.977		0.989	
Satd. Flow (perm)	0	1610	0	0	1588	0	0	1492	0	0	1635	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	341				1090				336		292	
Travel Time (s)	7.8				24.8				7.6		6.6	
Confl. Peds. (#/hr)	25			25	25			25	25			25
Peak Hour Factor	0.80	0.95	0.81	0.81	0.91	0.98	0.81	0.80	0.81	0.80	0.80	0.92
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	0%	4%	0%	0%	2%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	5	805	52	17	952	4	80	15	75	3	10	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	862	0	0	973	0	0	170	0	0	13	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	11				11				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15	9		15	9		15	9		15	9	
Sign Control	Free				Free				Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	77.9%											
Analysis Period (min)	15											
ICU Level of Service D												

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	285	270	414	190	87	355
Future Volume (vph)	285	270	414	190	87	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)	0	80		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Ped Bike Factor	0.96	0.95		0.92		0.99
Frt		0.850		0.850		
Flt Protected	0.950					0.990
Satd. Flow (prot)	1662	1516	3388	1531	0	3438
Flt Permitted	0.950					0.751
Satd. Flow (perm)	1599	1442	3388	1406	0	2592
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		216		210		
Link Speed (mph)	30		30			30
Link Distance (ft)	344		504			159
Travel Time (s)	7.8		11.5			3.6
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.87	0.85	0.83	0.81	0.81	0.87
Heavy Vehicles (%)	5%	3%	3%	2%	0%	5%
Adj. Flow (vph)	328	318	499	235	107	408
Shared Lane Traffic (%)						
Lane Group Flow (vph)	328	318	499	235	0	515
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	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	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0	44.0	5.0	58.0
Minimum Split (s)	23.0	23.0	55.0	55.0	8.0	63.0
Total Split (s)	27.0	27.0	55.0	55.0	8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%	61.1%	8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0	44.0	5.0	58.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	8.0	8.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	11.0	11.0		5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	Min	Min	None	C-Min
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 Effect Green (s)	20.2	20.2	53.8	53.8		59.8
Actuated g/C Ratio	0.22	0.22	0.60	0.60		0.66
v/c Ratio	0.88	0.65	0.25	0.25		0.30
Control Delay	59.2	17.1	8.3	1.9		7.2
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	59.2	17.1	8.3	1.9		7.2
LOS	E	B	A	A		A
Approach Delay	38.5		6.3			7.2
Approach LOS	D		A			A
Queue Length 50th (ft)	176	47	56	3		61
Queue Length 95th (ft)	#294	117	77	11		83
Internal Link Dist (ft)	264		424			79
Turn Bay Length (ft)		80		50		
Base Capacity (vph)	406	515	2026	925		1723
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.81	0.62	0.25	0.25		0.30

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

Intersection Signal Delay: 17.5

Intersection LOS: B

Intersection Capacity Utilization 98.3%

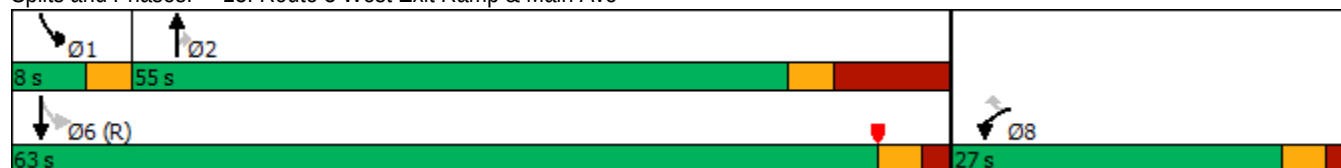
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 13: Route 3 West Exit Ramp & Main Ave



Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	71	130	474	440	223	417
Future Volume (vph)	71	130	474	440	223	417
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	11	12	12
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.96			1.00
Frt		0.850	0.926			
Flt Protected	0.950					0.983
Satd. Flow (prot)	1646	1553	3040	0	0	3370
Flt Permitted	0.950					0.535
Satd. Flow (perm)	1584	1477	3040	0	0	1829
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		153	435			
Link Speed (mph)	30		30			30
Link Distance (ft)	464		896			504
Travel Time (s)	10.5		20.4			11.5
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.85	0.88	0.83	0.87	0.87
Heavy Vehicles (%)	6%	4%	3%	1%	4%	6%
Adj. Flow (vph)	88	153	539	530	256	479
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	153	1069	0	0	735
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.04	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	6.0			12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	9.6	9.6	69.4			63.4
Actuated g/C Ratio	0.11	0.11	0.77			0.70
v/c Ratio	0.50	0.52	0.44			0.57
Control Delay	47.4	13.0	2.7			10.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	47.4	13.0	2.7			10.3
LOS	D	B	A			B
Approach Delay	25.6		2.7			10.3
Approach LOS	C		A			B
Queue Length 50th (ft)	48	0	41			125
Queue Length 95th (ft)	82	45	74			237
Internal Link Dist (ft)	384		816			424
Turn Bay Length (ft)		110				
Base Capacity (vph)	402	476	2444			1289
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.22	0.32	0.44			0.57

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

Intersection Signal Delay: 8.1

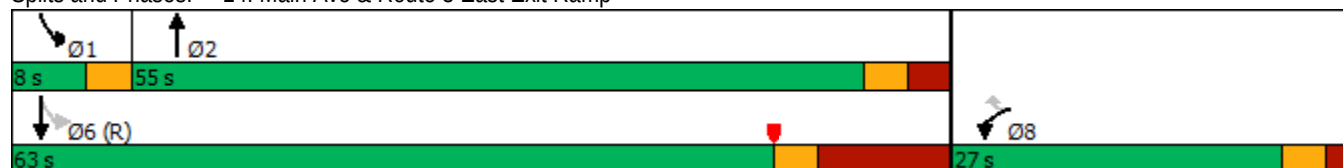
Intersection LOS: A

Intersection Capacity Utilization 113.5%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 14: Main Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	634	26	2	0	73	48	7	1	0	62	1	223
Future Volume (vph)	634	26	2	0	73	48	7	1	0	62	1	223
Ideal Flow (vphpl)	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	12	12	15
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		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
Ped Bike Factor												
Frt		0.999			0.947						0.898	
Flt Protected		0.955						0.957			0.988	
Satd. Flow (prot)	0	1982	0	0	2015	0	0	1758	0	0	1605	0
Flt Permitted		0.955						0.957			0.988	
Satd. Flow (perm)	0	1982	0	0	2015	0	0	1758	0	0	1605	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			258			233			196	
Travel Time (s)		5.4			5.9			5.3			4.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.93	0.80	0.80	0.92	0.81	0.81	0.80	0.80	0.92	0.81	0.80	0.92
Heavy Vehicles (%)	3%	13%	50%	2%	2%	0%	0%	0%	2%	2%	0%	6%
Adj. Flow (vph)	682	33	3	0	90	59	9	1	0	77	1	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	718	0	0	149	0	0	10	0	0	320	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.88	0.85	0.85	0.85	0.85	0.85	1.04	1.04	1.04	1.00	1.00	0.88
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	105.6%											
Analysis Period (min)	15											
	ICU Level of Service G											

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	451	266	1185	688	198	895
Future Volume (vph)	451	266	1185	688	198	895
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Storage Length (ft)	0	300		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.97			
Frt		0.850	0.941			
Flt Protected	0.950					0.991
Satd. Flow (prot)	1770	1482	3128	0	0	3296
Flt Permitted	0.950					0.512
Satd. Flow (perm)	1703	1409	3128	0	0	1703
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		136	233			
Link Speed (mph)	30		30			30
Link Distance (ft)	610		348			446
Travel Time (s)	13.9		7.9			10.1
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.93	0.83	0.93	0.83	0.92	0.92
Heavy Vehicles (%)	2%	9%	2%	1%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	10
Adj. Flow (vph)	485	320	1274	829	215	973
Shared Lane Traffic (%)						
Lane Group Flow (vph)	485	320	2103	0	0	1188
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		5.0	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0		5.0	58.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	11.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	22.0	52.0			58.0
Actuated g/C Ratio	0.24	0.24	0.58			0.64
v/c Ratio	1.12	0.72	1.10			2.83dl
Control Delay	114.9	27.9	66.3			71.2
Queue Delay	0.9	0.0	1.0			7.8
Total Delay	115.9	27.9	67.2			79.1
LOS	F	C	E			E
Approach Delay	80.9		67.2			79.1
Approach LOS	F		E			E
Queue Length 50th (ft)	~321	95	~441			~402
Queue Length 95th (ft)	#510	166	m212			#530
Internal Link Dist (ft)	530		268			366
Turn Bay Length (ft)		300				
Base Capacity (vph)	432	447	1905			1097
Starvation Cap Reductn	0	0	496			0
Spillback Cap Reductn	40	0	0			180
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	1.24	0.72	1.49			1.30

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 140
 Control Type: Actuated-Coordinated

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020

Maximum v/c Ratio: 1.12

Intersection Signal Delay: 73.3

Intersection LOS: E

Intersection Capacity Utilization 146.5%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Bloomfield Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	327	613	1259	273	353	992
Future Volume (vph)	327	613	1259	273	353	992
Ideal Flow (vphpl)	1900	1900	1900	1900	2110	1900
Lane Width (ft)	11	11	13	13	11	11
Storage Length (ft)	200	0		0	0	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94	0.95	0.99			
Frt		0.850	0.976			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1546	1849	0	1863	1801
Flt Permitted	0.950				0.087	
Satd. Flow (perm)	1620	1470	1849	0	171	1801
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		137	19			
Link Speed (mph)	30		30			30
Link Distance (ft)	533		1272			348
Travel Time (s)	12.1		28.9			7.9
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.91	0.90	0.85	0.86	0.99	0.96
Heavy Vehicles (%)	1%	1%	2%	3%	4%	2%
Adj. Flow (vph)	359	681	1481	317	357	1033
Shared Lane Traffic (%)						
Lane Group Flow (vph)	359	681	1798	0	357	1033
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.96	0.96	0.91	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	-4.0	-1.0		-3.0	0.0
Total Lost Time (s)	5.0	1.0	5.0		0.0	12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	26.0	50.0		63.0	51.0
Actuated g/C Ratio	0.24	0.29	0.56		0.70	0.57
v/c Ratio	0.85	1.30	1.74		1.32	1.01
Control Delay	52.9	175.3	356.9		170.1	32.4
Queue Delay	0.0	4.9	0.0		0.0	33.3
Total Delay	52.9	180.2	357.0		170.1	65.7
LOS	D	F	F		F	E
Approach Delay	136.2		357.0			92.5
Approach LOS	F		F			F
Queue Length 50th (ft)	195	~445	~1546		~202	~570
Queue Length 95th (ft)	#345	#661	#1674		m#164	m445
Internal Link Dist (ft)	453		1192			268
Turn Bay Length (ft)	200					
Base Capacity (vph)	422	522	1035		270	1020
Starvation Cap Reductn	0	0	0		0	278
Spillback Cap Reductn	0	206	3		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.85	2.16	1.74		1.32	1.39

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.74

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020

Intersection Signal Delay: 215.7

Intersection LOS: F

Intersection Capacity Utilization 131.1%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

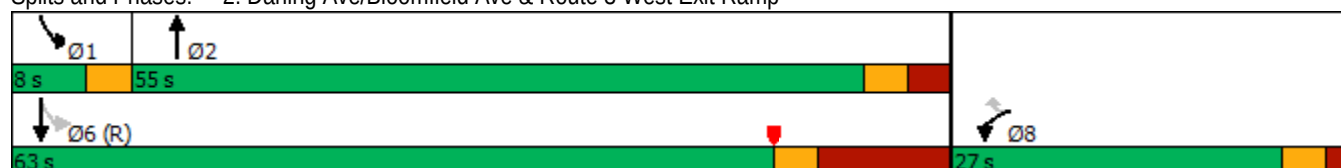
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp



Lanes, Volumes, Timings
3: Metro Blvd & EB Route 3

01/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗				↗
Traffic Volume (vph)	0	124	0	0	0	244
Future Volume (vph)	0	124	0	0	0	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	11	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				0.865
Flt Protected						
Satd. Flow (prot)	0	1534	0	0	0	1725
Flt Permitted						
Satd. Flow (perm)	0	1534	0	0	0	1725
Link Speed (mph)	30			30	30	
Link Distance (ft)	891			682	775	
Travel Time (s)	20.3			15.5	17.6	
Confl. Peds. (#/hr)		25	25		25	25
Peak Hour Factor	0.92	0.80	0.92	0.92	0.92	0.81
Heavy Vehicles (%)	2%	0%	2%	2%	2%	8%
Adj. Flow (vph)	0	155	0	0	0	301
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	0	0	0	301
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.09	1.04	1.04	1.04	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	20.8%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	534	253	17	8	336	811	0	0	0	332	91	643
Future Volume (vph)	534	253	17	8	336	811	0	0	0	332	91	643
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	13	13	16	11	11	11	10	10	10
Storage Length (ft)	100		0	0		110	0		0	0		150
Storage Lanes	1		0	0		1	0		0	0		1
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
Ped Bike Factor	0.98	0.99			1.00	0.92					0.95	0.92
Frt		0.990				0.850						0.850
Flt Protected	0.950				0.999						0.963	
Satd. Flow (prot)	1711	1602	0	0	1865	1777	0	0	0	0	1682	1419
Flt Permitted	0.321				0.988						0.963	
Satd. Flow (perm)	565	1602	0	0	1842	1633	0	0	0	0	1601	1303
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				716						191
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1090			2354			519			1272	
Travel Time (s)		24.8			53.5			11.8			28.9	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.91	0.82	0.80	0.80	0.89	0.93	0.92	0.92	0.92	0.90	0.83	0.85
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	2%	2%	2%	2%	0%	2%
Bus Blockages (#/hr)	0	10	10	0	10	0	0	0	0	0	0	10
Parking (#/hr)		0	0									
Adj. Flow (vph)	587	309	21	10	378	872	0	0	0	369	110	756
Shared Lane Traffic (%)												
Lane Group Flow (vph)	587	330	0	0	388	872	0	0	0	0	479	756
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.20	1.04	0.96	1.01	0.85	1.04	1.04	1.04	1.09	1.09	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	1
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20				20	100	20
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				20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	0.0
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	
Detector 2 Size(ft)		6			6						6	

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0						0.0		
Turn Type	pm+pt	NA		Perm	NA	Perm				Perm	NA	pm+ov
Protected Phases	5	2			6						4	5
Permitted Phases	2			6		6				4		4
Detector Phase	5	2		6	6	6				4	4	5
Switch Phase												
Minimum Initial (s)	7.0	39.0		29.0	29.0	29.0				8.0	8.0	7.0
Minimum Split (s)	10.0	45.0		35.0	35.0	35.0				25.0	25.0	10.0
Total Split (s)	16.0	51.0		35.0	35.0	35.0				39.0	39.0	16.0
Total Split (%)	17.8%	56.7%		38.9%	38.9%	38.9%				43.3%	43.3%	17.8%
Maximum Green (s)	13.0	45.0		29.0	29.0	29.0				32.0	32.0	13.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
All-Red Time (s)	0.0	3.0		3.0	3.0	3.0				4.0	4.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0					0.0	0.0
Total Lost Time (s)	3.0	6.0			6.0	6.0					7.0	3.0
Lead/Lag	Lead			Lag	Lag	Lag						Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Recall Mode	None	Min		Min	Min	Min				None	None	None
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)	48.2	45.2			29.1	29.1					28.4	45.5
Actuated g/C Ratio	0.56	0.52			0.34	0.34					0.33	0.53
v/c Ratio	1.21	0.39			0.63	0.85					0.91	0.95
Control Delay	130.7	14.9			30.5	15.2					51.5	37.6
Queue Delay	0.0	0.0			0.0	0.0					0.0	0.0
Total Delay	130.7	14.9			30.5	15.2					51.5	37.6
LOS	F	B			C	B					D	D
Approach Delay		89.0			19.9						43.0	
Approach LOS		F			B						D	
Queue Length 50th (ft)	~322	111			188	66					247	252
Queue Length 95th (ft)	#623	155			283	#362					#361	#393
Internal Link Dist (ft)		1010			2274			439			1192	
Turn Bay Length (ft)	100					110						150
Base Capacity (vph)	486	837			618	1024					593	792
Starvation Cap Reductn	0	0			0	0					0	0
Spillback Cap Reductn	0	0			0	0					0	0
Storage Cap Reductn	0	0			0	0					0	0
Reduced v/c Ratio	1.21	0.39			0.63	0.85					0.81	0.95

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 86.6

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

Maximum v/c Ratio: 1.21

Intersection Signal Delay: 46.8

Intersection LOS: D

Intersection Capacity Utilization 102.3%

ICU Level of Service G

Analysis Period (min) 15

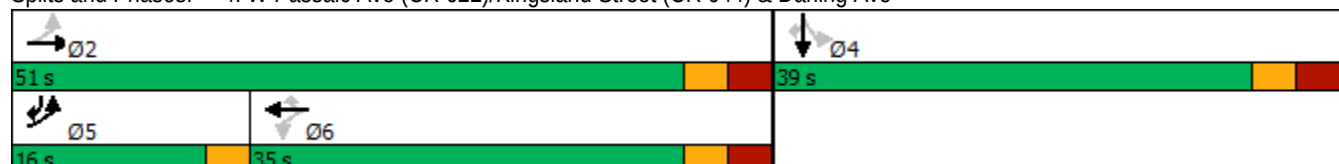
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave



Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	396	164	235	731	137	102	25	148	411	183	322
Future Volume (vph)	24	396	164	235	731	137	102	25	148	411	183	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	10	10	11
Storage Length (ft)	220		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
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
Ped Bike Factor	1.00	0.99		0.99	0.99			0.97			0.99	0.95
Frt		0.954			0.974			0.927				0.850
Flt Protected	0.950			0.950				0.982			0.967	
Satd. Flow (prot)	1685	1559	0	1617	1614	0	0	1598	0	0	1680	1561
Flt Permitted	0.143			0.189				0.114			0.609	
Satd. Flow (perm)	253	1559	0	319	1614	0	0	185	0	0	1045	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			20			102				74
Link Speed (mph)		30			30			30				30
Link Distance (ft)		2354			843			553				795
Travel Time (s)		53.5			19.2			12.6				18.1
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.87	0.81	0.90	0.89	0.80	0.81	0.80	0.81	0.83	0.80	0.81
Heavy Vehicles (%)	0%	2%	4%	0%	1%	6%	3%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	0	0
Adj. Flow (vph)	30	455	202	261	821	171	126	31	183	495	229	398
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	657	0	261	992	0	0	340	0	0	724	398
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.15	1.09	1.15	1.15	1.09	1.04	1.04	1.04	1.09	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2		6		6
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (%)	52.3%	52.3%		52.3%	52.3%		47.7%	47.7%		47.7%	47.7%	47.7%
Maximum Green (s)	28.0	28.0		28.0	28.0		24.0	24.0		24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			7.0			7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		Max	Max		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	21.0	21.0		21.0	21.0		17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effect Green (s)	28.0	28.0		28.0	28.0			24.0			24.0	24.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.37			0.37	0.37
v/c Ratio	0.28	0.94		1.91	1.41			2.58			1.88	0.67
Control Delay	20.3	42.4		453.7	212.2			745.7			426.7	20.5
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	20.3	42.4		453.7	212.2			745.7			426.7	20.5
LOS	C	D		F	F			F			F	C
Approach Delay		41.5			262.5			745.7			282.6	
Approach LOS		D			F			F			F	
Queue Length 50th (ft)	7	226		~163	~544			~183			~450	104
Queue Length 95th (ft)	24	#414		#246	#749			#282			#550	163
Internal Link Dist (ft)		2274			763			473			715	
Turn Bay Length (ft)	220			50								
Base Capacity (vph)	108	696		137	706			132			385	592
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.28	0.94		1.91	1.41			2.58			1.88	0.67
Intersection Summary												
Area Type:	Other											
Cycle Length: 65												
Actuated Cycle Length: 65												
Natural Cycle: 150												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 2.58												

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection Signal Delay: 272.8

Intersection LOS: F

Intersection Capacity Utilization 125.9%

ICU Level of Service H

Analysis Period (min) 15

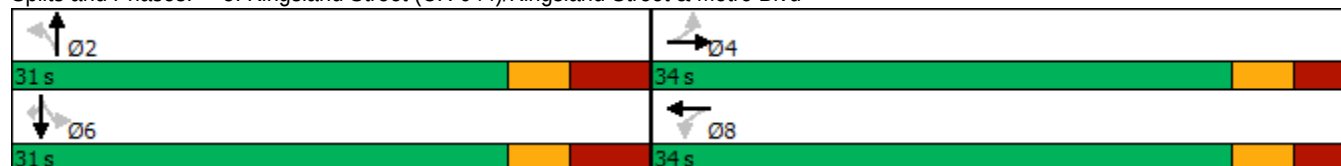
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

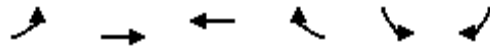
Splits and Phases: 5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd



Lanes, Volumes, Timings

6: Kingsland Street & Ideation Way

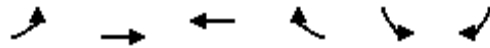
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	24	931	781	137	411	322
Future Volume (vph)	24	931	781	137	411	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.980			0.850
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	2110	2066	0	1685	1507
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	2110	2066	0	1685	1507
Link Speed (mph)		30	30		30	
Link Distance (ft)		843	832		283	
Travel Time (s)		19.2	18.9		6.4	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.80	0.93	0.89	0.92	0.80	0.80
Heavy Vehicles (%)	0%	2%	1%	9%	0%	0%
Adj. Flow (vph)	30	1001	878	149	514	403
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1031	1027	0	514	403
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.85	0.85	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	97.7%			ICU Level of Service F		
Analysis Period (min)	15					

Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	656	686	439	0	8	480
Future Volume (vph)	656	686	439	0	8	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	14	14	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.868	
Flt Protected		0.977			0.999	
Satd. Flow (prot)	0	1823	1788	0	1702	0
Flt Permitted		0.977			0.999	
Satd. Flow (perm)	0	1823	1788	0	1702	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		832	315		293	
Travel Time (s)		18.9	7.2		6.7	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.97	0.91	0.83	0.80	0.80	0.91
Heavy Vehicles (%)	1%	1%	2%	0%	0%	0%
Bus Blockages (#/hr)	10	10	0	0	0	0
Parking (#/hr)			0			
Adj. Flow (vph)	676	754	529	0	10	527
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1430	529	0	537	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.96	1.01	1.05	0.92	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 138.0% ICU Level of Service H

Analysis Period (min) 15

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	645	312	96	512	4	203	77	145	34	182	24
Future Volume (vph)	5	645	312	96	512	4	203	77	145	34	182	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	11	11	11	11	11	11	16	16	16
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98			1.00			0.97			0.99	
Frt		0.952			0.999			0.948			0.985	
Flt Protected					0.992			0.977			0.993	
Satd. Flow (prot)	0	1791	0	0	1710	0	0	2909	0	0	1869	0
Flt Permitted		0.996			0.632			0.679			0.859	
Satd. Flow (perm)	0	1784	0	0	1089	0	0	1996	0	0	1611	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		58			1							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		742			1021			370			382	
Travel Time (s)		16.9			23.2			8.4			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.93	0.81	0.81	0.83	0.80	0.84	0.88	0.83	0.81	0.88	0.80
Heavy Vehicles (%)	0%	2%	1%	3%	2%	0%	1%	0%	2%	0%	1%	0%
Bus Blockages (#/hr)	10	10	10	10	10	10	0	10	10	0	0	0
Parking (#/hr)								0	0		0	
Adj. Flow (vph)	6	694	385	119	617	5	242	88	175	42	207	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1085	0	0	741	0	0	505	0	0	279	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.97	0.92	1.04	1.10	1.04	1.04	1.14	1.04	0.85	0.97	0.85
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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	

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases	4			8						6		
Permitted Phases	4			8			2	2		6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		36.0	36.0		28.0	28.0		28.0	28.0	
Total Split (%)	56.3%	56.3%		56.3%	56.3%		43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	30.0	30.0		30.0	30.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	6.0			6.0			6.0			6.0		
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	32.9			32.9			19.1			19.1		
Actuated g/C Ratio	0.51			0.51			0.30			0.30		
v/c Ratio	1.15			1.33			0.99dl			0.58		
Control Delay	99.5			179.4			35.1			23.7		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	99.5			179.4			35.1			23.7		
LOS	F			F			D			C		
Approach Delay	99.5			179.4			35.1			23.7		
Approach LOS	F			F			D			C		
Queue Length 50th (ft)	~516			~398			93			88		
Queue Length 95th (ft)	#757			#543			#138			145		
Internal Link Dist (ft)	662			941			290			302		
Turn Bay Length (ft)												
Base Capacity (vph)	944			559			686			553		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	1.15			1.33			0.74			0.50		
Intersection Summary												
Area Type:	Other											
Cycle Length: 64												
Actuated Cycle Length: 64												
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow												
Natural Cycle: 90												

Lanes, Volumes, Timings

8: Franklin Avenue & Kingsland Street

01/10/2020

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.33

Intersection Signal Delay: 101.6

Intersection LOS: F

Intersection Capacity Utilization 135.0%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

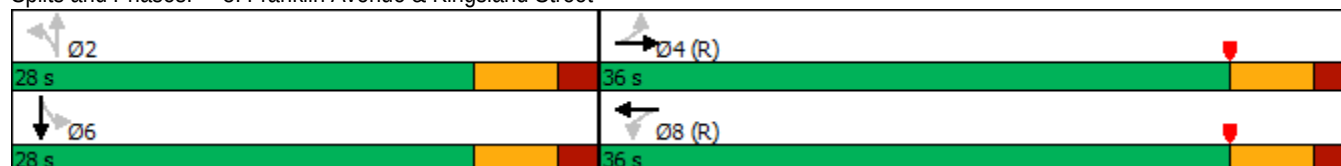
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Franklin Avenue & Kingsland Street



Lanes, Volumes, Timings
9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	373	172	61	376	175	42	460	57	162	564	195
Future Volume (vph)	280	373	172	61	376	175	42	460	57	162	564	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	150		0	0		0	0		0	70		0
Storage Lanes	1		0	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98			0.99			1.00		0.99	0.99	
Frt		0.948			0.963			0.986			0.960	
Flt Protected	0.950				0.995			0.996		0.950		
Satd. Flow (prot)	1711	1627	0	0	1636	0	0	1556	0	1652	1593	0
Flt Permitted	0.258				0.615			0.439		0.322		
Satd. Flow (perm)	461	1627	0	0	1010	0	0	686	0	554	1593	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1021			651			384			1036	
Travel Time (s)		23.2			14.8			8.7			23.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.90	0.92	0.81	0.81	0.83	0.87	0.97	0.97	0.97	0.82	0.85	0.81
Heavy Vehicles (%)	2%	1%	1%	0%	3%	0%	0%	0%	2%	2%	1%	2%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	10	10
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	311	405	212	75	453	201	43	474	59	198	664	241
Shared Lane Traffic (%)												
Lane Group Flow (vph)	311	617	0	0	729	0	0	576	0	198	905	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.10	1.04	1.04	1.10	1.04	1.09	1.25	1.09	1.09	1.15	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			-3.0			-5.0		0.0	-1.0	
Total Lost Time (s)	6.0	6.0			3.0			1.0		6.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings

9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	23.0	23.0		23.0	23.0		22.0	22.0		22.0	22.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0			36.0			40.0		35.0	36.0	
Actuated g/C Ratio	0.41	0.41			0.45			0.50		0.44	0.45	
v/c Ratio	1.64	0.92			1.61			1.68		0.82	1.26	
Control Delay	332.5	44.1			305.3			339.7		49.2	153.8	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	332.5	44.1			305.3			339.7		49.2	153.8	
LOS	F	D			F			F		D	F	
Approach Delay		140.8			305.3			339.7			135.0	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	~228	283			~530			~427		84	~577	
Queue Length 95th (ft)	#380	#493			#660			#458		#177	#732	
Internal Link Dist (ft)		941			571			304			956	
Turn Bay Length (ft)	150									70		
Base Capacity (vph)	190	671			454			343		242	716	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	1.64	0.92			1.61			1.68		0.82	1.26	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 1.68

Intersection Signal Delay: 209.2

Intersection LOS: F

Intersection Capacity Utilization 141.1%

ICU Level of Service H

Analysis Period (min) 15

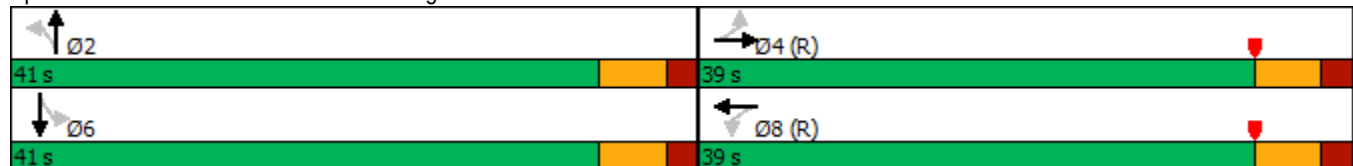
~ Volume exceeds capacity, queue is theoretically infinite.

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: 9: Passaic Ave & Kingsland Street



Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	220	206	997	262	90	828
Future Volume (vph)	220	206	997	262	90	828
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.968			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1865	1553	3352	0	1728	1801
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1865	1553	3352	0	1728	1801
Link Speed (mph)	30		30			30
Link Distance (ft)	450		534			209
Travel Time (s)	10.2		12.1			4.8
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.89	0.82	0.89	0.85	0.81	0.95
Heavy Vehicles (%)	0%	4%	1%	0%	1%	2%
Adj. Flow (vph)	247	251	1120	308	111	872
Shared Lane Traffic (%)						
Lane Group Flow (vph)	247	251	1428	0	111	872
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	64.2%			ICU Level of Service C		
Analysis Period (min)	15					

Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	4	57	5	425	7	822	129	341	697	10
Future Volume (vph)	12	2	4	57	5	425	7	822	129	341	697	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	11	11	11
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
Ped Bike Factor												
Frt		0.971				0.850		0.982			0.998	
Flt Protected		0.968			0.956					0.950		
Satd. Flow (prot)	0	1726	0	0	1756	1531	0	2091	0	1678	1815	0
Flt Permitted		0.968			0.956					0.950		
Satd. Flow (perm)	0	1726	0	0	1756	1531	0	2091	0	1678	1815	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		309			239			1482			534	
Travel Time (s)		7.0			5.4			33.7			12.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.80	0.80	0.87	0.80	0.84	0.80	0.88	0.88	0.93	0.88	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	1%	2%	4%	1%	0%
Adj. Flow (vph)	15	3	5	66	6	506	9	934	147	367	792	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	72	506	0	1090	0	367	805	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.85	0.85	0.85	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	110.2%											
Analysis Period (min)	15											
	ICU Level of Service H											

Lanes, Volumes, Timings

12: High Street & W Passaic Street/W Passaic Ave (CR 622)

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	765	56	37	935	7	37	5	38	1	1	8
Future Volume (vph)	5	765	56	37	935	7	37	5	38	1	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt	0.991				0.999				0.931		0.887	
Flt Protected					0.998				0.979		0.996	
Satd. Flow (prot)	0	1619	0	0	1633	0	0	1507	0	0	1460	0
Flt Permitted					0.998				0.979		0.996	
Satd. Flow (perm)	0	1619	0	0	1633	0	0	1507	0	0	1460	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	341				1090				336		292	
Travel Time (s)	7.8				24.8				7.6		6.6	
Confl. Peds. (#/hr)	25			25	25			25	25			25
Peak Hour Factor	0.80	0.86	0.85	0.81	0.90	0.80	0.94	0.80	0.81	0.80	0.80	0.80
Heavy Vehicles (%)	0%	1%	4%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	6	890	66	46	1039	9	39	6	47	1	1	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	962	0	0	1094	0	0	92	0	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	11				11				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15	9		15	9		15	9		15	9	
Sign Control	Free				Free				Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	94.8%											
Analysis Period (min)	15											
ICU Level of Service F												

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	578	194	793	184	75	691
Future Volume (vph)	578	194	793	184	75	691
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)	0	80		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Ped Bike Factor	0.96	0.95		0.92		1.00
Frt		0.850		0.850		
Flt Protected	0.950					0.994
Satd. Flow (prot)	1728	1501	3455	1546	0	3522
Flt Permitted	0.950					0.736
Satd. Flow (perm)	1663	1428	3455	1420	0	2604
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		79		102		
Link Speed (mph)	30		30			30
Link Distance (ft)	344		504			159
Travel Time (s)	7.8		11.5			3.6
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.94	0.89	0.86	0.87	0.81	0.93
Heavy Vehicles (%)	1%	4%	1%	1%	1%	2%
Adj. Flow (vph)	615	218	922	211	93	743
Shared Lane Traffic (%)						
Lane Group Flow (vph)	615	218	922	211	0	836
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	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	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0	44.0	5.0	58.0
Minimum Split (s)	23.0	23.0	55.0	55.0	8.0	63.0
Total Split (s)	27.0	27.0	55.0	55.0	8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%	61.1%	8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0	44.0	5.0	58.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	8.0	8.0	0.0	2.0
Lost Time Adjust (s)	-5.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	0.0	5.0	11.0	11.0		5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	Min	Min	None	C-Min
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 Effect Green (s)	27.0	22.0	52.0	52.0		58.0
Actuated g/C Ratio	0.30	0.24	0.58	0.58		0.64
v/c Ratio	1.19	0.53	0.46	0.24		0.50
Control Delay	133.2	24.0	9.3	4.1		9.7
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	133.2	24.0	9.3	4.1		9.7
LOS	F	C	A	A		A
Approach Delay	104.6		8.3			9.7
Approach LOS	F		A			A
Queue Length 50th (ft)	~425	67	105	13		117
Queue Length 95th (ft)	#630	137	133	25		160
Internal Link Dist (ft)	264		424			79
Turn Bay Length (ft)		80		50		
Base Capacity (vph)	518	408	1996	863		1678
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	1.19	0.53	0.46	0.24		0.50

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.19

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

Intersection Signal Delay: 37.4

Intersection LOS: D

Intersection Capacity Utilization 117.0%

ICU Level of Service H

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: 13: Route 3 West Exit Ramp & Main Ave



Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	162	237	740	215	249	1019
Future Volume (vph)	162	237	740	215	249	1019
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	11	12	12
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.98			1.00
Frt		0.850	0.965			
Flt Protected	0.950					0.990
Satd. Flow (prot)	1745	1553	3271	0	0	3545
Flt Permitted	0.950					0.573
Satd. Flow (perm)	1679	1477	3271	0	0	2049
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		232	70			
Link Speed (mph)	30		30			30
Link Distance (ft)	464		896			504
Travel Time (s)	10.5		20.4			11.5
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.82	0.90	0.86	0.94	0.94
Heavy Vehicles (%)	0%	4%	1%	1%	0%	1%
Adj. Flow (vph)	200	289	822	250	265	1084
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	289	1072	0	0	1349
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.04	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	6.0			12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	14.6	14.6	64.4			58.4
Actuated g/C Ratio	0.16	0.16	0.72			0.65
v/c Ratio	0.71	0.67	0.45			1.02
Control Delay	48.7	16.0	6.2			42.8
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	48.7	16.0	6.2			42.8
LOS	D	B	A			D
Approach Delay	29.4		6.2			42.8
Approach LOS	C		A			D
Queue Length 50th (ft)	109	29	105			~440
Queue Length 95th (ft)	148	76	180			m#495
Internal Link Dist (ft)	384		816			424
Turn Bay Length (ft)		110				
Base Capacity (vph)	426	536	2359			1328
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.47	0.54	0.45			1.02

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

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

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

Intersection Signal Delay: 27.1

Intersection LOS: C

Intersection Capacity Utilization 114.9%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

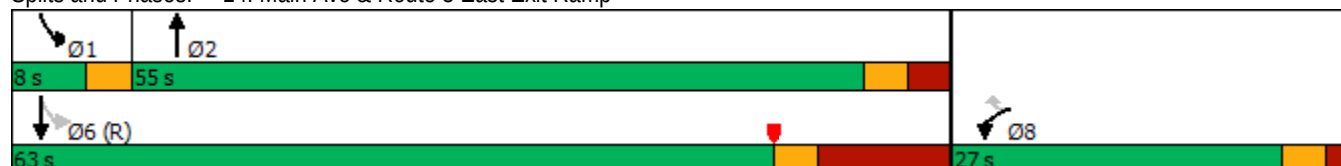
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 14: Main Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	407	61	4	1	47	32	4	0	0	148	1	436
Future Volume (vph)	407	61	4	1	47	32	4	0	0	148	1	436
Ideal Flow (vphpl)	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	12	12	15
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		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
Ped Bike Factor												
Frt		0.999			0.942						0.900	
Flt Protected		0.959			0.999			0.950			0.987	
Satd. Flow (prot)	0	2006	0	0	2026	0	0	1745	0	0	1663	0
Flt Permitted		0.959			0.999			0.950			0.987	
Satd. Flow (perm)	0	2006	0	0	2026	0	0	1745	0	0	1663	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			258			233			196	
Travel Time (s)		5.4			5.9			5.3			4.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.94	0.88	0.80	0.80	0.90	0.81	0.80	0.80	0.92	0.82	0.80	0.84
Heavy Vehicles (%)	3%	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%
Adj. Flow (vph)	433	69	5	1	52	40	5	0	0	180	1	519
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	507	0	0	93	0	0	5	0	0	700	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.88	0.85	0.85	0.85	0.85	0.85	1.04	1.04	1.04	1.00	1.00	0.88
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	90.0%						ICU Level of Service E					
Analysis Period (min)	15											

2025 Build Synchro Analysis Reports

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	426	358	864	461	166	794
Future Volume (vph)	426	358	864	461	166	794
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Storage Length (ft)	0	300		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.97			
Frt		0.850	0.948			
Flt Protected	0.950					0.991
Satd. Flow (prot)	1687	1468	3152	0	0	3164
Flt Permitted	0.950					0.508
Satd. Flow (perm)	1624	1397	3152	0	0	1622
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		177	153			
Link Speed (mph)	30		30			30
Link Distance (ft)	610		348			446
Travel Time (s)	13.9		7.9			10.1
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.98	0.94	0.92	0.92	0.84	0.87
Heavy Vehicles (%)	7%	10%	2%	2%	3%	8%
Bus Blockages (#/hr)	0	0	0	0	0	10
Adj. Flow (vph)	435	381	939	501	198	913
Shared Lane Traffic (%)						
Lane Group Flow (vph)	435	381	1440	0	0	1111
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		5.0	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0		5.0	58.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	11.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	22.0	52.0			58.0
Actuated g/C Ratio	0.24	0.24	0.58			0.64
v/c Ratio	1.06	0.80	0.76			1.38dl
Control Delay	94.9	31.4	10.8			64.8
Queue Delay	16.5	0.0	0.9			15.6
Total Delay	111.3	31.4	11.7			80.4
LOS	F	C	B			F
Approach Delay	74.0		11.7			80.4
Approach LOS	E		B			F
Queue Length 50th (ft)	~274	111	193			~370
Queue Length 95th (ft)	#455	#263	m242			#468
Internal Link Dist (ft)	530		268			366
Turn Bay Length (ft)		300				
Base Capacity (vph)	412	475	1885			1045
Starvation Cap Reductn	0	0	202			0
Spillback Cap Reductn	20	0	0			177
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	1.11	0.80	0.86			1.28

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 49.5

Intersection LOS: D

Intersection Capacity Utilization 128.9%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Bloomfield Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	188	473	852	319	337	883
Future Volume (vph)	188	473	852	319	337	883
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	0		150	0	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.94	0.95	0.98		0.99	
Frt		0.850	0.959			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1601	1546	3184	0	1544	1749
Flt Permitted	0.950				0.145	
Satd. Flow (perm)	1501	1470	3184	0	234	1749
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		209	93			
Link Speed (mph)	30		30			30
Link Distance (ft)	533		385			348
Travel Time (s)	12.1		8.8			7.9
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.92	0.94	0.95	0.94	0.91
Heavy Vehicles (%)	9%	1%	2%	5%	13%	5%
Adj. Flow (vph)	232	514	906	336	359	970
Shared Lane Traffic (%)						
Lane Group Flow (vph)	232	514	1242	0	359	970
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0		-4.0	0.0
Total Lost Time (s)	5.0	5.0	6.0		-1.0	12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	22.0	49.0		64.0	51.0
Actuated g/C Ratio	0.24	0.24	0.54		0.71	0.57
v/c Ratio	0.59	0.99	0.70		1.21	0.98
Control Delay	37.3	60.4	16.4		116.4	24.6
Queue Delay	0.0	5.6	4.4		0.0	40.6
Total Delay	37.3	66.0	20.8		116.4	65.2
LOS	D	E	C		F	E
Approach Delay	57.1		20.8			79.1
Approach LOS	E		C			E
Queue Length 50th (ft)	117	188	237		~123	488
Queue Length 95th (ft)	170	#403	314		m#101	m427
Internal Link Dist (ft)	453		305			268
Turn Bay Length (ft)	200					
Base Capacity (vph)	391	517	1775		297	991
Starvation Cap Reductn	0	0	449		0	265
Spillback Cap Reductn	0	11	4		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.59	1.02	0.94		1.21	1.34

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow, Master Intersection
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.21
 Intersection Signal Delay: 52.3
 Intersection LOS: D

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020

Intersection Capacity Utilization 85.0%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

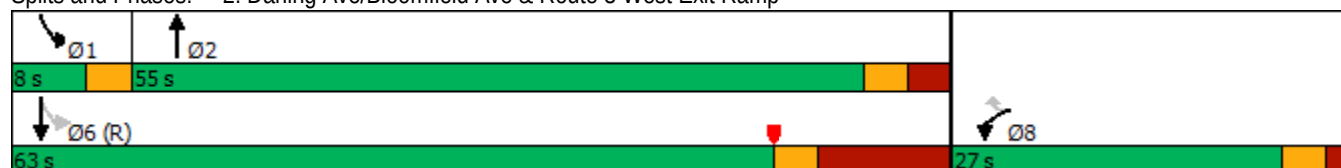
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp



Lanes, Volumes, Timings

3: Metro Blvd & EB Route 3

01/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗				↗
Traffic Volume (vph)	0	699	0	0	0	392
Future Volume (vph)	0	699	0	0	0	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	11	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				0.865
Flt Protected						
Satd. Flow (prot)	0	1489	0	0	0	1242
Flt Permitted						
Satd. Flow (perm)	0	1489	0	0	0	1242
Link Speed (mph)	30			30	30	
Link Distance (ft)	891			682	775	
Travel Time (s)	20.3			15.5	17.6	
Confl. Peds. (#/hr)		25	25		25	25
Peak Hour Factor	0.92	0.86	0.92	0.92	0.92	0.80
Heavy Vehicles (%)	2%	3%	2%	2%	2%	50%
Adj. Flow (vph)	0	813	0	0	0	490
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	813	0	0	0	490
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.09	1.04	1.04	1.04	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.9%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	482	393	13	10	345	220	0	0	0	62	36	553
Future Volume (vph)	482	393	13	10	345	220	0	0	0	62	36	553
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	13	13	16	11	11	11	10	10	10
Storage Length (ft)	100		0	0		110	0		0	0		150
Storage Lanes	1		0	0		1	0		0	0		1
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
Ped Bike Factor	0.98	1.00			1.00	0.92					0.96	0.92
Frt		0.995				0.850						0.850
Flt Protected	0.950				0.998						0.969	
Satd. Flow (prot)	1694	1583	0	0	1845	1777	0	0	0	0	1658	1378
Flt Permitted	0.386				0.981						0.969	
Satd. Flow (perm)	675	1583	0	0	1812	1633	0	0	0	0	1592	1266
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				186						170
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1090			2354			519			626	
Travel Time (s)		24.8			53.5			11.8			14.2	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.97	0.83	0.80	0.80	0.85	0.90	0.92	0.92	0.92	0.82	0.81	0.94
Heavy Vehicles (%)	3%	3%	0%	0%	2%	3%	2%	2%	2%	4%	3%	5%
Bus Blockages (#/hr)	0	10	10	0	10	0	0	0	0	0	0	10
Parking (#/hr)		0	0									
Adj. Flow (vph)	497	473	16	13	406	244	0	0	0	76	44	588
Shared Lane Traffic (%)												
Lane Group Flow (vph)	497	489	0	0	419	244	0	0	0	0	120	588
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.20	1.04	0.96	1.01	0.85	1.04	1.04	1.04	1.09	1.09	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	1
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20				20	100	20
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				20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	0.0
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	
Detector 2 Size(ft)		6			6						6	

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0						0.0		
Turn Type	pm+pt	NA		Perm	NA	Perm				Perm	NA	pm+ov
Protected Phases	5	2			6						4	5
Permitted Phases	2			6		6				4		4
Detector Phase	5	2		6	6	6				4	4	5
Switch Phase												
Minimum Initial (s)	7.0	39.0		29.0	29.0	29.0				8.0	8.0	7.0
Minimum Split (s)	10.0	45.0		35.0	35.0	35.0				25.0	25.0	10.0
Total Split (s)	16.0	51.0		35.0	35.0	35.0				39.0	39.0	16.0
Total Split (%)	17.8%	56.7%		38.9%	38.9%	38.9%				43.3%	43.3%	17.8%
Maximum Green (s)	13.0	45.0		29.0	29.0	29.0				32.0	32.0	13.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
All-Red Time (s)	0.0	3.0		3.0	3.0	3.0				4.0	4.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0					0.0	0.0
Total Lost Time (s)	3.0	6.0			6.0	6.0					7.0	3.0
Lead/Lag	Lead			Lag	Lag	Lag				Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes				Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Recall Mode	None	Min		Min	Min	Min				None	None	None
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)	48.7	47.2			29.4	29.4					10.0	24.2
Actuated g/C Ratio	0.75	0.73			0.45	0.45					0.15	0.37
v/c Ratio	0.70	0.43			0.51	0.29					0.49	0.98
Control Delay	11.4	7.0			17.2	5.1					34.0	48.1
Queue Delay	0.0	0.0			0.0	0.0					0.0	0.0
Total Delay	11.4	7.0			17.2	5.1					34.0	48.1
LOS	B	A			B	A					C	D
Approach Delay		9.2			12.8						45.7	
Approach LOS		A			B						D	
Queue Length 50th (ft)	66	80			123	14					47	150
Queue Length 95th (ft)	#167	145			206	57					83	#258
Internal Link Dist (ft)		1010			2274		439				546	
Turn Bay Length (ft)	100					110						150
Base Capacity (vph)	712	1150			820	841					795	599
Starvation Cap Reductn	0	0			0	0					0	0
Spillback Cap Reductn	0	0			0	0					0	0
Storage Cap Reductn	0	0			0	0					0	0
Reduced v/c Ratio	0.70	0.43			0.51	0.29					0.15	0.98

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 65

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 21.2

Intersection LOS: C

Intersection Capacity Utilization 86.2%

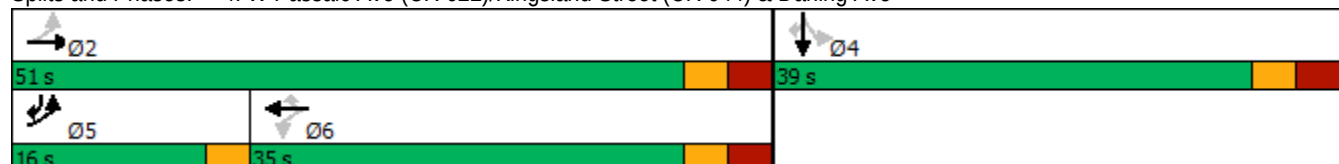
ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave



Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	463	81	110	376	395	142	236	301	106	21	13
Future Volume (vph)	95	463	81	110	376	395	142	236	301	106	21	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	10	10	11
Storage Length (ft)	220		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		1
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
Ped Bike Factor	1.00	0.99		0.99	0.97			0.97			0.99	0.95
Frt		0.975			0.922			0.940				0.850
Flt Protected	0.950			0.950				0.990			0.960	
Satd. Flow (prot)	1685	1585	0	1570	1450	0	0	1654	0	0	1702	1561
Flt Permitted	0.143			0.249				0.886			0.308	
Satd. Flow (perm)	253	1585	0	407	1450	0	0	1472	0	0	543	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			105			76				50
Link Speed (mph)		30			30			30				30
Link Distance (ft)		2354			843			553				795
Travel Time (s)		53.5			19.2			12.6				18.1
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.96	0.94	0.81	0.87	0.83	0.81	0.88	0.89	0.88	0.80	0.80	0.88
Heavy Vehicles (%)	0%	3%	8%	3%	4%	7%	2%	0%	1%	0%	0%	0%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	0	0
Adj. Flow (vph)	99	493	100	126	453	488	161	265	342	133	26	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	593	0	126	941	0	0	768	0	0	159	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.15	1.09	1.15	1.15	1.09	1.04	1.04	1.04	1.09	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2		6		6
Permitted Phases	4	4		8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (s)	34.0	34.0		34.0	34.0		31.0	31.0		31.0	31.0	31.0
Total Split (%)	52.3%	52.3%		52.3%	52.3%		47.7%	47.7%		47.7%	47.7%	47.7%
Maximum Green (s)	28.0	28.0		28.0	28.0		24.0	24.0		24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			-3.0			0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0			4.0			7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Max	Max		Max	Max		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	21.0	21.0		21.0	21.0		17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effect Green (s)	28.0	28.0		28.0	28.0			27.0			24.0	24.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.42			0.37	0.37
v/c Ratio	0.92	0.85		0.72	1.38			1.17			0.80	0.03
Control Delay	93.5	30.9		43.1	198.6			114.0			50.4	0.4
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	93.5	30.9		43.1	198.6			114.0			50.4	0.4
LOS	F	C		D	F			F			D	A
Approach Delay		39.9			180.2			114.0			46.1	
Approach LOS		D			F			F			D	
Queue Length 50th (ft)	35	196		39	~488			~356			55	0
Queue Length 95th (ft)	#123	#384		#120	#621			#546			#127	1
Internal Link Dist (ft)		2274			763			473			715	
Turn Bay Length (ft)	220			50								
Base Capacity (vph)	108	694		175	684			655			200	577
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.92	0.85		0.72	1.38			1.17			0.80	0.03
Intersection Summary												
Area Type:	Other											
Cycle Length: 65												
Actuated Cycle Length: 65												
Natural Cycle: 75												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 1.38												

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection Signal Delay: 116.8

Intersection LOS: F

Intersection Capacity Utilization 113.2%

ICU Level of Service H

Analysis Period (min) 15

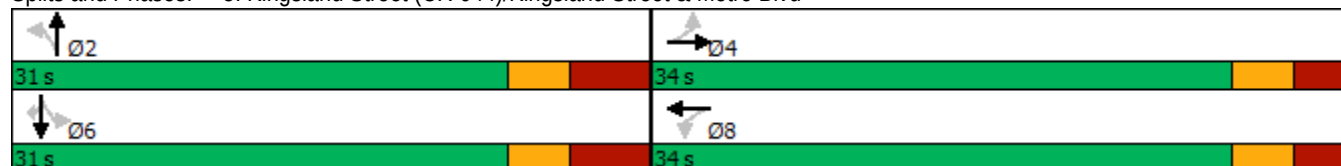
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

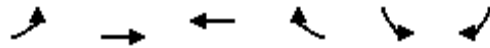
Queue shown is maximum after two cycles.

Splits and Phases: 5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd



Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

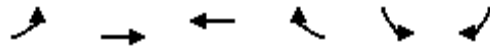
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	831	856	432	115	25
Future Volume (vph)	40	831	856	432	115	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.951			0.850
Flt Protected		0.997			0.950	
Satd. Flow (prot)	0	2105	1997	0	1685	1409
Flt Permitted		0.997			0.950	
Satd. Flow (perm)	0	2105	1997	0	1685	1409
Link Speed (mph)		30	30		30	
Link Distance (ft)		843	832		283	
Travel Time (s)		19.2	18.9		6.4	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.81	0.93	0.92	0.81	0.80	0.80
Heavy Vehicles (%)	2%	2%	4%	0%	0%	7%
Adj. Flow (vph)	49	894	930	533	144	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	943	1463	0	144	31
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		10	10		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.85	0.85	1.09	1.09
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	93.3%			ICU Level of Service F		
Analysis Period (min)	15					

Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	452	494	516	1	4	772
Future Volume (vph)	452	494	516	1	4	772
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	14	14	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.866	
Flt Protected		0.977				
Satd. Flow (prot)	0	1814	1754	0	1651	0
Flt Permitted		0.977				
Satd. Flow (perm)	0	1814	1754	0	1651	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		832	315		293	
Travel Time (s)		18.9	7.2		6.7	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.85	0.84	0.82	0.80	0.80	0.91
Heavy Vehicles (%)	1%	2%	4%	0%	0%	3%
Bus Blockages (#/hr)	10	10	0	0	0	0
Parking (#/hr)			0			
Adj. Flow (vph)	532	588	629	1	5	848
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1120	630	0	853	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.96	1.01	1.05	0.92	0.96	0.96
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 138.6% ICU Level of Service H

Analysis Period (min) 15

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	494	168	78	589	7	284	89	162	14	98	30
Future Volume (vph)	2	494	168	78	589	7	284	89	162	14	98	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	11	11	11	11	11	11	16	16	16
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.96			0.98	
Frt		0.967			0.998			0.949			0.971	
Flt Protected					0.994			0.976			0.995	
Satd. Flow (prot)	0	1815	0	0	1678	0	0	2911	0	0	1724	0
Flt Permitted		0.997			0.822			0.764			0.909	
Satd. Flow (perm)	0	1809	0	0	1386	0	0	2240	0	0	1572	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		34			1							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		742			1021			370			382	
Travel Time (s)		16.9			23.2			8.4			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.89	0.95	0.81	0.87	0.80	0.96	0.92	0.81	0.80	0.83	0.80
Heavy Vehicles (%)	0%	2%	4%	6%	4%	0%	1%	0%	2%	0%	4%	20%
Bus Blockages (#/hr)	10	10	10	10	10	10	0	10	10	0	0	0
Parking (#/hr)								0	0		0	
Adj. Flow (vph)	3	555	177	96	677	9	296	97	200	18	118	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	735	0	0	782	0	0	593	0	0	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.97	0.92	1.04	1.10	1.04	1.04	1.14	1.04	0.85	0.97	0.85
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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	

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases	4			8						6		
Permitted Phases	4			8			2	2		6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		36.0	36.0		28.0	28.0		28.0	28.0	
Total Split (%)	56.3%	56.3%		56.3%	56.3%		43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	30.0	30.0		30.0	30.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	6.0			6.0			6.0			6.0		
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	32.1			32.1			19.9			19.9		
Actuated g/C Ratio	0.50			0.50			0.31			0.31		
v/c Ratio	0.80			1.13			0.92dl			0.36		
Control Delay	22.2			95.7			33.5			18.7		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	22.2			95.7			33.5			18.7		
LOS	C			F			C			B		
Approach Delay	22.2			95.7			33.5			18.7		
Approach LOS	C			F			C			B		
Queue Length 50th (ft)	227			~384			106			49		
Queue Length 95th (ft)	#426			#555			#183			85		
Internal Link Dist (ft)	662			941			290			302		
Turn Bay Length (ft)												
Base Capacity (vph)	923			694			770			540		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.80			1.13			0.77			0.32		
Intersection Summary												
Area Type:	Other											
Cycle Length: 64												
Actuated Cycle Length: 64												
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow												
Natural Cycle: 80												

Lanes, Volumes, Timings

8: Franklin Avenue & Kingsland Street

01/10/2020

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 50.0

Intersection LOS: D

Intersection Capacity Utilization 121.4%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

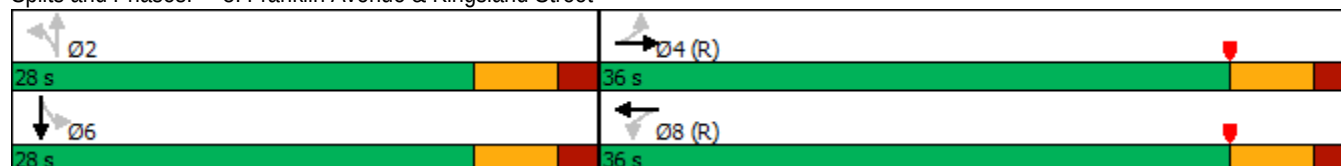
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Franklin Avenue & Kingsland Street



Lanes, Volumes, Timings
9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	257	352	61	17	319	91	136	481	46	51	175	219
Future Volume (vph)	257	352	61	17	319	91	136	481	46	51	175	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	150		0	0		0	0		0	70		0
Storage Lanes	1		0	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99			0.99		0.99	0.97	
Frt		0.975			0.968			0.990			0.917	
Flt Protected	0.950				0.998			0.990		0.950		
Satd. Flow (prot)	1711	1658	0	0	1607	0	0	1539	0	1620	1450	0
Flt Permitted	0.395				0.970			0.661		0.294		
Satd. Flow (perm)	702	1658	0	0	1561	0	0	1025	0	498	1450	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1021			651			384			1036	
Travel Time (s)		23.2			14.8			8.7			23.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.86	0.93	0.81	0.80	0.93	0.81	0.86	0.86	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	3%	2%	0%	5%	5%	2%	1%	2%	4%	2%	7%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	10	10
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	299	378	75	21	343	112	158	559	57	63	216	270
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	453	0	0	476	0	0	774	0	63	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.10	1.04	1.04	1.10	1.04	1.09	1.25	1.09	1.09	1.15	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			-4.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0			2.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings

9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	23.0	23.0		23.0	23.0		22.0	22.0		22.0	22.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0			33.0			39.0		35.0	35.0	
Actuated g/C Ratio	0.41	0.41			0.41			0.49		0.44	0.44	
v/c Ratio	1.03	0.66			0.74			1.55		0.29	0.77	
Control Delay	89.6	24.8			28.5			280.0		19.1	29.0	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	89.6	24.8			28.5			280.0		19.1	29.0	
LOS	F	C			C			F		B	C	
Approach Delay		50.5			28.5			280.0			27.9	
Approach LOS		D			C			F			C	
Queue Length 50th (ft)	~163	178			195			~554		20	198	
Queue Length 95th (ft)	#292	282			#314			#718		44	269	
Internal Link Dist (ft)		941			571			304			956	
Turn Bay Length (ft)	150									70		
Base Capacity (vph)	289	683			643			499		217	634	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	1.03	0.66			0.74			1.55		0.29	0.77	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.55

Intersection Signal Delay: 111.2

Intersection LOS: F

Intersection Capacity Utilization 138.3%

ICU Level of Service H

Analysis Period (min) 15

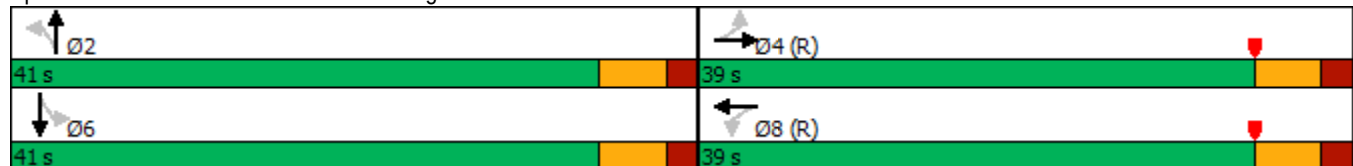
~ Volume exceeds capacity, queue is theoretically infinite.

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: 9: Passaic Ave & Kingsland Street



Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	343	128	610	266	110	879
Future Volume (vph)	343	128	610	266	110	879
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.958			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1829	1482	3287	0	1745	1783
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1829	1482	3287	0	1745	1783
Link Speed (mph)	30		30			30
Link Distance (ft)	450		534			209
Travel Time (s)	10.2		12.1			4.8
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.81	0.84	0.93	0.84	0.92
Heavy Vehicles (%)	2%	9%	2%	1%	0%	3%
Adj. Flow (vph)	423	158	726	286	131	955
Shared Lane Traffic (%)						
Lane Group Flow (vph)	423	158	1012	0	131	955
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	71.9%			ICU Level of Service C		
Analysis Period (min)	15					

Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	5	7	77	0	248	4	622	212	361	859	2
Future Volume (vph)	7	5	7	77	0	248	4	622	212	361	859	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	11	11	11
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
Ped Bike Factor												
Frt		0.949				0.850		0.964			0.999	
Flt Protected		0.982			0.950					0.950		
Satd. Flow (prot)	0	1630	0	0	1558	1516	0	2047	0	1678	1764	0
Flt Permitted		0.982			0.950					0.950		
Satd. Flow (perm)	0	1630	0	0	1558	1516	0	2047	0	1678	1764	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		309			239			1482			534	
Travel Time (s)		7.0			5.4			33.7			12.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.80	0.80	0.81	0.92	0.92	0.80	0.94	0.87	0.95	0.98	0.80
Heavy Vehicles (%)	0%	20%	0%	12%	2%	3%	25%	1%	2%	4%	4%	0%
Adj. Flow (vph)	9	6	9	95	0	270	5	662	244	380	877	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	95	270	0	911	0	380	880	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.85	0.85	0.85	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	113.6%						ICU Level of Service H					
Analysis Period (min)	15											

Lanes, Volumes, Timings

12: High Street & W Passaic Street/W Passaic Ave (CR 622)

01/10/2020

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	4	825	42	14	880	4	65	12	61	2	8	0	
Future Volume (vph)	4	825	42	14	880	4	65	12	61	2	8	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor													
Frt	0.992				0.999				0.940				
Flt Protected					0.999						0.977		0.989
Satd. Flow (prot)	0	1610	0	0	1588	0	0	1492	0	0	1635	0	
Flt Permitted					0.999						0.977		0.989
Satd. Flow (perm)	0	1610	0	0	1588	0	0	1492	0	0	1635	0	
Link Speed (mph)	30				30				30		30		
Link Distance (ft)	341				1090				336		292		
Travel Time (s)	7.8				24.8				7.6		6.6		
Confl. Peds. (#/hr)	25			25	25			25	25			25	
Peak Hour Factor	0.80	0.95	0.81	0.81	0.91	0.98	0.81	0.80	0.81	0.80	0.80	0.92	
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	0%	4%	0%	0%	2%	
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Adj. Flow (vph)	5	868	52	17	967	4	80	15	75	3	10	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	925	0	0	988	0	0	170	0	0	13	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	11				11				0		0		
Link Offset(ft)	0				0				0		0		
Crosswalk Width(ft)	16				16				16		16		
Two way Left Turn Lane													
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Free				Free				Stop		Stop		
Intersection Summary													
Area Type:	Other												
Control Type:	Unsignalized												
Intersection Capacity Utilization	78.8%												
Analysis Period (min)	15												
ICU Level of Service D													

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	298	270	423	190	87	369
Future Volume (vph)	298	270	423	190	87	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)	0	80		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Ped Bike Factor	0.96	0.95		0.92		0.99
Frt		0.850		0.850		
Flt Protected	0.950					0.990
Satd. Flow (prot)	1662	1516	3388	1531	0	3437
Flt Permitted	0.950					0.752
Satd. Flow (perm)	1599	1442	3388	1406	0	2596
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		206		206		
Link Speed (mph)	30		30			30
Link Distance (ft)	344		504			159
Travel Time (s)	7.8		11.5			3.6
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.87	0.85	0.83	0.81	0.81	0.87
Heavy Vehicles (%)	5%	3%	3%	2%	0%	5%
Adj. Flow (vph)	343	318	510	235	107	424
Shared Lane Traffic (%)						
Lane Group Flow (vph)	343	318	510	235	0	531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	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	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0	44.0	5.0	58.0
Minimum Split (s)	23.0	23.0	55.0	55.0	8.0	63.0
Total Split (s)	27.0	27.0	55.0	55.0	8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%	61.1%	8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0	44.0	5.0	58.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	8.0	8.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	11.0	11.0		5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	Min	Min	None	C-Min
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 Effect Green (s)	20.7	20.7	53.3	53.3		59.3
Actuated g/C Ratio	0.23	0.23	0.59	0.59		0.66
v/c Ratio	0.90	0.65	0.25	0.26		0.31
Control Delay	61.3	17.9	8.4	2.0		7.4
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	61.3	17.9	8.4	2.0		7.4
LOS	E	B	A	A		A
Approach Delay	40.4		6.4			7.4
Approach LOS	D		A			A
Queue Length 50th (ft)	186	52	57	4		63
Queue Length 95th (ft)	#314	124	78	12		85
Internal Link Dist (ft)	264		424			79
Turn Bay Length (ft)		80		50		
Base Capacity (vph)	406	508	2008	917		1711
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.84	0.63	0.25	0.26		0.31

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 98.3%

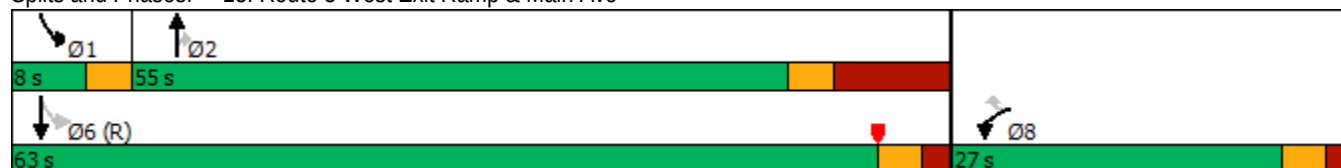
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 13: Route 3 West Exit Ramp & Main Ave



Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	71	130	484	433	223	444
Future Volume (vph)	71	130	484	433	223	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	11	12	12
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.96			1.00
Frt		0.850	0.927			
Flt Protected	0.950					0.984
Satd. Flow (prot)	1646	1553	3045	0	0	3372
Flt Permitted	0.950					0.537
Satd. Flow (perm)	1584	1477	3045	0	0	1836
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		153	417			
Link Speed (mph)	30		30			30
Link Distance (ft)	464		896			504
Travel Time (s)	10.5		20.4			11.5
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.85	0.88	0.83	0.87	0.87
Heavy Vehicles (%)	6%	4%	3%	1%	4%	6%
Adj. Flow (vph)	88	153	550	522	256	510
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	153	1072	0	0	766
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.04	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	6.0			12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	9.6	9.6	69.4			63.4
Actuated g/C Ratio	0.11	0.11	0.77			0.70
v/c Ratio	0.50	0.52	0.44			0.59
Control Delay	47.4	13.0	2.7			10.7
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	47.4	13.0	2.7			10.7
LOS	D	B	A			B
Approach Delay	25.6		2.7			10.7
Approach LOS	C		A			B
Queue Length 50th (ft)	48	0	43			131
Queue Length 95th (ft)	82	45	77			m246
Internal Link Dist (ft)	384		816			424
Turn Bay Length (ft)		110				
Base Capacity (vph)	402	476	2444			1293
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.22	0.32	0.44			0.59

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

Intersection Signal Delay: 8.3

Intersection LOS: A

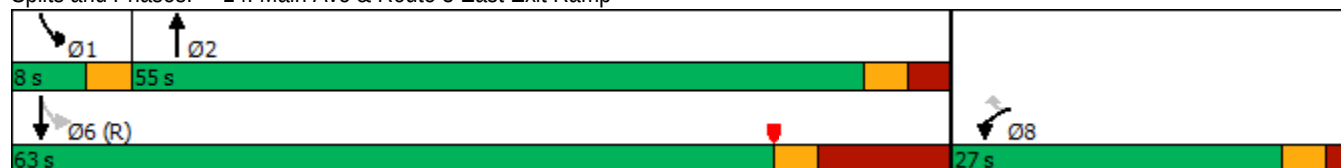
Intersection Capacity Utilization 113.5%

ICU Level of Service H

Analysis Period (min) 15

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

Splits and Phases: 14: Main Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	549	26	2	0	73	48	7	1	0	62	1	245
Future Volume (vph)	549	26	2	0	73	48	7	1	0	62	1	245
Ideal Flow (vphpl)	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	12	12	15
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		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
Ped Bike Factor												
Frt		0.999			0.947						0.896	
Flt Protected		0.955						0.957			0.989	
Satd. Flow (prot)	0	1980	0	0	2015	0	0	1758	0	0	1602	0
Flt Permitted		0.955						0.957			0.989	
Satd. Flow (perm)	0	1980	0	0	2015	0	0	1758	0	0	1602	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			258			233			196	
Travel Time (s)		5.4			5.9			5.3			4.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.93	0.80	0.80	0.92	0.81	0.81	0.80	0.80	0.92	0.81	0.80	0.92
Heavy Vehicles (%)	3%	13%	50%	2%	2%	0%	0%	0%	2%	2%	0%	6%
Adj. Flow (vph)	590	33	3	0	90	59	9	1	0	77	1	266
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	626	0	0	149	0	0	10	0	0	344	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.88	0.85	0.85	0.85	0.85	0.85	1.04	1.04	1.04	1.00	1.00	0.88
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	98.0%											
Analysis Period (min)	15											
ICU Level of Service F												

2025 Build with Improvements Synchro Analysis Reports

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	426	358	864	461	166	794
Future Volume (vph)	426	358	864	461	166	794
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Storage Length (ft)	0	300		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.97			
Frt		0.850	0.948			
Flt Protected	0.950					0.991
Satd. Flow (prot)	1687	1468	3152	0	0	3164
Flt Permitted	0.950					0.508
Satd. Flow (perm)	1624	1397	3152	0	0	1622
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		177	153			
Link Speed (mph)	30		30			30
Link Distance (ft)	610		348			446
Travel Time (s)	13.9		7.9			10.1
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.98	0.94	0.92	0.92	0.84	0.87
Heavy Vehicles (%)	7%	10%	2%	2%	3%	8%
Bus Blockages (#/hr)	0	0	0	0	0	10
Adj. Flow (vph)	435	381	939	501	198	913
Shared Lane Traffic (%)						
Lane Group Flow (vph)	435	381	1440	0	0	1111
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		5.0	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0		5.0	58.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	11.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	22.0	52.0			58.0
Actuated g/C Ratio	0.24	0.24	0.58			0.64
v/c Ratio	1.06	0.80	0.76			1.38dl
Control Delay	94.9	31.4	12.8			64.8
Queue Delay	16.5	0.0	2.3			15.6
Total Delay	111.3	31.4	15.1			80.4
LOS	F	C	B			F
Approach Delay	74.0		15.1			80.4
Approach LOS	E		B			F
Queue Length 50th (ft)	~274	111	197			~370
Queue Length 95th (ft)	#455	#263	m288			#468
Internal Link Dist (ft)	530		268			366
Turn Bay Length (ft)		300				
Base Capacity (vph)	412	475	1885			1045
Starvation Cap Reductn	0	0	302			0
Spillback Cap Reductn	20	0	0			177
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	1.11	0.80	0.91			1.28

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 50.9

Intersection LOS: D

Intersection Capacity Utilization 128.9%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Bloomfield Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	188	473	852	319	337	883
Future Volume (vph)	188	473	852	319	337	883
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	0		150	0	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.94	0.95	0.98			
Frt		0.850	0.959			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1601	1546	3184	0	1544	1749
Flt Permitted	0.950				0.120	
Satd. Flow (perm)	1501	1470	3184	0	195	1749
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		291	83			
Link Speed (mph)	30		30			30
Link Distance (ft)	533		385			348
Travel Time (s)	12.1		8.8			7.9
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.92	0.94	0.95	0.94	0.91
Heavy Vehicles (%)	9%	1%	2%	5%	13%	5%
Adj. Flow (vph)	232	514	906	336	359	970
Shared Lane Traffic (%)						
Lane Group Flow (vph)	232	514	1242	0	359	970
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	50.0		13.0	63.0
Total Split (%)	30.0%	30.0%	55.6%		14.4%	70.0%
Maximum Green (s)	22.0	22.0	44.0		10.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0		-4.0	0.0
Total Lost Time (s)	5.0	5.0	6.0		-1.0	12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	19.1	19.1	44.1		66.9	53.9
Actuated g/C Ratio	0.21	0.21	0.49		0.74	0.60
v/c Ratio	0.68	0.95	0.78		0.91	0.93
Control Delay	42.8	43.8	21.7		27.3	20.0
Queue Delay	0.0	7.0	10.6		0.0	46.1
Total Delay	42.8	50.9	32.2		27.3	66.1
LOS	D	D	C		C	E
Approach Delay	48.3		32.2			55.6
Approach LOS	D		C			E
Queue Length 50th (ft)	117	129	275		~154	488
Queue Length 95th (ft)	170	#326	362		m124	m427
Internal Link Dist (ft)	453		305			268
Turn Bay Length (ft)	200					
Base Capacity (vph)	391	579	1602		396	1047
Starvation Cap Reductn	0	0	347		0	265
Spillback Cap Reductn	0	43	5		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.59	0.96	0.99		0.91	1.24

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 45.2

Intersection LOS: D

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020

Intersection Capacity Utilization 85.0%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

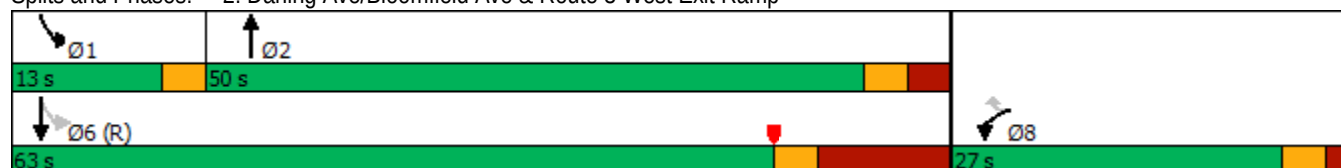
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp



Lanes, Volumes, Timings

3: Metro Blvd & EB Route 3

01/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗				↗
Traffic Volume (vph)	0	699	0	0	0	392
Future Volume (vph)	0	699	0	0	0	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	11	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				0.865
Flt Protected						
Satd. Flow (prot)	0	1489	0	0	0	1242
Flt Permitted						
Satd. Flow (perm)	0	1489	0	0	0	1242
Link Speed (mph)	30			30	30	
Link Distance (ft)	891			682	775	
Travel Time (s)	20.3			15.5	17.6	
Confl. Peds. (#/hr)		25	25		25	25
Peak Hour Factor	0.92	0.86	0.92	0.92	0.92	0.80
Heavy Vehicles (%)	2%	3%	2%	2%	2%	50%
Adj. Flow (vph)	0	813	0	0	0	490
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	813	0	0	0	490
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.09	1.04	1.04	1.04	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.9%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	482	393	13	10	345	220	0	0	0	62	36	553
Future Volume (vph)	482	393	13	10	345	220	0	0	0	62	36	553
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	13	13	16	11	11	11	10	10	10
Storage Length (ft)	100		0	0		110	0		0	0		150
Storage Lanes	1		0	0		1	0		0	0		1
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
Ped Bike Factor	0.98	1.00			1.00	0.92					0.96	0.92
Frt		0.995				0.850						0.850
Flt Protected	0.950				0.998						0.969	
Satd. Flow (prot)	1694	1583	0	0	1845	1777	0	0	0	0	1658	1378
Flt Permitted	0.344				0.980						0.969	
Satd. Flow (perm)	602	1583	0	0	1810	1633	0	0	0	0	1592	1266
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				174						124
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1090			2354			519			626	
Travel Time (s)		24.8			53.5			11.8			14.2	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.97	0.83	0.80	0.80	0.85	0.90	0.92	0.92	0.92	0.82	0.81	0.94
Heavy Vehicles (%)	3%	3%	0%	0%	2%	3%	2%	2%	2%	4%	3%	5%
Bus Blockages (#/hr)	0	10	10	0	10	0	0	0	0	0	0	10
Parking (#/hr)		0	0									
Adj. Flow (vph)	497	473	16	13	406	244	0	0	0	76	44	588
Shared Lane Traffic (%)												
Lane Group Flow (vph)	497	489	0	0	419	244	0	0	0	0	120	588
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.20	1.04	0.96	1.01	0.85	1.04	1.04	1.04	1.09	1.09	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	1
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20				20	100	20
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				20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	0.0
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	
Detector 2 Size(ft)		6			6						6	

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		Perm	NA	Perm				Perm	NA	pm+ov
Protected Phases	5	2			6						4	5
Permitted Phases	2			6		6				4		4
Detector Phase	5	2		6	6	6				4	4	5
Switch Phase												
Minimum Initial (s)	7.0	39.0		29.0	29.0	29.0				8.0	8.0	7.0
Minimum Split (s)	10.0	45.0		35.0	35.0	35.0				25.0	25.0	10.0
Total Split (s)	20.0	51.0		31.0	31.0	31.0				39.0	39.0	20.0
Total Split (%)	22.2%	56.7%		34.4%	34.4%	34.4%				43.3%	43.3%	22.2%
Maximum Green (s)	17.0	45.0		25.0	25.0	25.0				32.0	32.0	17.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
All-Red Time (s)	0.0	3.0		3.0	3.0	3.0				4.0	4.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0					0.0	0.0
Total Lost Time (s)	3.0	6.0			6.0	6.0					7.0	3.0
Lead/Lag	Lead			Lag	Lag	Lag						Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Recall Mode	None	Min		Min	Min	Min				None	None	None
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 Effect Green (s)	48.7	47.2			25.4	25.4					10.0	28.2
Actuated g/C Ratio	0.75	0.73			0.39	0.39					0.15	0.43
v/c Ratio	0.67	0.43			0.59	0.33					0.49	0.91
Control Delay	10.6	7.0			21.8	6.9					34.0	32.7
Queue Delay	0.0	0.0			0.0	0.0					0.0	0.0
Total Delay	10.6	7.0			21.8	6.9					34.0	32.7
LOS	B	A			C	A					C	C
Approach Delay		8.8			16.3						32.9	
Approach LOS		A			B						C	
Queue Length 50th (ft)	66	80			138	19					47	149
Queue Length 95th (ft)	#151	145			229	68					83	#380
Internal Link Dist (ft)		1010			2274			439			546	
Turn Bay Length (ft)	100					110						150
Base Capacity (vph)	740	1150			706	743					795	649
Starvation Cap Reductn	0	0			0	0					0	0
Spillback Cap Reductn	0	0			0	0					0	0
Storage Cap Reductn	0	0			0	0					0	0
Reduced v/c Ratio	0.67	0.43			0.59	0.33					0.15	0.91

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 65

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 18.2

Intersection LOS: B

Intersection Capacity Utilization 86.2%

ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

 Ø2	 Ø4
51 s	39 s
 Ø5	 Ø6
20 s	31 s

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	463	81	110	376	395	142	236	301	106	21	13
Future Volume (vph)	95	463	81	110	376	395	142	236	301	106	21	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	10	10	11
Storage Length (ft)	220		0	50		50	0		0	0		0
Storage Lanes	1		0	1		1	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.95		0.97		0.99	0.98	
Frt		0.975				0.850		0.940			0.945	
Flt Protected	0.950			0.950				0.990		0.950		
Satd. Flow (prot)	1685	1585	0	1570	1637	1352	0	1654	0	1685	1643	0
Flt Permitted	0.362			0.218				0.918		0.299		
Satd. Flow (perm)	633	1585	0	357	1637	1287	0	1524	0	526	1643	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				284		85			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2354			843			553			795	
Travel Time (s)		53.5			19.2			12.6			18.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.96	0.94	0.81	0.87	0.83	0.81	0.88	0.89	0.88	0.80	0.80	0.88
Heavy Vehicles (%)	0%	3%	8%	3%	4%	7%	2%	0%	1%	0%	0%	0%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	0	0
Adj. Flow (vph)	99	493	100	126	453	488	161	265	342	133	26	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	593	0	126	453	488	0	768	0	133	41	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.15	1.09	1.15	1.15	1.15	1.04	1.04	1.04	1.09	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	34.0	34.0		34.0	34.0	34.0	31.0	31.0		31.0	31.0	
Total Split (s)	30.0	30.0		30.0	30.0	30.0	35.0	35.0		35.0	35.0	
Total Split (%)	46.2%	46.2%		46.2%	46.2%	46.2%	53.8%	53.8%		53.8%	53.8%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	28.0	28.0		28.0	28.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		-3.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		4.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max	Max	None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0	21.0	17.0	17.0		17.0	17.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effect Green (s)	28.0	28.0		28.0	28.0	28.0		31.0		28.0	28.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41	0.41		0.45		0.41	0.41	
v/c Ratio	0.39	0.91		0.88	0.68	0.71		1.05		0.62	0.06	
Control Delay	20.1	39.9		73.7	23.2	13.4		67.6		32.6	9.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	20.1	39.9		73.7	23.2	13.4		67.6		32.6	9.4	
LOS	C	D		E	C	B		E		C	A	
Approach Delay		37.1			24.7			67.6			27.2	
Approach LOS		D			C			E			C	
Queue Length 50th (ft)	29	222		47	152	61		~342		43	6	
Queue Length 95th (ft)	69	#421		#138	222	127		#536		#91	20	
Internal Link Dist (ft)		2274			763			473			715	
Turn Bay Length (ft)	220			50		50						
Base Capacity (vph)	256	653		144	664	691		731		213	675	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.39	0.91		0.88	0.68	0.71		1.05		0.62	0.06	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 69

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.05

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection Signal Delay: 40.2

Intersection LOS: D

Intersection Capacity Utilization 95.4%

ICU Level of Service F

Analysis Period (min) 15

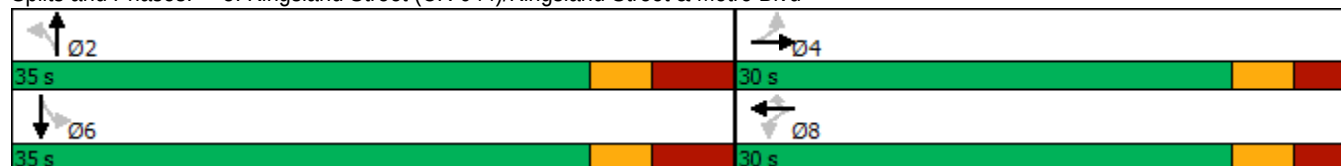
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

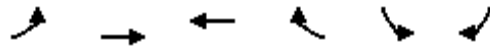
Queue shown is maximum after two cycles.

Splits and Phases: 5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd



Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

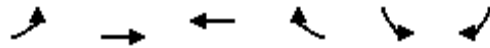
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	831	856	432	115	25
Future Volume (vph)	40	831	856	432	115	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	10	10
Storage Length (ft)	100			100	0	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
Ped Bike Factor				0.93	0.95	0.93
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1711	1801	1766	1561	1685	1409
Flt Permitted	0.103				0.950	
Satd. Flow (perm)	185	1801	1766	1456	1603	1313
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				333		31
Link Speed (mph)		30	30		30	
Link Distance (ft)		843	832		283	
Travel Time (s)		19.2	18.9		6.4	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.81	0.93	0.92	0.81	0.80	0.80
Heavy Vehicles (%)	2%	2%	4%	0%	0%	7%
Adj. Flow (vph)	49	894	930	533	144	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	894	930	533	144	31
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.09	1.09
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
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	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						

Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	45.0	45.0	45.0	45.0	25.0	25.0
Total Split (%)	64.3%	64.3%	64.3%	64.3%	35.7%	35.7%
Maximum Green (s)	39.0	39.0	39.0	39.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	Max	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 Effect Green (s)	39.0	39.0	39.0	39.0	19.0	19.0
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.27	0.27
v/c Ratio	0.48	0.89	0.95	0.56	0.32	0.08
Control Delay	29.1	27.4	35.2	5.9	22.7	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	27.4	35.2	5.9	22.7	8.3
LOS	C	C	D	A	C	A
Approach Delay		27.5	24.6		20.1	
Approach LOS		C	C		C	
Queue Length 50th (ft)	12	308	341	40	49	0
Queue Length 95th (ft)	#48	#569	#614	75	83	15
Internal Link Dist (ft)		763	752		203	
Turn Bay Length (ft)	100			100		
Base Capacity (vph)	103	1003	983	958	457	378
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.89	0.95	0.56	0.32	0.08

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 25.3

Intersection LOS: C

Lanes, Volumes, Timings

6: Kingsland Street & Ideation Way

01/10/2020

Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

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

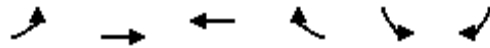
Queue shown is maximum after two cycles.

Splits and Phases: 6: Kingsland Street & Ideation Way



Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

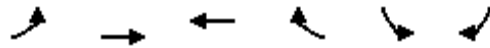
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	452	494	516	1	4	772
Future Volume (vph)	452	494	516	1	4	772
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	13	13
Storage Length (ft)	600			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			1.00		0.92	
Frt					0.866	
Flt Protected	0.950					
Satd. Flow (prot)	1658	1729	1589	0	1518	0
Flt Permitted	0.124					
Satd. Flow (perm)	216	1729	1589	0	1517	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)					506	
Link Speed (mph)		30	30		30	
Link Distance (ft)		832	315		293	
Travel Time (s)		18.9	7.2		6.7	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.85	0.84	0.82	0.80	0.80	0.91
Heavy Vehicles (%)	1%	2%	4%	0%	0%	3%
Bus Blockages (#/hr)	10	10	0	0	0	0
Parking (#/hr)			0			
Adj. Flow (vph)	532	588	629	1	5	848
Shared Lane Traffic (%)						
Lane Group Flow (vph)	532	588	630	0	853	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.10	1.19	1.04	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			

Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 2 Type	Cl+Ex		Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4					
Detector Phase	7	4	8		6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	10.0	23.0	23.0		23.0	
Total Split (s)	29.0	70.0	41.0		20.0	
Total Split (%)	32.2%	77.8%	45.6%		22.2%	
Maximum Green (s)	24.0	65.0	36.0		15.0	
Yellow Time (s)	3.0	3.0	3.0		3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.0	5.0	5.0		5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None		Min	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)	65.0	65.0	36.0		15.0	
Actuated g/C Ratio	0.72	0.72	0.40		0.17	
v/c Ratio	0.99	0.47	0.99		1.27	
Control Delay	59.4	6.8	62.6		147.1	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	59.4	6.8	62.6		147.1	
LOS	E	A	E		F	
Approach Delay		31.8	62.6		147.1	
Approach LOS		C	E		F	
Queue Length 50th (ft)	236	117	348		~358	
Queue Length 95th (ft)	#403	158	#494		#447	
Internal Link Dist (ft)		752	235		213	
Turn Bay Length (ft)	600					
Base Capacity (vph)	540	1248	635		674	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.99	0.47	0.99		1.27	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Natural Cycle: 120

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

7: Kingsland Street & Cathedral Ave

01/10/2020

Maximum v/c Ratio: 1.27

Intersection Signal Delay: 77.0

Intersection LOS: E

Intersection Capacity Utilization 115.1%

ICU Level of Service H

Analysis Period (min) 15

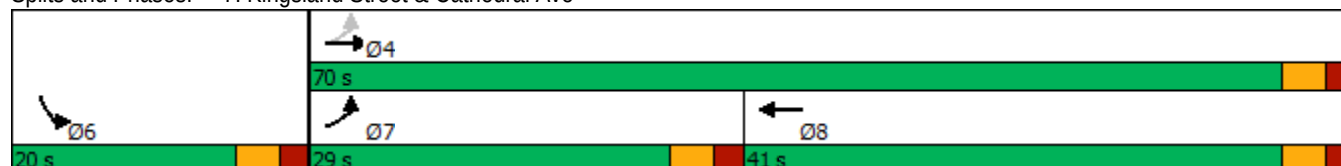
~ Volume exceeds capacity, queue is theoretically infinite.

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: 7: Kingsland Street & Cathedral Ave



Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	494	168	78	589	7	284	89	162	14	98	30
Future Volume (vph)	2	494	168	78	589	7	284	89	162	14	98	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	11	11	11	11	11	11	16	16	16
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.96			0.98	
Frt		0.967			0.998			0.949			0.971	
Flt Protected					0.994			0.976			0.995	
Satd. Flow (prot)	0	1815	0	0	1678	0	0	2911	0	0	1724	0
Flt Permitted		0.998			0.837			0.760			0.904	
Satd. Flow (perm)	0	1811	0	0	1412	0	0	2229	0	0	1564	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		38			1							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		742			1021			370			382	
Travel Time (s)		16.9			23.2			8.4			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.89	0.95	0.81	0.87	0.80	0.96	0.92	0.81	0.80	0.83	0.80
Heavy Vehicles (%)	0%	2%	4%	6%	4%	0%	1%	0%	2%	0%	4%	20%
Bus Blockages (#/hr)	10	10	10	10	10	10	0	10	10	0	0	0
Parking (#/hr)								0	0		0	
Adj. Flow (vph)	3	555	177	96	677	9	296	97	200	18	118	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	735	0	0	782	0	0	593	0	0	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.97	0.92	1.04	1.10	1.04	1.04	1.14	1.04	0.85	0.97	0.85
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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	

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases	4			8						6		
Permitted Phases	4			8			2	2		6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		24.0	24.0		24.0	24.0	
Total Split (s)	40.0	40.0		40.0	40.0		24.0	24.0		24.0	24.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Maximum Green (s)	34.0	34.0		34.0	34.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	6.0			6.0			6.0			6.0		
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	34.0			34.0			18.0			18.0		
Actuated g/C Ratio	0.53			0.53			0.28			0.28		
v/c Ratio	0.75			1.04			1.03dl			0.40		
Control Delay	17.2			62.9			51.0			21.9		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	17.2			62.9			51.0			21.9		
LOS	B			E			D			C		
Approach Delay	17.2			62.9			51.0			21.9		
Approach LOS	B			E			D			C		
Queue Length 50th (ft)	193			~340			118			54		
Queue Length 95th (ft)	318			#510			#215			95		
Internal Link Dist (ft)	662			941			290			302		
Turn Bay Length (ft)												
Base Capacity (vph)	980			751			626			439		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.75			1.04			0.95			0.40		
Intersection Summary												
Area Type:	Other											
Cycle Length: 64												
Actuated Cycle Length: 64												
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow												
Natural Cycle: 80												

Lanes, Volumes, Timings

8: Franklin Avenue & Kingsland Street

01/10/2020

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 42.0

Intersection LOS: D

Intersection Capacity Utilization 121.4%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

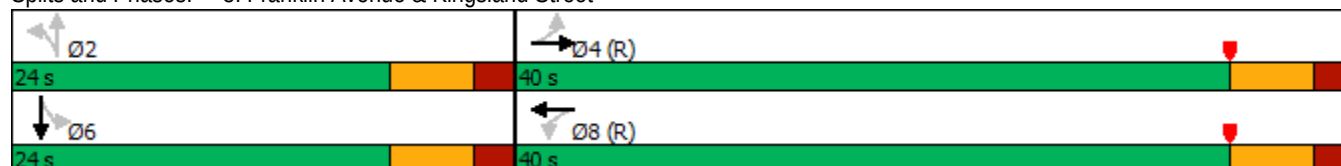
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Franklin Avenue & Kingsland Street



Lanes, Volumes, Timings
9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	257	352	61	17	319	91	136	481	46	51	175	219
Future Volume (vph)	257	352	61	17	319	91	136	481	46	51	175	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	150		0	0		0	0		0	70		0
Storage Lanes	1		0	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99			0.99		0.99	0.97	
Frt		0.975			0.968			0.990			0.917	
Flt Protected	0.950				0.998			0.990		0.950		
Satd. Flow (prot)	1711	1658	0	0	1607	0	0	1539	0	1620	1450	0
Flt Permitted	0.395				0.970			0.661		0.294		
Satd. Flow (perm)	702	1658	0	0	1561	0	0	1025	0	498	1450	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1021			651			384			1036	
Travel Time (s)		23.2			14.8			8.7			23.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.86	0.93	0.81	0.80	0.93	0.81	0.86	0.86	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	3%	2%	0%	5%	5%	2%	1%	2%	4%	2%	7%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	10	10
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	299	378	75	21	343	112	158	559	57	63	216	270
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	453	0	0	476	0	0	774	0	63	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.10	1.04	1.04	1.10	1.04	1.09	1.25	1.09	1.09	1.15	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			-4.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0			2.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings

9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	23.0	23.0		23.0	23.0		22.0	22.0		22.0	22.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0			33.0			39.0		35.0	35.0	
Actuated g/C Ratio	0.41	0.41			0.41			0.49		0.44	0.44	
v/c Ratio	1.03	0.66			0.74			1.55		0.29	0.77	
Control Delay	89.6	24.8			28.5			280.0		19.1	29.0	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	89.6	24.8			28.5			280.0		19.1	29.0	
LOS	F	C			C			F		B	C	
Approach Delay		50.5			28.5			280.0			27.9	
Approach LOS		D			C			F			C	
Queue Length 50th (ft)	~163	178			195			~554		20	198	
Queue Length 95th (ft)	#292	282			#314			#718		44	269	
Internal Link Dist (ft)		941			571			304			956	
Turn Bay Length (ft)	150									70		
Base Capacity (vph)	289	683			643			499		217	634	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	1.03	0.66			0.74			1.55		0.29	0.77	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.55

Intersection Signal Delay: 111.2

Intersection LOS: F

Intersection Capacity Utilization 138.3%

ICU Level of Service H

Analysis Period (min) 15

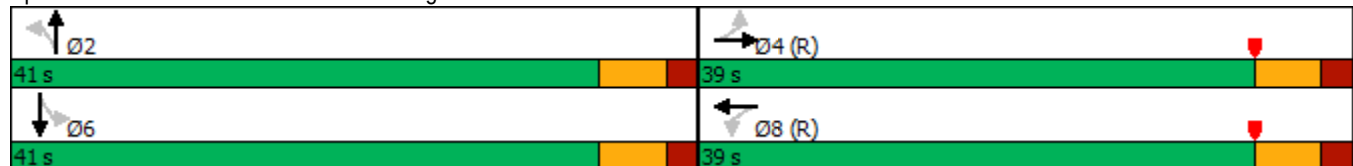
~ Volume exceeds capacity, queue is theoretically infinite.

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: 9: Passaic Ave & Kingsland Street



Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	343	128	610	266	110	879
Future Volume (vph)	343	128	610	266	110	879
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.96	0.95	0.98			
Frt		0.850	0.958			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1829	1482	3211	0	1745	1783
Flt Permitted	0.950				0.194	
Satd. Flow (perm)	1760	1409	3211	0	356	1783
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		158	62			
Link Speed (mph)	30		30			30
Link Distance (ft)	450		534			209
Travel Time (s)	10.2		12.1			4.8
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.81	0.84	0.93	0.84	0.92
Heavy Vehicles (%)	2%	9%	2%	1%	0%	3%
Adj. Flow (vph)	423	158	726	286	131	955
Shared Lane Traffic (%)						
Lane Group Flow (vph)	423	158	1012	0	131	955
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6

Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020



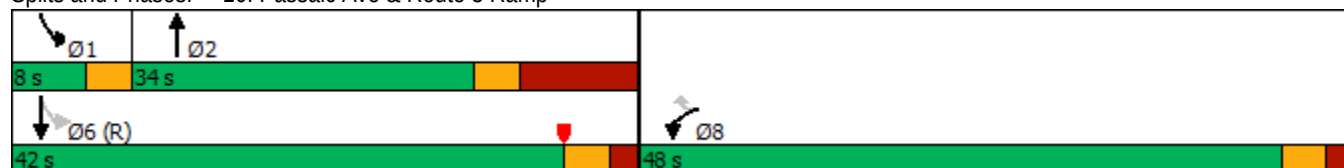
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		3.5	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	48.0	48.0	34.0		8.0	42.0
Total Split (%)	53.3%	53.3%	37.8%		8.9%	46.7%
Maximum Green (s)	43.0	43.0	23.0		5.0	37.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	11.0		3.0	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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)	26.4	26.4	36.6		55.6	53.6
Actuated g/C Ratio	0.29	0.29	0.41		0.62	0.60
v/c Ratio	0.79	0.30	0.75		0.38	0.90
Control Delay	39.5	4.9	20.4		12.0	31.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	39.5	4.9	20.4		12.0	31.5
LOS	D	A	C		B	C
Approach Delay	30.1		20.4			29.2
Approach LOS	C		C			C
Queue Length 50th (ft)	220	0	103		28	436
Queue Length 95th (ft)	244	27	#395		62	#843
Internal Link Dist (ft)	370		454			129
Turn Bay Length (ft)						
Base Capacity (vph)	873	755	1341		343	1061
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.48	0.21	0.75		0.38	0.90
Intersection Summary						
Area Type:	Other					
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow						
Natural Cycle: 90						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.90						
Intersection Signal Delay: 26.1				Intersection LOS: C		
Intersection Capacity Utilization 78.4%				ICU Level of Service D		
Analysis Period (min) 15						

Lanes, Volumes, Timings 10: Passaic Ave & Route 3 Ramp

01/10/2020

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

Splits and Phases: 10: Passaic Ave & Route 3 Ramp



Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	5	7	77	0	248	4	622	212	361	859	2
Future Volume (vph)	7	5	7	77	0	248	4	622	212	361	859	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	11	11	11
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
Ped Bike Factor		0.96			0.94	0.95		0.98		0.99	1.00	
Frt		0.949				0.850		0.964			0.999	
Flt Protected		0.982			0.950					0.950		
Satd. Flow (prot)	0	1580	0	0	1558	1516	0	2003	0	1678	1764	0
Flt Permitted		0.888			0.742			0.995		0.276		
Satd. Flow (perm)	0	1412	0	0	1143	1442	0	1992	0	483	1764	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				270		31				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		309			239			1482			534	
Travel Time (s)		7.0			5.4			33.7			12.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.80	0.80	0.81	0.92	0.92	0.80	0.94	0.87	0.95	0.98	0.80
Heavy Vehicles (%)	0%	20%	0%	12%	2%	3%	25%	1%	2%	4%	4%	0%
Adj. Flow (vph)	9	6	9	95	0	270	5	662	244	380	877	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	95	270	0	911	0	380	880	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.85	0.85	0.85	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	

Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0	23.0	29.0	29.0		9.5	23.0	
Total Split (s)	23.0	23.0		23.0	23.0	23.0	59.0	59.0		8.0	67.0	
Total Split (%)	25.6%	25.6%		25.6%	25.6%	25.6%	65.6%	65.6%		8.9%	74.4%	
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	48.0	48.0		5.0	62.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	8.0	8.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0		11.0		3.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	None		None	C-Max	
Walk Time (s)	7.0	7.0		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	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0			0	
Act Effct Green (s)		12.6			12.6	12.6		48.8		69.4	67.4	
Actuated g/C Ratio		0.14			0.14	0.14		0.54		0.77	0.75	
v/c Ratio		0.12			0.60	0.62		0.83		0.76	0.67	
Control Delay		24.2			50.6	11.1		25.4		15.9	7.3	
Queue Delay		0.0			0.0	0.1		0.0		0.0	0.9	
Total Delay		24.2			50.6	11.2		25.4		15.9	8.2	
LOS		C			D	B		C		B	A	
Approach Delay		24.2			21.5			25.4			10.6	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		8			51	0		403		26	150	
Queue Length 95th (ft)		24			95	65		#666		m#118	m298	
Internal Link Dist (ft)		229			159			1402			454	
Turn Bay Length (ft)												
Base Capacity (vph)		289			228	504		1094		500	1321	
Starvation Cap Reductn		0			0	11		0		0	199	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.08			0.42	0.55		0.83		0.76	0.78	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.83												
Intersection Signal Delay: 17.5						Intersection LOS: B						
Intersection Capacity Utilization 122.0%						ICU Level of Service H						
Analysis Period (min) 15												

Lanes, Volumes, Timings

11: Ward Ave & Passaic Ave

01/10/2020

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: 11: Ward Ave & Passaic Ave



Lanes, Volumes, Timings

12: High Street & W Passaic Street/W Passaic Ave (CR 622)

01/10/2020

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	4	825	42	14	880	4	65	12	61	2	8	0	
Future Volume (vph)	4	825	42	14	880	4	65	12	61	2	8	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor													
Frt	0.992				0.999				0.940				
Flt Protected					0.999						0.977		0.989
Satd. Flow (prot)	0	1610	0	0	1588	0	0	1492	0	0	1635	0	
Flt Permitted					0.999						0.977		0.989
Satd. Flow (perm)	0	1610	0	0	1588	0	0	1492	0	0	1635	0	
Link Speed (mph)	30				30				30		30		
Link Distance (ft)	341				1090				336		292		
Travel Time (s)	7.8				24.8				7.6		6.6		
Confl. Peds. (#/hr)	25			25	25			25	25			25	
Peak Hour Factor	0.80	0.95	0.81	0.81	0.91	0.98	0.81	0.80	0.81	0.80	0.80	0.92	
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	0%	4%	0%	0%	2%	
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Adj. Flow (vph)	5	868	52	17	967	4	80	15	75	3	10	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	925	0	0	988	0	0	170	0	0	13	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	11				11				0		0		
Link Offset(ft)	0				0				0		0		
Crosswalk Width(ft)	16				16				16		16		
Two way Left Turn Lane													
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Free				Free				Stop		Stop		
Intersection Summary													
Area Type:	Other												
Control Type:	Unsignalized												
Intersection Capacity Utilization	78.8%												
Analysis Period (min)	15												
ICU Level of Service D													

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	298	270	423	190	87	369
Future Volume (vph)	298	270	423	190	87	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)	0	80		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Ped Bike Factor	0.96	0.95		0.92		0.99
Frt		0.850		0.850		
Flt Protected	0.950					0.990
Satd. Flow (prot)	1662	1516	3388	1531	0	3437
Flt Permitted	0.950					0.751
Satd. Flow (perm)	1599	1442	3388	1406	0	2592
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		219		189		
Link Speed (mph)	30		30			30
Link Distance (ft)	344		504			159
Travel Time (s)	7.8		11.5			3.6
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.87	0.85	0.83	0.81	0.81	0.87
Heavy Vehicles (%)	5%	3%	3%	2%	0%	5%
Adj. Flow (vph)	343	318	510	235	107	424
Shared Lane Traffic (%)						
Lane Group Flow (vph)	343	318	510	235	0	531
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	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	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0	44.0	5.0	58.0
Minimum Split (s)	23.0	23.0	55.0	55.0	8.0	63.0
Total Split (s)	31.0	31.0	51.0	51.0	8.0	59.0
Total Split (%)	34.4%	34.4%	56.7%	56.7%	8.9%	65.6%
Maximum Green (s)	26.0	26.0	40.0	40.0	5.0	54.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	8.0	8.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	5.0	11.0	11.0		5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	Min	Min	None	C-Min
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 Effect Green (s)	22.0	22.0	52.0	52.0		58.0
Actuated g/C Ratio	0.24	0.24	0.58	0.58		0.64
v/c Ratio	0.85	0.62	0.26	0.26		0.32
Control Delay	51.3	14.7	9.3	2.7		8.4
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	51.3	14.7	9.3	2.7		8.4
LOS	D	B	A	A		A
Approach Delay	33.7		7.2			8.4
Approach LOS	C		A			A
Queue Length 50th (ft)	183	45	58	6		66
Queue Length 95th (ft)	261	107	83	14		98
Internal Link Dist (ft)	264		424			79
Turn Bay Length (ft)		80		50		
Base Capacity (vph)	480	572	1958	892		1671
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		0
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	0.71	0.56	0.26	0.26		0.32

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

Intersection Signal Delay: 16.6

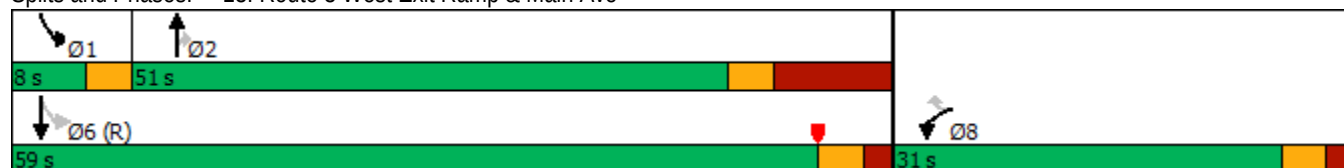
Intersection LOS: B

Intersection Capacity Utilization 98.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 13: Route 3 West Exit Ramp & Main Ave



Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	71	130	484	433	223	444
Future Volume (vph)	71	130	484	433	223	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	11	12	12
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.96			1.00
Frt		0.850	0.927			
Flt Protected	0.950					0.984
Satd. Flow (prot)	1646	1553	3045	0	0	3372
Flt Permitted	0.950					0.537
Satd. Flow (perm)	1584	1477	3045	0	0	1836
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		153	417			
Link Speed (mph)	30		30			30
Link Distance (ft)	464		896			504
Travel Time (s)	10.5		20.4			11.5
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.85	0.88	0.83	0.87	0.87
Heavy Vehicles (%)	6%	4%	3%	1%	4%	6%
Adj. Flow (vph)	88	153	550	522	256	510
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	153	1072	0	0	766
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.04	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	6.0			12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	9.6	9.6	69.4			63.4
Actuated g/C Ratio	0.11	0.11	0.77			0.70
v/c Ratio	0.50	0.52	0.44			0.59
Control Delay	47.4	13.0	2.7			10.0
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	47.4	13.0	2.7			10.0
LOS	D	B	A			A
Approach Delay	25.6		2.7			10.0
Approach LOS	C		A			A
Queue Length 50th (ft)	48	0	43			130
Queue Length 95th (ft)	82	45	77			248
Internal Link Dist (ft)	384		816			424
Turn Bay Length (ft)		110				
Base Capacity (vph)	402	476	2444			1293
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.22	0.32	0.44			0.59

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

Intersection Signal Delay: 8.0

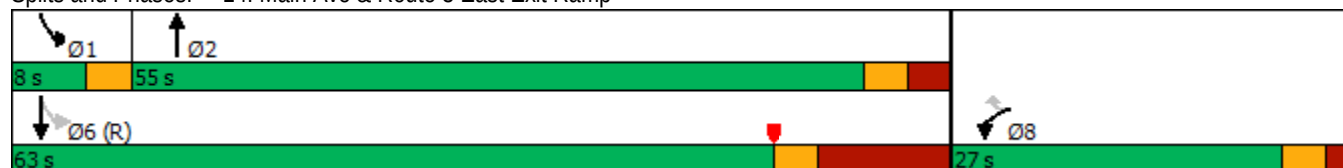
Intersection LOS: A

Intersection Capacity Utilization 113.5%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 14: Main Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	549	26	2	0	73	48	7	1	0	62	1	245
Future Volume (vph)	549	26	2	0	73	48	7	1	0	62	1	245
Ideal Flow (vphpl)	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	12	12	15
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		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
Ped Bike Factor		0.95			0.97			0.99			0.95	
Frt		0.999			0.947						0.896	
Flt Protected		0.955						0.957			0.989	
Satd. Flow (prot)	0	1979	0	0	1950	0	0	1758	0	0	1542	0
Flt Permitted		0.635						0.800			0.921	
Satd. Flow (perm)	0	1253	0	0	1950	0	0	1450	0	0	1416	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			59						173	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			258			233			196	
Travel Time (s)		5.4			5.9			5.3			4.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.93	0.80	0.80	0.92	0.81	0.81	0.80	0.80	0.92	0.81	0.80	0.92
Heavy Vehicles (%)	3%	13%	50%	2%	2%	0%	0%	0%	2%	2%	0%	6%
Adj. Flow (vph)	590	33	3	0	90	59	9	1	0	77	1	266
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	626	0	0	149	0	0	10	0	0	344	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.88	0.85	0.85	0.85	0.85	0.85	1.04	1.04	1.04	1.00	1.00	0.88
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	65.0	65.0		65.0	65.0		25.0	25.0		25.0	25.0	
Total Split (%)	72.2%	72.2%		72.2%	72.2%		27.8%	27.8%		27.8%	27.8%	
Maximum Green (s)	59.0	59.0		59.0	59.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
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		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		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		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		40.0			40.0			19.7			19.7	
Actuated g/C Ratio		0.55			0.55			0.27			0.27	
v/c Ratio		0.90			0.13			0.03			0.67	
Control Delay		30.9			4.4			26.1			22.1	
Queue Delay		1.1			0.0			0.0			0.0	
Total Delay		32.0			4.4			26.1			22.1	
LOS		C			A			C			C	
Approach Delay		32.0			4.4			26.1			22.1	
Approach LOS		C			A			C			C	
Queue Length 50th (ft)		217			16			3			63	
Queue Length 95th (ft)		284			31			16			156	
Internal Link Dist (ft)		159			178			153			116	
Turn Bay Length (ft)												
Base Capacity (vph)		1035			1622			395			511	
Starvation Cap Reductn		200			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.75			0.09			0.03			0.67	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 72.1												
Natural Cycle: 65												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 0.90												
Intersection Signal Delay: 25.3	Intersection LOS: C											

Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

Intersection Capacity Utilization 104.0%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 15: Kensington Ave & Ward Ave



Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	460	266	1248	761	198	990
Future Volume (vph)	460	266	1248	761	198	990
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Storage Length (ft)	0	300		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.97			
Frt		0.850	0.939			
Flt Protected	0.950					0.992
Satd. Flow (prot)	1770	1482	3119	0	0	3299
Flt Permitted	0.950					0.511
Satd. Flow (perm)	1703	1409	3119	0	0	1699
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		132	264			
Link Speed (mph)	30		30			30
Link Distance (ft)	610		348			446
Travel Time (s)	13.9		7.9			10.1
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.93	0.83	0.93	0.83	0.92	0.92
Heavy Vehicles (%)	2%	9%	2%	1%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	10
Adj. Flow (vph)	495	320	1342	917	215	1076
Shared Lane Traffic (%)						
Lane Group Flow (vph)	495	320	2259	0	0	1291
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		5.0	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	44.0		5.0	58.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	11.0			5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	22.0	52.0			58.0
Actuated g/C Ratio	0.24	0.24	0.58			0.64
v/c Ratio	1.15	0.72	1.18			2.83dl
Control Delay	123.0	28.6	100.1			110.2
Queue Delay	1.3	0.0	0.1			0.9
Total Delay	124.3	28.6	100.2			111.0
LOS	F	C	F			F
Approach Delay	86.7		100.2			111.0
Approach LOS	F		F			F
Queue Length 50th (ft)	~333	98	~794			~467
Queue Length 95th (ft)	#522	169	m#384			#598
Internal Link Dist (ft)	530		268			366
Turn Bay Length (ft)		300				
Base Capacity (vph)	432	444	1913			1094
Starvation Cap Reductn	0	0	83			0
Spillback Cap Reductn	55	0	0			180
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	1.31	0.72	1.23			1.41

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Lanes, Volumes, Timings

1: Bloomfield Ave & Route 3 East Exit Ramp

01/10/2020

Maximum v/c Ratio: 1.18

Intersection Signal Delay: 100.9

Intersection LOS: F

Intersection Capacity Utilization 151.1%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 1: Bloomfield Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	327	613	1396	225	353	1097
Future Volume (vph)	327	613	1396	225	353	1097
Ideal Flow (vphpl)	1900	1900	1900	1900	2110	1900
Storage Length (ft)	200	0		150	0	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.94	0.95	0.99			
Frt		0.850	0.979			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1546	3307	0	1863	1801
Flt Permitted	0.950				0.087	
Satd. Flow (perm)	1620	1470	3307	0	171	1801
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		129	32			
Link Speed (mph)	30		30			30
Link Distance (ft)	533		385			348
Travel Time (s)	12.1		8.8			7.9
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.91	0.90	0.85	0.86	0.99	0.96
Heavy Vehicles (%)	1%	1%	2%	3%	4%	2%
Adj. Flow (vph)	359	681	1642	262	357	1143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	359	681	1904	0	357	1143
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	0.91	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	27.0	27.0	55.0		8.0	63.0
Total Split (%)	30.0%	30.0%	61.1%		8.9%	70.0%
Maximum Green (s)	22.0	22.0	49.0		5.0	51.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	-4.0	-1.0		-3.0	0.0
Total Lost Time (s)	5.0	1.0	5.0		0.0	12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	22.0	26.0	50.0		63.0	51.0
Actuated g/C Ratio	0.24	0.29	0.56		0.70	0.57
v/c Ratio	0.85	1.32	1.03		1.32	1.12
Control Delay	52.9	182.0	49.7		170.4	76.4
Queue Delay	0.0	5.2	28.9		0.0	1.6
Total Delay	52.9	187.3	78.6		170.4	78.0
LOS	D	F	E		F	E
Approach Delay	140.9		78.6			100.0
Approach LOS	F		E			F
Queue Length 50th (ft)	195	~453	~611		~202	~759
Queue Length 95th (ft)	#345	#668	#675		m#138	m475
Internal Link Dist (ft)	453		305			268
Turn Bay Length (ft)	200					
Base Capacity (vph)	422	516	1851		270	1020
Starvation Cap Reductn	0	0	341		0	264
Spillback Cap Reductn	0	212	4		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.85	2.24	1.26		1.32	1.51

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow, Master Intersection
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.32
 Intersection Signal Delay: 100.4
 Intersection LOS: F

Lanes, Volumes, Timings

2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp

01/10/2020

Intersection Capacity Utilization 93.9%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Darling Ave/Bloomfield Ave & Route 3 West Exit Ramp



Lanes, Volumes, Timings
3: Metro Blvd & EB Route 3

01/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↗				↗
Traffic Volume (vph)	0	197	0	0	0	559
Future Volume (vph)	0	197	0	0	0	559
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	11	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				0.865
Flt Protected						
Satd. Flow (prot)	0	1534	0	0	0	1725
Flt Permitted						
Satd. Flow (perm)	0	1534	0	0	0	1725
Link Speed (mph)	30			30	30	
Link Distance (ft)	891			682	775	
Travel Time (s)	20.3			15.5	17.6	
Confl. Peds. (#/hr)		25	25		25	25
Peak Hour Factor	0.92	0.80	0.92	0.92	0.92	0.81
Heavy Vehicles (%)	2%	0%	2%	2%	2%	8%
Adj. Flow (vph)	0	246	0	0	0	690
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	246	0	0	0	690
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.09	1.04	1.04	1.04	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	40.3%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	492	344	17	8	387	235	0	0	0	290	91	660
Future Volume (vph)	492	344	17	8	387	235	0	0	0	290	91	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	13	13	16	11	11	11	10	10	10
Storage Length (ft)	100		0	0		110	0		0	0		150
Storage Lanes	1		0	0		1	0		0	0		1
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
Ped Bike Factor		1.00			1.00	0.92					0.95	0.92
Frt		0.993				0.850						0.850
Flt Protected	0.950				0.999						0.964	
Satd. Flow (prot)	1711	1608	0	0	1865	1777	0	0	0	0	1684	1419
Flt Permitted	0.166				0.985						0.964	
Satd. Flow (perm)	299	1608	0	0	1837	1633	0	0	0	0	1606	1303
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				160						68
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1090			2354			519			626	
Travel Time (s)		24.8			53.5			11.8			14.2	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.91	0.82	0.80	0.80	0.89	0.93	0.92	0.92	0.92	0.90	0.83	0.85
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	2%	2%	2%	2%	0%	2%
Bus Blockages (#/hr)	0	10	10	0	10	0	0	0	0	0	0	10
Parking (#/hr)		0	0									
Adj. Flow (vph)	541	420	21	10	435	253	0	0	0	322	110	776
Shared Lane Traffic (%)												
Lane Group Flow (vph)	541	441	0	0	445	253	0	0	0	0	432	776
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.20	1.04	0.96	1.01	0.85	1.04	1.04	1.04	1.09	1.09	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	1
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20				20	100	20
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				20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	0.0
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	
Detector 2 Size(ft)		6			6						6	

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	pm+pt	NA		Perm	NA	Perm				Perm	NA	pm+ov
Protected Phases	5	2			6						4	5
Permitted Phases	2			6		6				4		4
Detector Phase	5	2		6	6	6				4	4	5
Switch Phase												
Minimum Initial (s)	7.0	39.0		29.0	29.0	29.0				8.0	8.0	7.0
Minimum Split (s)	10.0	45.0		35.0	35.0	35.0				25.0	25.0	10.0
Total Split (s)	24.0	51.0		27.0	27.0	27.0				39.0	39.0	24.0
Total Split (%)	26.7%	56.7%		30.0%	30.0%	30.0%				43.3%	43.3%	26.7%
Maximum Green (s)	21.0	45.0		21.0	21.0	21.0				32.0	32.0	21.0
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
All-Red Time (s)	0.0	3.0		3.0	3.0	3.0				4.0	4.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0					0.0	0.0
Total Lost Time (s)	3.0	6.0			6.0	6.0					7.0	3.0
Lead/Lag	Lead			Lag	Lag	Lag						Lead
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Recall Mode	None	Min		Min	Min	Min				None	None	None
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 Effect Green (s)	48.3	45.2			21.1	21.1					25.9	51.0
Actuated g/C Ratio	0.57	0.54			0.25	0.25					0.31	0.61
v/c Ratio	1.03	0.51			0.97	0.48					0.88	0.92
Control Delay	71.4	16.1			69.1	14.6					47.1	30.1
Queue Delay	0.0	0.0			0.0	0.0					0.0	0.0
Total Delay	71.4	16.1			69.1	14.6					47.1	30.1
LOS	E	B			E	B					D	C
Approach Delay		46.6			49.4						36.2	
Approach LOS		D			D						D	
Queue Length 50th (ft)	~264	143			238	40					213	254
Queue Length 95th (ft)	#500	218			#450	114					292	#429
Internal Link Dist (ft)		1010			2274			439			546	
Turn Bay Length (ft)	100					110						150
Base Capacity (vph)	525	866			460	529					613	845
Starvation Cap Reductn	0	0			0	0					0	0
Spillback Cap Reductn	0	0			0	0					0	0
Storage Cap Reductn	0	0			0	0					0	0
Reduced v/c Ratio	1.03	0.51			0.97	0.48					0.70	0.92

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 84.2

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave

01/10/2020

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 42.9

Intersection LOS: D

Intersection Capacity Utilization 100.0%

ICU Level of Service G

Analysis Period (min) 15

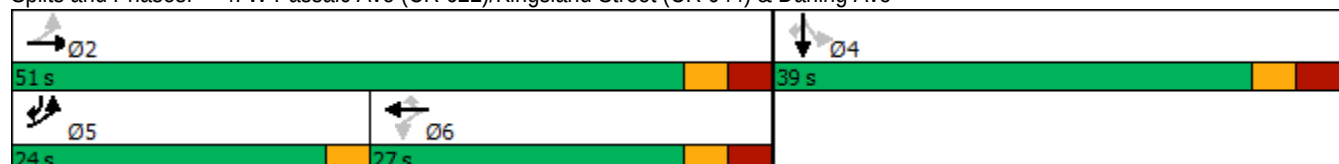
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: W Passaic Ave (CR 622)/Kingsland Street (CR 644) & Darling Ave



Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	386	164	235	499	209	102	125	67	424	182	29
Future Volume (vph)	84	386	164	235	499	209	102	125	67	424	182	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	10	10	11
Storage Length (ft)	220		0	50		50	0		0	0		0
Storage Lanes	1		0	1		1	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98		0.99		0.95		0.98		0.98	0.99	
Frt		0.953				0.850		0.969			0.980	
Flt Protected	0.950			0.950				0.983		0.950		
Satd. Flow (prot)	1685	1557	0	1617	1686	1365	0	1707	0	1636	1725	0
Flt Permitted	0.293			0.215				0.773		0.526		
Satd. Flow (perm)	514	1557	0	363	1686	1299	0	1331	0	889	1725	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45				140		25			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2354			843			553			795	
Travel Time (s)		53.5			19.2			12.6			18.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.87	0.81	0.90	0.89	0.80	0.81	0.80	0.81	0.83	0.80	0.81
Heavy Vehicles (%)	0%	2%	4%	0%	1%	6%	3%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	0	0
Adj. Flow (vph)	105	444	202	261	561	261	126	156	83	511	228	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	646	0	261	561	261	0	365	0	511	264	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.15	1.09	1.15	1.15	1.15	1.04	1.04	1.04	1.09	1.09	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2				
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	34.0	34.0		34.0	34.0	34.0	31.0	31.0		31.0	31.0	
Total Split (s)	35.0	35.0		35.0	35.0	35.0	30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%	53.8%	46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	29.0	29.0		29.0	29.0	29.0	23.0	23.0		23.0	23.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max	Max	None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0	21.0	17.0	17.0		17.0	17.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effect Green (s)	29.0	29.0		29.0	29.0	29.0		23.0		23.0	23.0	
Actuated g/C Ratio	0.45	0.45		0.45	0.45	0.45		0.35		0.35	0.35	
v/c Ratio	0.46	0.90		1.62	0.75	0.40		0.75		1.63	0.43	
Control Delay	20.7	34.3		328.0	22.8	7.7		29.2		318.7	17.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	20.7	34.3		328.0	22.8	7.7		29.2		318.7	17.7	
LOS	C	C		F	C	A		C		F	B	
Approach Delay		32.4			92.7			29.2			216.2	
Approach LOS		C			F			C			F	
Queue Length 50th (ft)	28	211		~153	175	28		116		~300	73	
Queue Length 95th (ft)	60	#393		#225	#290	58		176		#421	113	
Internal Link Dist (ft)		2274			763			473			715	
Turn Bay Length (ft)	220			50		50						
Base Capacity (vph)	229	719		161	752	657		487		314	619	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.46	0.90		1.62	0.75	0.40		0.75		1.63	0.43	
Intersection Summary												
Area Type:	Other											
Cycle Length: 65												
Actuated Cycle Length: 65												
Natural Cycle: 120												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 1.63												

Lanes, Volumes, Timings

5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection Signal Delay: 101.9

Intersection LOS: F

Intersection Capacity Utilization 107.8%

ICU Level of Service G

Analysis Period (min) 15

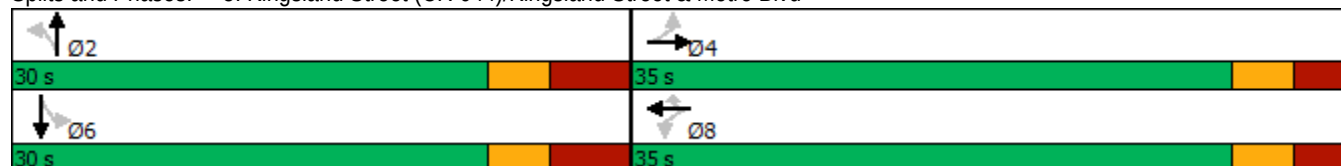
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

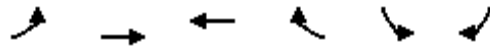
Queue shown is maximum after two cycles.

Splits and Phases: 5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd



Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

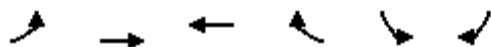
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	852	853	234	469	90
Future Volume (vph)	25	852	853	234	469	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	10	10
Storage Length (ft)	100			100	0	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
Ped Bike Factor				0.93	0.95	0.93
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1745	1801	1818	1432	1685	1507
Flt Permitted	0.118				0.950	
Satd. Flow (perm)	217	1801	1818	1335	1603	1405
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				133		69
Link Speed (mph)		30	30		30	
Link Distance (ft)		843	832		283	
Travel Time (s)		19.2	18.9		6.4	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.80	0.93	0.89	0.92	0.80	0.80
Heavy Vehicles (%)	0%	2%	1%	9%	0%	0%
Adj. Flow (vph)	31	916	958	254	586	113
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	916	958	254	586	113
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.09	1.09
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
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	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						

Lanes, Volumes, Timings
6: Kingsland Street & Ideation Way

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	40.0	40.0	40.0	40.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	57.1%	42.9%	42.9%
Maximum Green (s)	34.0	34.0	34.0	34.0	24.0	24.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	Max	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 Effect Green (s)	34.0	34.0	34.0	34.0	24.0	24.0
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.34	0.34
v/c Ratio	0.30	1.05	1.08	0.35	1.02	0.21
Control Delay	20.1	64.8	77.1	6.9	67.6	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	64.8	77.1	6.9	67.6	8.9
LOS	C	E	E	A	E	A
Approach Delay		63.3	62.4		58.1	
Approach LOS		E	E		E	
Queue Length 50th (ft)	8	~439	~474	28	~255	13
Queue Length 95th (ft)	25	#650	#675	71	#375	37
Internal Link Dist (ft)		763	752		203	
Turn Bay Length (ft)	100			100		
Base Capacity (vph)	105	874	883	716	577	527
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	1.05	1.08	0.35	1.02	0.21

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 61.6

Intersection LOS: E

Lanes, Volumes, Timings

6: Kingsland Street & Ideation Way

01/10/2020

Intersection Capacity Utilization 80.9% ICU Level of Service D

Analysis Period (min) 15

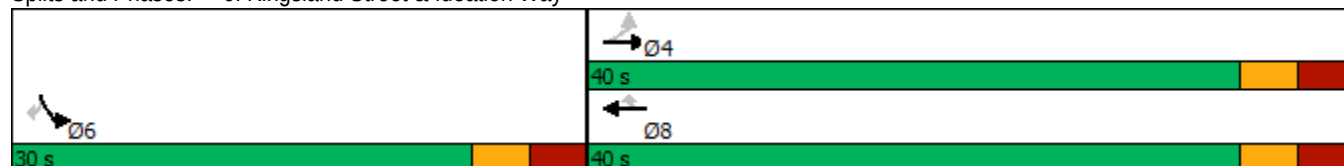
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

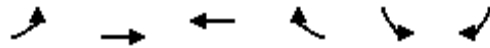
Queue shown is maximum after two cycles.

Splits and Phases: 6: Kingsland Street & Ideation Way



Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

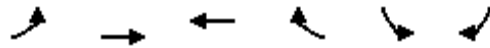
01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	609	712	502	0	8	585
Future Volume (vph)	609	712	502	0	8	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	13	13
Storage Length (ft)	600			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.92	
Frt					0.867	
Flt Protected	0.950				0.999	
Satd. Flow (prot)	1658	1746	1621	0	1564	0
Flt Permitted	0.108				0.999	
Satd. Flow (perm)	189	1746	1621	0	1563	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)					560	
Link Speed (mph)		30	30		30	
Link Distance (ft)		832	315		293	
Travel Time (s)		18.9	7.2		6.7	
Confl. Peds. (#/hr)	25			25	25	25
Peak Hour Factor	0.97	0.91	0.83	0.80	0.80	0.91
Heavy Vehicles (%)	1%	1%	2%	0%	0%	0%
Bus Blockages (#/hr)	10	10	0	0	0	0
Parking (#/hr)			0			
Adj. Flow (vph)	628	782	605	0	10	643
Shared Lane Traffic (%)						
Lane Group Flow (vph)	628	782	605	0	653	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		13	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.10	1.10	1.19	1.04	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			

Lanes, Volumes, Timings
7: Kingsland Street & Cathedral Ave

01/10/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 2 Type	Cl+Ex		Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4					
Detector Phase	7	4	8		6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	10.0	23.0	23.0		23.0	
Total Split (s)	33.0	70.0	37.0		20.0	
Total Split (%)	36.7%	77.8%	41.1%		22.2%	
Maximum Green (s)	28.0	65.0	32.0		15.0	
Yellow Time (s)	3.0	3.0	3.0		3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.0	5.0	5.0		5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None		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 Effect Green (s)	65.0	65.0	32.0		18.0	
Actuated g/C Ratio	0.70	0.70	0.34		0.19	
v/c Ratio	1.09	0.64	1.09		0.87	
Control Delay	92.0	10.7	94.8		19.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	92.0	10.7	94.8		19.9	
LOS	F	B	F		B	
Approach Delay		46.9	94.8		19.9	
Approach LOS		D	F		B	
Queue Length 50th (ft)	~374	217	~403		47	
Queue Length 95th (ft)	#587	327	#534		112	
Internal Link Dist (ft)		752	235		213	
Turn Bay Length (ft)	600					
Base Capacity (vph)	574	1220	557		754	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	1.09	0.64	1.09		0.87	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 93

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Lanes, Volumes, Timings

7: Kingsland Street & Cathedral Ave

01/10/2020

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 51.1

Intersection LOS: D

Intersection Capacity Utilization 111.6%

ICU Level of Service H

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: 7: Kingsland Street & Cathedral Ave



Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	677	307	96	574	4	205	77	145	34	182	24
Future Volume (vph)	5	677	307	96	574	4	205	77	145	34	182	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	14	11	11	11	11	11	11	16	16	16
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98			1.00			0.97			0.99	
Frt		0.954			0.999			0.948			0.985	
Flt Protected					0.993			0.977			0.993	
Satd. Flow (prot)	0	1796	0	0	1712	0	0	2909	0	0	1869	0
Flt Permitted		0.996			0.689			0.662			0.820	
Satd. Flow (perm)	0	1789	0	0	1187	0	0	1948	0	0	1538	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		66			1							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		742			1021			370			382	
Travel Time (s)		16.9			23.2			8.4			8.7	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.93	0.81	0.81	0.83	0.80	0.84	0.88	0.83	0.81	0.88	0.80
Heavy Vehicles (%)	0%	2%	1%	3%	2%	0%	1%	0%	2%	0%	1%	0%
Bus Blockages (#/hr)	10	10	10	10	10	10	0	10	10	0	0	0
Parking (#/hr)								0	0		0	
Adj. Flow (vph)	6	728	379	119	692	5	244	88	175	42	207	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1113	0	0	816	0	0	507	0	0	279	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.92	0.97	0.92	1.04	1.10	1.04	1.04	1.14	1.04	0.85	0.97	0.85
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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	

Lanes, Volumes, Timings
8: Franklin Avenue & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases	4			8						6		
Permitted Phases	4			8			2	2		6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		24.0	24.0		24.0	24.0	
Total Split (s)	42.0	42.0		42.0	42.0		22.0	22.0		22.0	22.0	
Total Split (%)	65.6%	65.6%		65.6%	65.6%		34.4%	34.4%		34.4%	34.4%	
Maximum Green (s)	36.0	36.0		36.0	36.0		16.0	16.0		16.0	16.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	6.0			6.0			6.0			6.0		
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	18.0	18.0		18.0	18.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	36.0			36.0			16.0			16.0		
Actuated g/C Ratio	0.56			0.56			0.25			0.25		
v/c Ratio	1.08			1.22			1.28dl			0.73		
Control Delay	67.5			132.0			79.4			35.4		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	67.5			132.0			79.4			35.4		
LOS	E			F			E			D		
Approach Delay	67.5			132.0			79.4			35.4		
Approach LOS	E			F			E			D		
Queue Length 50th (ft)	~486			~406			~115			100		
Queue Length 95th (ft)	#710			#538			#196			#196		
Internal Link Dist (ft)	662			941			290			302		
Turn Bay Length (ft)												
Base Capacity (vph)	1035			668			487			384		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	1.08			1.22			1.04			0.73		
Intersection Summary												
Area Type:	Other											
Cycle Length: 64												
Actuated Cycle Length: 64												
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow												
Natural Cycle: 100												

Lanes, Volumes, Timings

8: Franklin Avenue & Kingsland Street

01/10/2020

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.22

Intersection Signal Delay: 85.8

Intersection LOS: F

Intersection Capacity Utilization 139.7%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

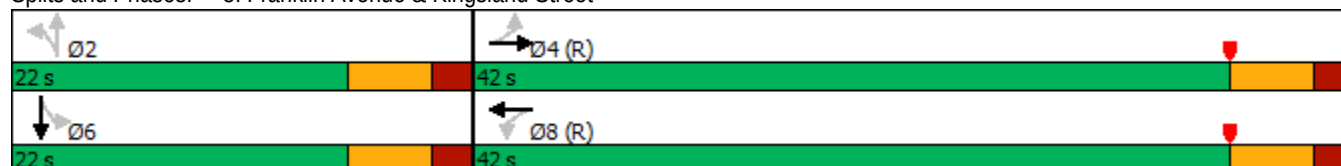
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Franklin Avenue & Kingsland Street



Lanes, Volumes, Timings
9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	399	170	61	394	175	49	460	57	162	564	232
Future Volume (vph)	286	399	170	61	394	175	49	460	57	162	564	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	150		0	0		0	0		0	70		0
Storage Lanes	1		0	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.98			0.99			1.00		0.99	0.99	
Frt		0.951			0.964			0.986			0.955	
Flt Protected	0.950				0.995			0.996		0.950		
Satd. Flow (prot)	1711	1633	0	0	1638	0	0	1557	0	1652	1582	0
Flt Permitted	0.249				0.574			0.402		0.321		
Satd. Flow (perm)	445	1633	0	0	944	0	0	628	0	553	1582	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1021			651			384			1036	
Travel Time (s)		23.2			14.8			8.7			23.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.90	0.92	0.81	0.81	0.83	0.87	0.97	0.97	0.97	0.82	0.85	0.81
Heavy Vehicles (%)	2%	1%	1%	0%	3%	0%	0%	0%	2%	2%	1%	2%
Bus Blockages (#/hr)	0	10	10	10	10	10	0	0	0	0	10	10
Parking (#/hr)							0	0	0			
Adj. Flow (vph)	318	434	210	75	475	201	51	474	59	198	664	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	318	644	0	0	751	0	0	584	0	198	950	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.10	1.04	1.04	1.10	1.04	1.09	1.25	1.09	1.09	1.15	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	
Maximum Green (s)	33.0	33.0		33.0	33.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			-3.0			-5.0		0.0	-1.0	
Total Lost Time (s)	6.0	6.0			3.0			1.0		6.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings

9: Passaic Ave & Kingsland Street

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	23.0	23.0		23.0	23.0		22.0	22.0		22.0	22.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	33.0	33.0			36.0			40.0		35.0	36.0	
Actuated g/C Ratio	0.41	0.41			0.45			0.50		0.44	0.45	
v/c Ratio	1.74	0.96			1.77			1.86		0.82	1.34	
Control Delay	376.3	50.7			378.3			419.7		49.7	184.4	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	376.3	50.7			378.3			419.7		49.7	184.4	
LOS	F	D			F			F		D	F	
Approach Delay		158.3			378.3			419.7			161.2	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	~239	303			~569			~451		84	~627	
Queue Length 95th (ft)	#311	#523			#699			#498		#178	#783	
Internal Link Dist (ft)		941			571			304			956	
Turn Bay Length (ft)	150									70		
Base Capacity (vph)	183	673			424			314		241	711	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	1.74	0.96			1.77			1.86		0.82	1.34	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 1.86

Intersection Signal Delay: 251.5

Intersection LOS: F

Intersection Capacity Utilization 148.3%

ICU Level of Service H

Analysis Period (min) 15

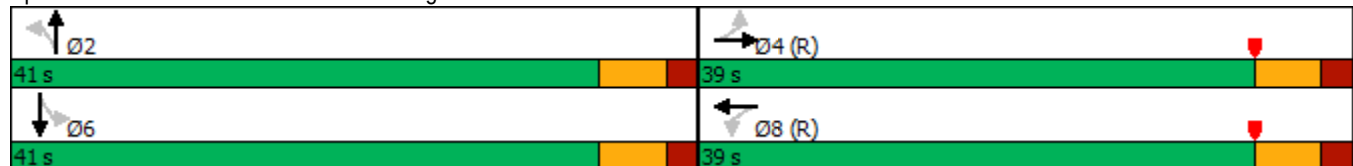
~ Volume exceeds capacity, queue is theoretically infinite.

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: 9: Passaic Ave & Kingsland Street



Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	312	206	995	319	90	840
Future Volume (vph)	312	206	995	319	90	840
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	11	11	11	11
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.96	0.95	0.98			
Frt		0.850	0.962			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1865	1553	3264	0	1728	1801
Flt Permitted	0.950				0.078	
Satd. Flow (perm)	1795	1477	3264	0	142	1801
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		158	57			
Link Speed (mph)	30		30			30
Link Distance (ft)	450		534			209
Travel Time (s)	10.2		12.1			4.8
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.89	0.82	0.89	0.85	0.81	0.95
Heavy Vehicles (%)	0%	4%	1%	0%	1%	2%
Adj. Flow (vph)	351	251	1118	375	111	884
Shared Lane Traffic (%)						
Lane Group Flow (vph)	351	251	1493	0	111	884
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		11			11
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6

Lanes, Volumes, Timings
10: Passaic Ave & Route 3 Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0		3.5	58.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	39.0	39.0	43.0		8.0	51.0
Total Split (%)	43.3%	43.3%	47.8%		8.9%	56.7%
Maximum Green (s)	34.0	34.0	32.0		5.0	46.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	8.0		0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	11.0		3.0	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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)	21.6	21.6	42.4		60.4	58.4
Actuated g/C Ratio	0.24	0.24	0.47		0.67	0.65
v/c Ratio	0.78	0.53	0.95		0.51	0.76
Control Delay	44.1	14.6	23.0		18.0	18.2
Queue Delay	0.0	0.0	0.0		0.0	0.1
Total Delay	44.1	14.6	23.0		18.0	18.3
LOS	D	B	C		B	B
Approach Delay	31.8		23.0			18.3
Approach LOS	C		C			B
Queue Length 50th (ft)	187	43	255		20	310
Queue Length 95th (ft)	251	82	m#496		55	#674
Internal Link Dist (ft)	370		454			129
Turn Bay Length (ft)						
Base Capacity (vph)	704	656	1566		218	1167
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	18
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.50	0.38	0.95		0.51	0.77
Intersection Summary						
Area Type:	Other					
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow						
Natural Cycle: 90						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.95						
Intersection Signal Delay: 23.2				Intersection LOS: C		
Intersection Capacity Utilization 77.2%				ICU Level of Service D		
Analysis Period (min) 15						

Lanes, Volumes, Timings

10: Passaic Ave & Route 3 Ramp

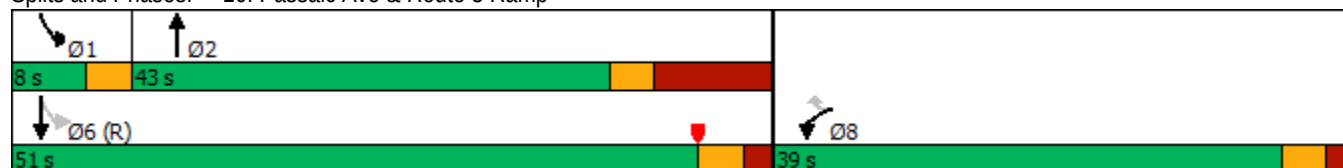
01/10/2020

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: 10: Passaic Ave & Route 3 Ramp



Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	4	57	5	442	7	860	44	341	802	10
Future Volume (vph)	12	2	4	57	5	442	7	860	44	341	802	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	16	16	16	11	11	11
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
Ped Bike Factor		0.96			0.94	0.95		1.00			1.00	
Frt		0.971				0.850		0.993			0.998	
Flt Protected		0.968			0.956					0.950		
Satd. Flow (prot)	0	1696	0	0	1756	1531	0	2108	0	1678	1813	0
Flt Permitted		0.856			0.749			0.988		0.205		
Satd. Flow (perm)	0	1466	0	0	1299	1456	0	2083	0	362	1813	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				205		4			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		309			239			1482			534	
Travel Time (s)		7.0			5.4			33.7			12.1	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.80	0.80	0.80	0.87	0.80	0.84	0.80	0.88	0.88	0.93	0.88	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	1%	2%	4%	1%	0%
Adj. Flow (vph)	15	3	5	66	6	526	9	977	50	367	911	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	72	526	0	1036	0	367	924	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			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.85	0.85	0.85	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	

Lanes, Volumes, Timings
11: Ward Ave & Passaic Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0	23.0	29.0	29.0		9.5	23.0	
Total Split (s)	27.0	27.0		27.0	27.0	27.0	53.0	53.0		10.0	63.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%	30.0%	58.9%	58.9%		11.1%	70.0%	
Maximum Green (s)	22.0	22.0		22.0	22.0	22.0	42.0	42.0		7.0	58.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	8.0	8.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0		11.0		3.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	None		None	C-Max	
Walk Time (s)	7.0	7.0		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	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0			0	
Act Effct Green (s)		22.0			22.0	22.0		42.0		60.0	58.0	
Actuated g/C Ratio		0.24			0.24	0.24		0.47		0.67	0.64	
v/c Ratio		0.06			0.23	1.03		1.06		1.07	0.79	
Control Delay		22.7			29.5	70.8		72.7		78.8	14.2	
Queue Delay		0.0			0.0	25.5		0.0		0.0	1.8	
Total Delay		22.7			29.5	96.3		72.7		78.8	16.0	
LOS		C			C	F		E		E	B	
Approach Delay		22.7			88.3			72.7			33.9	
Approach LOS		C			F			E			C	
Queue Length 50th (ft)		8			33	~227		~656		~96	222	
Queue Length 95th (ft)		24			61	#370		#864		m#224	312	
Internal Link Dist (ft)		229			159			1402			454	
Turn Bay Length (ft)												
Base Capacity (vph)		362			317	510		974		343	1169	
Starvation Cap Reductn		0			0	70		0		0	118	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.06			0.23	1.20		1.06		1.07	0.88	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow												
Natural Cycle: 100												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.07												
Intersection Signal Delay: 58.5							Intersection LOS: E					
Intersection Capacity Utilization 120.8%							ICU Level of Service H					
Analysis Period (min) 15												

Lanes, Volumes, Timings

11: Ward Ave & Passaic Ave

01/10/2020

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 11: Ward Ave & Passaic Ave



Lanes, Volumes, Timings

12: High Street & W Passaic Street/W Passaic Ave (CR 622)

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	814	56	37	1003	7	37	5	38	1	1	8
Future Volume (vph)	5	814	56	37	1003	7	37	5	38	1	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Ped Bike Factor												
Frt	0.991				0.999				0.931		0.887	
Flt Protected					0.998				0.979		0.996	
Satd. Flow (prot)	0	1619	0	0	1632	0	0	1507	0	0	1460	0
Flt Permitted					0.998				0.979		0.996	
Satd. Flow (perm)	0	1619	0	0	1632	0	0	1507	0	0	1460	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	341				1090				336		292	
Travel Time (s)	7.8				24.8				7.6		6.6	
Confl. Peds. (#/hr)	25			25	25			25	25			25
Peak Hour Factor	0.80	0.86	0.85	0.81	0.90	0.80	0.94	0.80	0.81	0.80	0.80	0.80
Heavy Vehicles (%)	0%	1%	4%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Adj. Flow (vph)	6	947	66	46	1114	9	39	6	47	1	1	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1019	0	0	1169	0	0	92	0	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	11				11				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15	9		15	9		15	9		15	9	
Sign Control	Free				Free				Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	98.5%											
ICU Level of Service F												
Analysis Period (min) 15												

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	607	194	806	184	75	698
Future Volume (vph)	607	194	806	184	75	698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Storage Length (ft)	0	80		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.95
Ped Bike Factor	0.96	0.95		0.92		1.00
Frt		0.850		0.850		
Flt Protected	0.950					0.995
Satd. Flow (prot)	1728	1501	3455	1546	0	3525
Flt Permitted	0.950					0.731
Satd. Flow (perm)	1663	1428	3455	1420	0	2587
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		82		89		
Link Speed (mph)	30		30			30
Link Distance (ft)	344		504			159
Travel Time (s)	7.8		11.5			3.6
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.94	0.89	0.86	0.87	0.81	0.93
Heavy Vehicles (%)	1%	4%	1%	1%	1%	2%
Adj. Flow (vph)	646	218	937	211	93	751
Shared Lane Traffic (%)						
Lane Group Flow (vph)	646	218	937	211	0	844
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	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	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
13: Route 3 West Exit Ramp & Main Ave

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	44.0	44.0	5.0	58.0
Minimum Split (s)	23.0	23.0	55.0	55.0	8.0	63.0
Total Split (s)	33.0	33.0	49.0	49.0	8.0	57.0
Total Split (%)	36.7%	36.7%	54.4%	54.4%	8.9%	63.3%
Maximum Green (s)	28.0	28.0	38.0	38.0	5.0	52.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	8.0	8.0	0.0	2.0
Lost Time Adjust (s)	-5.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	0.0	5.0	11.0	11.0		5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None	Min	Min	None	C-Min
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 Effect Green (s)	33.0	28.0	46.0	46.0		52.0
Actuated g/C Ratio	0.37	0.31	0.51	0.51		0.58
v/c Ratio	1.02	0.44	0.53	0.27		0.56
Control Delay	71.2	18.2	12.7	5.8		13.8
Queue Delay	0.0	0.0	0.0	0.0		1.8
Total Delay	71.2	18.2	12.7	5.8		15.6
LOS	E	B	B	A		B
Approach Delay	57.9		11.4			15.6
Approach LOS	E		B			B
Queue Length 50th (ft)	~377	58	112	15		146
Queue Length 95th (ft)	#600	122	142	48		200
Internal Link Dist (ft)	264		424			79
Turn Bay Length (ft)		80		50		
Base Capacity (vph)	633	500	1765	769		1494
Starvation Cap Reductn	0	0	0	0		0
Spillback Cap Reductn	0	0	0	0		464
Storage Cap Reductn	0	0	0	0		0
Reduced v/c Ratio	1.02	0.44	0.53	0.27		0.82

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02

Lanes, Volumes, Timings

13: Route 3 West Exit Ramp & Main Ave

01/10/2020

Intersection Signal Delay: 26.7

Intersection LOS: C

Intersection Capacity Utilization 118.8%

ICU Level of Service H

Analysis Period (min) 15

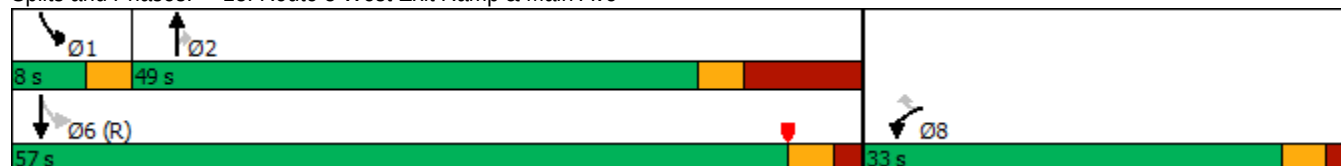
~ Volume exceeds capacity, queue is theoretically infinite.

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: 13: Route 3 West Exit Ramp & Main Ave



Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	162	237	753	209	249	1056
Future Volume (vph)	162	237	753	209	249	1056
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	11	12	12
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	0.96	0.95	0.98			1.00
Frt		0.850	0.966			
Flt Protected	0.950					0.991
Satd. Flow (prot)	1745	1553	3277	0	0	3549
Flt Permitted	0.950					0.574
Satd. Flow (perm)	1679	1477	3277	0	0	2052
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		244	75			
Link Speed (mph)	30		30			30
Link Distance (ft)	464		896			504
Travel Time (s)	10.5		20.4			11.5
Confl. Peds. (#/hr)	25	25		25	25	
Peak Hour Factor	0.81	0.82	0.90	0.86	0.94	0.94
Heavy Vehicles (%)	0%	4%	1%	1%	0%	1%
Adj. Flow (vph)	200	289	837	243	265	1123
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	289	1080	0	0	1388
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.04	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						

Lanes, Volumes, Timings
14: Main Ave & Route 3 East Exit Ramp

01/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	49.0		3.5	51.0
Minimum Split (s)	23.0	23.0	55.0		8.0	63.0
Total Split (s)	22.0	22.0	60.0		8.0	68.0
Total Split (%)	24.4%	24.4%	66.7%		8.9%	75.6%
Maximum Green (s)	17.0	17.0	54.0		5.0	56.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		0.0	9.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	6.0			12.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Recall Mode	None	None	Min		None	C-Min
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 Effect Green (s)	13.9	13.9	65.1			59.1
Actuated g/C Ratio	0.15	0.15	0.72			0.66
v/c Ratio	0.74	0.67	0.45			1.03
Control Delay	52.9	15.5	5.7			45.0
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	52.9	15.5	5.7			45.0
LOS	D	B	A			D
Approach Delay	30.8		5.7			45.0
Approach LOS	C		A			D
Queue Length 50th (ft)	109	22	105			~465
Queue Length 95th (ft)	156	73	156			m#548
Internal Link Dist (ft)	384		816			424
Turn Bay Length (ft)		110				
Base Capacity (vph)	329	476	2391			1347
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.61	0.61	0.45			1.03

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03

Lanes, Volumes, Timings

14: Main Ave & Route 3 East Exit Ramp

01/10/2020

Intersection Signal Delay: 28.3

Intersection LOS: C

Intersection Capacity Utilization 114.9%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

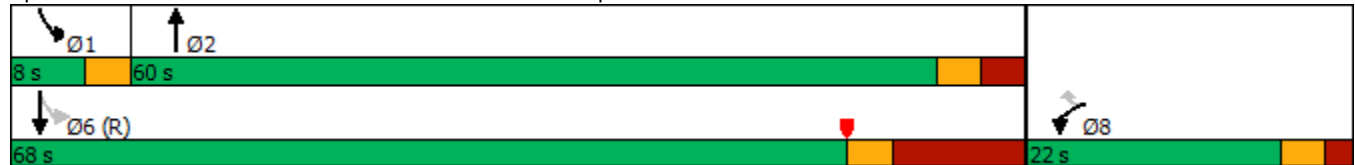
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 14: Main Ave & Route 3 East Exit Ramp



Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	61	4	1	47	32	4	0	0	148	1	453
Future Volume (vph)	322	61	4	1	47	32	4	0	0	148	1	453
Ideal Flow (vphpl)	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	12	12	15
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		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
Ped Bike Factor		0.95			0.96						0.95	
Frt		0.998			0.942						0.899	
Flt Protected		0.960			0.999			0.950			0.988	
Satd. Flow (prot)	0	2005	0	0	1956	0	0	1745	0	0	1602	0
Flt Permitted		0.701			0.996			0.353			0.913	
Satd. Flow (perm)	0	1398	0	0	1949	0	0	648	0	0	1457	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			40						191	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			258			233			196	
Travel Time (s)		5.4			5.9			5.3			4.5	
Confl. Peds. (#/hr)	25		25	25		25	25		25	25		25
Peak Hour Factor	0.94	0.88	0.80	0.80	0.90	0.81	0.80	0.80	0.92	0.82	0.80	0.84
Heavy Vehicles (%)	3%	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%
Adj. Flow (vph)	343	69	5	1	52	40	5	0	0	180	1	539
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	417	0	0	93	0	0	5	0	0	720	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.88	0.85	0.85	0.85	0.85	0.85	1.04	1.04	1.04	1.00	1.00	0.88
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	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
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		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lanes, Volumes, Timings
15: Kensington Ave & Ward Ave

01/10/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	50.0	50.0		50.0	50.0		40.0	40.0		40.0	40.0	
Total Split (%)	55.6%	55.6%		55.6%	55.6%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	44.0	44.0		44.0	44.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
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		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		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		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		26.7			26.7			34.5			34.5	
Actuated g/C Ratio		0.36			0.36			0.47			0.47	
v/c Ratio		0.82			0.13			0.02			0.92	
Control Delay		34.4			9.3			14.8			34.6	
Queue Delay		0.7			0.0			0.0			0.0	
Total Delay		35.0			9.3			14.8			34.6	
LOS		D			A			B			C	
Approach Delay		35.0			9.3			14.8			34.6	
Approach LOS		D			A			B			C	
Queue Length 50th (ft)		165			15			1			217	
Queue Length 95th (ft)		257			41			8			#465	
Internal Link Dist (ft)		159			178			153			116	
Turn Bay Length (ft)												
Base Capacity (vph)		850			1200			304			785	
Starvation Cap Reductn		175			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.62			0.08			0.02			0.92	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 73.4												
Natural Cycle: 50												
Control Type: Semi Act-Uncoord												
Maximum v/c Ratio: 0.92												
Intersection Signal Delay: 32.8	Intersection LOS: C											

Lanes, Volumes, Timings 15: Kensington Ave & Ward Ave

01/10/2020

Intersection Capacity Utilization 85.4%

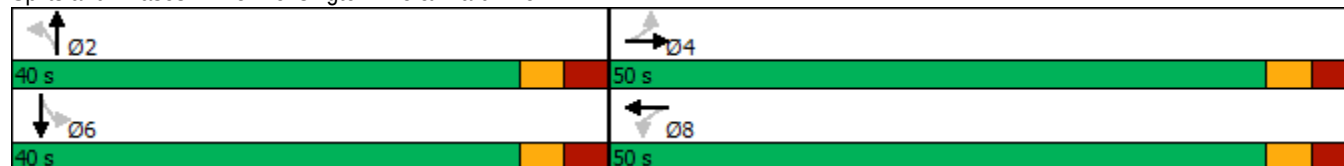
ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 15: Kensington Ave & Ward Ave



HCM 2010 Roundabout
5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection								
Intersection Delay, s/veh	91.1							
Intersection LOS	F							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	692		1067		768		174	
Demand Flow Rate, veh/h	715		1123		774		174	
Vehicles Circulating, veh/h	289		528		740		765	
Vehicles Exiting, veh/h	650		986		264		886	
Follow-Up Headway, s	3.186		3.186		3.186		3.186	
Ped Vol Crossing Leg, #/h	25		25		25		25	
Ped Cap Adj	0.978		0.985		0.997		0.993	
Approach Delay, s/veh	14.4		142.0		108.3		8.6	
Approach LOS	B		F		F		A	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	L	TR	L	TR	LTR	LT	R	
Assumed Moves	L	TR	L	TR	LTR	LT	R	
RT Channelized								
Lane Util	0.138	0.862	0.116	0.884	1.000	0.914	0.086	
Critical Headway, s	4.293	4.113	4.293	4.113	4.113	4.293	4.113	
Entry Flow, veh/h	99	616	130	993	774	159	15	
Cap Entry Lane, veh/h	910	923	760	781	673	637	661	
Entry HV Adj Factor	1.000	0.963	0.969	0.948	0.992	1.000	1.000	
Flow Entry, veh/h	99	593	126	941	768	159	15	
Cap Entry, veh/h	890	869	726	729	666	632	657	
V/C Ratio	0.111	0.682	0.174	1.291	1.154	0.251	0.023	
Control Delay, s/veh	5.1	16.0	6.9	160.1	108.3	8.9	5.7	
LOS	A	C	A	F	F	A	A	
95th %tile Queue, veh	0	6	1	36	25	1	0	

HCM 2010 Roundabout
6: Kingsland Street & Ideation Way

01/10/2020

Intersection					
Intersection Delay, s/veh	30.6				
Intersection LOS	D				
Approach	EB	WB	SB		
Entry Lanes	1	1	1		
Conflicting Circle Lanes	1	1	1		
Adj Approach Flow, veh/h	943	1463	175		
Demand Flow Rate, veh/h	962	1500	177		
Vehicles Circulating, veh/h	144	50	967		
Vehicles Exiting, veh/h	967	1056	50		
Follow-Up Headway, s	3.186	3.186	3.186		
Ped Vol Crossing Leg, #/h	25	25	25		
Ped Cap Adj	0.997	0.997	1.000		
Approach Delay, s/veh	46.7	22.2	13.5		
Approach LOS	E	C	B		
Lane	Left	Left	Bypass	Left	Bypass
Designated Moves	LT	T	R	L	R
Assumed Moves	LT	T	R	L	R
RT Channelized			Yield		Yield
Lane Util	1.000	1.000		1.000	
Critical Headway, s	5.193	5.193		5.193	
Entry Flow, veh/h	962	967	533	144	33
Cap Entry Lane, veh/h	978	1075	1075	430	430
Entry HV Adj Factor	0.980	0.962	1.000	1.000	0.935
Flow Entry, veh/h	943	930	533	144	31
Cap Entry, veh/h	956	1030	1071	430	402
V/C Ratio	0.987	0.903	0.498	0.335	0.077
Control Delay, s/veh	46.7	29.7	9.1	14.2	10.1
LOS	E	D	A	B	B
95th %tile Queue, veh	18	13	3	1	0

HCM 6th Roundabout
5: Kingsland Street (CR 644)/Kingsland Street & Metro Blvd

01/10/2020

Intersection								
Intersection Delay, s/veh	78.4							
Intersection LOS	F							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	751		1083		365		775	
Demand Flow Rate, veh/h	768		1105		370		790	
Vehicles Circulating, veh/h	1015		391		1084		958	
Vehicles Exiting, veh/h	733		1063		699		538	
Ped Vol Crossing Leg, #/h	25		25		25		25	
Ped Cap Adj	1.000		0.981		1.000		1.000	
Approach Delay, s/veh	83.5		20.0		21.1		182.0	
Approach LOS	F		C		C		F	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	L	TR	L	TR	LTR	LT	R	
Assumed Moves	L	TR	L	TR	LTR	LT	R	
RT Channelized								
Lane Util	0.137	0.863	0.236	0.764	1.000	0.954	0.046	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
Entry Flow, veh/h	105	663	261	844	370	754	36	
Cap Entry Lane, veh/h	531	599	942	1019	565	559	629	
Entry HV Adj Factor	1.000	0.975	1.000	0.974	0.986	0.980	1.000	
Flow Entry, veh/h	105	646	261	822	365	739	36	
Cap Entry, veh/h	531	584	924	973	557	548	629	
V/C Ratio	0.198	1.106	0.282	0.845	0.655	1.348	0.057	
Control Delay, s/veh	9.4	95.5	6.8	24.2	21.1	190.6	6.4	
LOS	A	F	A	C	C	F	A	
95th %tile Queue, veh	1	20	1	10	5	32	0	

HCM 6th Roundabout
6: Kingsland Street & Ideation Way

01/10/2020

Intersection					
Intersection Delay, s/veh	78.8				
Intersection LOS	F				
Approach	EB	WB	SB		
Entry Lanes	1	1	1		
Conflicting Circle Lanes	1	1	1		
Adj Approach Flow, veh/h	947	1212	699		
Demand Flow Rate, veh/h	965	1245	699		
Vehicles Circulating, veh/h	586	31	968		
Vehicles Exiting, veh/h	968	1520	31		
Ped Vol Crossing Leg, #/h	25	25	25		
Ped Cap Adj	0.997	0.997	1.000		
Approach Delay, s/veh	153.3	11.5	94.8		
Approach LOS	F	B	F		
Lane	Left	Left	Bypass	Left	Bypass
Designated Moves	LT	T	R	L	R
Assumed Moves	LT	T	R	L	R
RT Channelized			Yield		Yield
Lane Util	1.000	1.000		1.000	
Follow-Up Headway, s	2.609	2.609		2.609	
Critical Headway, s	4.976	4.976	277	4.976	113
Entry Flow, veh/h	965	968	1337	586	514
Cap Entry Lane, veh/h	759	1337	0.917	514	1.000
Entry HV Adj Factor	0.981	0.990	254	1.000	113
Flow Entry, veh/h	947	958	1222	586	514
Cap Entry, veh/h	742	1319	0.208	514	0.220
V/C Ratio	1.276	0.727	4.8	1.140	10.1
Control Delay, s/veh	153.3	13.2	A	111.1	B
LOS	F	B	1	F	1
95th %tile Queue, veh	36	7		20	